

Sales Forecasting and Consumer Behaviour Analysis Using Social Media Analytics: A Case Study of Haldiram's Nagpur

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Abstract- The spread of social media sites has radically redefined the consumer interaction and corporate intelligence in the modern online economy. This paper will critically analyse how social media analytics can be of use in improving the quality of sales forecasting and understanding consumer behaviour of a particular location with reference to Haldiram Nagpur. The study explores how the online reviews, measures of engagement, sentiment, and content interaction (user-generated data) can be analysed systematically to provide actionable information to predict demand and make strategic decisions.

The paper will follow a descriptive and analytical research design incorporating primary information gathered by using structured questionnaires and secondary information obtained via scholarly literature and online sources of analytics. There are sophisticated analytical methods used to determine the connection between indicators of the digital engagement and consumer buying intentions such as the trend analysis and qualitative sentiment interpretation methods. The results indicate that there is a high level of correlation between the activity on social media and the consumption patterns thus suggesting that the level of engagement has a great impact on the brand perception, customer loyalty, and buying behaviour.

Moreover, the research paper indicates the predictive nature of social media analytics when it comes to detecting seasonal changes in demand, new consumer trends, and product performance trends. It also highlights how strategic real-time data can be used to improve the real-time marketing and inventory planning. The study concludes that, in addition to enhancing the accuracy of sales forecasting models, the incorporation of social media analytics in sales forecasting models can ensure organizations are in a proactive and customer-focused mode in an environment that is very competitive in the sale of the FMCG. The research has useful implication to managers

that indicate that they need to consider using data-driven marketing strategies and sophisticated analysis tools to maintain long-term growth and competitive advantage.

Keywords-Social Media Analytics, Sentiment Analysis, Sales Forecasting, Consumer Behaviour Analysis, FMCG Marketing, Predictive Modeling, Customer Engagement, Brand Loyalty, Demand Forecasting, Haldiram Nagpur.

I. INTRODUCTION

The modern business environment, the adoption of digital technologies has drastically changed how organizations relate with consumers and how they make strategic decisions. Out of these technological advancements, social media platforms have come out as efficient means of communication, marketing, and generation of data. Social media (Instagram, Facebook, and Twitter) cause gigantic amounts of real-time information that capture the views, preferences, and behavioural trends of consumers. This has helped the businesses to leave the old modes of forecasting and use the newer and more dynamic modes which are data based.

Sales forecasting is a sensitive process in any organization, especially in Fast-Moving Consumer Goods (FMCG) market, where the demand is very volatile and subject to numerous external factors. Proper forecasting assists businesses in inventory control, production scheduling and allocation of resources. Nevertheless, the classical approaches to forecasting are usually based on the past sales numbers, which might not be effective in reflecting the consumer preferences that are changing at a very fast pace. In this regard, social media analytics has become relevant because it can give real-time

information on customers, product trends, and the market.

The other crucial part of contemporary marketing strategy is consumer behaviour analysis. The reason behind consumer purchase decisions, their preferences and perceptions of the brands is vital in sustaining competitiveness. Social media sites are influential in influencing consumer behaviour, as they affect consumer opinion on reviewing, recommending, advertisement, and influencer content. These platforms are interactive, which means that a company can directly interact with consumers, which opens up opportunities of marketing to consumers on a personal level, and also improve the customer relationship.

Haldiram, being a long-standing brand in the Indian FMCG market, is famous as a company with a wide variety of snacks and sweet products. The brand is also well established in Nagpur, and this has helped it to manage dynamic market trends and consumer demands. Its expanding online visibility is an indication of the rising significance of social platforms as a marketing and communication platform. The focus on the consumer interaction analysis in terms of Haldiram on social media can give significant information on the purchasing behaviour, brand perception, and demand trends.

II. LITERATURE REVIEW

Sales forecasting and consumer behaviour analysis have become the concept that has been developed under the influence of digital technologies and the popularity of social media platforms. The earlier models of consumer behaviour were mainly based on demographic, psychological, and economic constructs of consumer buying decisions. Nevertheless, current studies focus on the importance of online interactions and digital engagement in consumer preferences development.

The research across the Fast-Moving Consumer Goods (FMCG) industry reveals that quality, taste, price and brand image of a product are still the key factors that determine consumer preference. The consumers are likely to be highly brand loyal in the case of snack food brands, where such factors are maintained consistently. Meanwhile, various other digital stimuli like online reviews, advertisements, and peer

recommendations posted on social media networks are progressively impacting the modern consumers.

The studies on social media analytics emphasise that it is an essential tool of gathering real-time consumer data. The social media is a source of unstructured but useful data in the form of comments, likes, shares and expressions of sentiment unlike the traditional sources of data. Such data are analysable to determine customer perception, identify new trends, and brand perception. Some of the works indicate positive online sentiment and an increase in the rate of engagement directly correlate with a higher purchase intention and retention of the customer.

In the further literature, the increasing role of sentiment analysis and trend analysis in sales prediction can be highlighted. Through evaluations of consumer discussion and reactions on online platforms, organizations are able to determine the demand patterns and foresee market behaviour shifts. Predictive modelling is another technique that social media analytics can support; it can be used to predict the trends of product popularity, changes in demand seasonally, and altering consumer preferences.

III. RESEARCH METHODOLOGY

III.1 Research Design

The research design used in the study is descriptive and analytical research design to investigate the connection between social media analytics, consumer behaviour, and sales forecasting. The descriptive approach is used to draw a vision of the consumer preferences whereas the analytical approach is used in analyzing the significance of the data on social media in predicting the accuracy of the forecasts.

III.2 Objectives of the Study

- To categorize consumer behaviour in relation to the products of Haldiram.
- To assess the impact of the social media on the purchasing decision.
- To investigate how social media analytics can be used in sales forecasting.
- To establish trends between engagement via the internet and product demand.

III.3 Hypotheses

- H_0 (Null Hypothesis): There is no significant

influence of social media analytics on sales forecasting and consumer behaviour.

- H 1 (Alternate Hypothesis): The social media analytics plays an important role in sales forecasting and consumer behaviour.

III.4 Data Collection Methods

Primary Data: Gathered as structured questionnaires of Nagpur consumers.

Secondary Data: Gathered in research articles, journals, online and digital marketing reports.

III.5 Sample Design

- Sample Size: 100 respondents
- Sampling Technique: Convenience sampling.
- Target Respondents: Haldiram consumer of its products.

III.6 Tools and Techniques Used

- Percentage analysis
- Bar charts and pie charts (to be interpreted visually).
- Trend analysis
- Simple emotion reconnaissance of social media response.

III.7 Scope of the Study

The research is confined to Nagpur city and is centered on the customers who know or consume the products of Haldiram and use social media.

4.

IV. COMPANY HISTORY HALDIRAM NAGPUR.

Haldiram is one of the leading and reputed brands of the Indian FMCG market with a strong product portfolio of Indian traditional snacks, sweets, and ready-to-eat food. The brand was started in Bikaner, Rajasthan and gradually increased its business in large cities in India, such as Nagpur which has become a major center of operation and production.

Haldiram Nagpur has an important role in the development and brand positioning of the company. It works via the properly developed system of retail stores, distribution channels, and online stores. The company provides various products, like namkeen,

sweets, bakery, beverage, and frozen, and serves a great variety of tastes of the consumers.

Its brand is well known to be of high standards in terms of quality, hygiene, and taste which has earned it a high level of customer loyalty over the years. Along with its traditional strengths, Haldiram has come to give more attention to modern marketing, especially, the digital and social media marketing, to gain more leverage among the young consumers.

Haldiram advertises its new products, offers, and brand campaigns to customers via their social media accounts like Instagram, facebook, and YouTube. Consumer feedback using such platforms is also a good source of information to the company, as it allows the company to know what the customers want and how to enhance their packages.

V. DATA ANALYSIS AND INTERPRETATION

V.1 Introduction

Data analytics is important in converting raw data to meaningful information that is used in decision-making. Data analytics in this paper is applied to analyse consumer behaviour and assess the success of social media analytics in the sales forecasting of Haldiram, Nagpur. The evaluation is based on determining patterns trends and correlations between online interactions and buying behaviour.

V.2 Concept of Data Analytics

The concept of data analytics can be defined as the process of gathering, arranging, and analysing information in order to derive valuable information. Data analytics, in relation to this study, is the study of consumer behaviour, responses and social media interplay in order to determine the demand pattern.

The use of analytics helps in:

- Determining the preferences of customers.
- Learning about buying behaviour.
- Anticipating the future sales progress.
- Propping up strategic marketing choices.

V.3 Data Analytics utilized in the research.

1. Descriptive Analytics

Descriptive analytics is applied to summarize and present data in a significant manner. It will involve

percentage analysis, charts and tables to explain consumer preferences and behaviour.

Application in Study:

Applied in studying the responses obtained in surveys like awareness, frequency of purchase and influencing factors.

2. Diagnostic Analytics

Diagnostic analytics is concerned with the cause of the trends and trends that are being observed.

Application in Study:

It is applied to determine the rationale behind people choosing particular products (e.g. taste, quality) and the impact of social media on the decision-making process.

3. Predictive Analytics

Predictive analytics involves the use of past and recent data in order to predict future trends and results.

Application in Study:

It is used to forecast sales patterns based on social media response, seasonal and consumer sentiment.

4. Sentiment Analysis (Basic)

Sentiment analysis deals with the evaluation of opinions of consumers in the form of online reviews and comments on social media.

Application in Study:

Previously used to categorize feedback according to positive, negative or neutral, which assists in determining the level of customer satisfaction.

The chapter reflects the analysis of primary data that was gathered on 100 respondents in Nagpur on their preferences, behaviour and the impact of social media on purchase of Haldiram products.

5.1 Frequency of Purchase

Frequency	Respondents	Percentage
Weekly	35	35%
Monthly	45	45%
Occasionally	20	20%

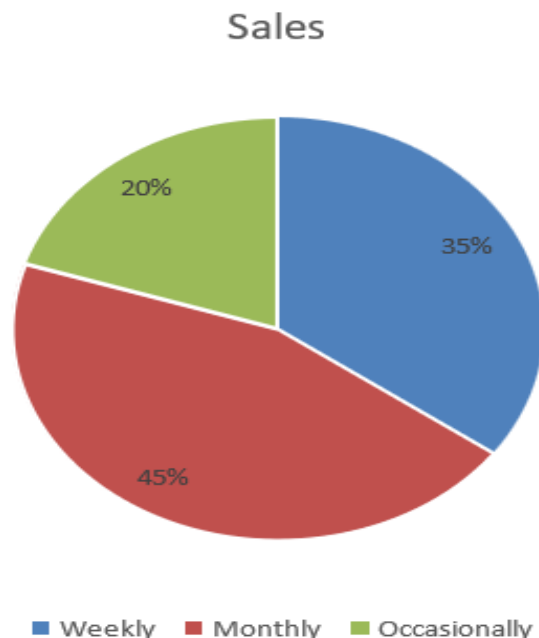


Fig 5.1 Frequency of Purchase

Interpretation:

The purchase decision interpretation of the purchase decision of most consumers is regular consumption behaviour as most consumers buy the products of Haldiram on a regular basis, that is, monthly.

VI. RESULTS AND DISCUSSION

The data analysis demonstrates that some valuable information can be obtained concerning consumer behaviour and the application of social media analytics to sales forecasting.

On the one hand, the research proves that Haldiram faces a good brand awareness and consumer loyalty in Nagpur. Most of the respondents are average consumers meaning that there are no fluctuations in the demand base. Taste and quality turn out to be the most persuasive factors, which contribute to the significance of product consistency.

Secondly, social media is important in the influence of consumer choice. A high proportion of the participants said that they had been influenced by advertisements on social media, by the work of the influencers, and online reviews. It indicates that the digital platforms are not only important marketing tools but also central to consumer perception.

Third, the interest of consumer and the demand of the

product are closely connected with the engagement metrics, which include likes, comments, and shares. The campaign during the festive period has high levels of engagement which means that the campaign is more visible and there are greater chances of making more sales. This underscores the forecasting power of social media analytics in predicting the patterns of demand. Moreover, the analysis of online feedbacks is used to understand the customer satisfaction and where to improve. Favourable attitude is linked to repeat buying and unfavourable feedback may influence brand image in case of inaction.

VII. FINDINGS AND DISCUSSION

VII.1 Key Findings

- Hadiram has a good brand awareness among the Nagpur consumers.
- The majority of consumers buy their products on a regular basis implying the existence of a stable demand.
- The main issues that affect the purchasing decisions are taste and quality.
- The consumer behaviour is greatly influenced by social media.
- This is because Instagram is the most powerful tool among users.
- Reviews and ratings online have a very strong influence in purchase decisions.
- The social media interaction assists in determining the trends of demand.
- It is possible to predict based on digital data that sales would be higher during festive seasons.

VII.2 Discussion

The results clearly reveal that consumers no longer prefer traditional prices and availability as the only factors affecting their behaviour of buying. Rather, online communication and social media presence have become essential factors in the buying decision-making.

The high persuasiveness of social media implies that businesses have to be concerned with establishing an active online presence. Instagram and YouTube platforms are not only able to build the brand presence, but also provide a chance to interact directly with consumers. This engagement creates trust and

loyalty to the brand.

In terms of prediction, social media analytics can offer real-time data that can assist companies to predict the market trend more effectively. As opposed to the conventional approaches, which are based on historical data, social media insights reflect the sentiment of the consumers and the new preferences of consumers.

VIII. LIMITATIONS OF THE STUDY

The research has some limitations which must be observed when analyzing the findings:

- This study is also restricted to the city of Nagpur only, and this might not reflect the market in general.
- It is possible that the sample size of 100 respondents does not adequately represent various consumer behaviour.
- The research is based on self-reported information, and this information can be subject to biases or inaccuracies.
- The internal company data were limited and this hindered further analysis.

The analytics of social media applied to the research is a simplistic one that lacks sophisticated tools and algorithms. The amount of data that was collected and analyzed was restricted by time.

IX. FUTURE DIRECTION OF THE RESEARCH.

The study leaves a number of opportunities to the further research:

- The research can be extended to other cities or regions so as to get a wider picture.
- The future studies can use more complex analytical methods like machine learning and big data analytics.
- Comparative analysis of various brands of FMCG can bring more insight into the competition in the market.
- Accuracy can be increased with the integration of real-time social media data analytics tools.
- The effects of using the new tools such as short-video apps on consumer behaviour can be investigated through further research.
- Longitudinal study can be done to examine the trend of consumer behaviour.

X. CONCLUSION

The objective of the current research was to examine how social media analytics can be used in consumer behaviour analysis and sales prediction, and make special reference to Haldiram Nagpur. The results clearly show that social media websites have emerged as strong assets in influencing their consumer choice and market demand.

The study points out that, taste, quality and brand reputation are still very important in consumer behaviour. Nonetheless, the online effects, online reviews, social media interactions, and influencer marketing have made it much more effective. Before consumers make a purchase decision, they are paying much emphasis on digital content and this makes social media a very critical aspect of marketing strategies.

Another conclusion that has been reached in the study is that sales forecasting can be successfully implemented with the help of social media analytics. Through engagement measurement and consumer sentiment analysis, companies can learn the demand patterns, predict trends in each season, and enhance their decision-making. This not only increases the accuracy of forecasting but also minimizes the uncertainty in the operations of the business.

Nagpur is a strong brand of Haldiram and with its increasing digital interaction, it has substantial leverage in comprehending the preferences of the consumers in the case of Haldiram Nagpur. Combining the cultural advantages with the latest analytics solutions can help the organization to stay afloat in the evolving FMCG market.

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