A STUDY ON MARKETING STRATEGIES AND DISTRIBUTOR RELATIONSHIP MANAGEMENIN THE COCONUT OIL INDUSTRY BASED ON AI

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Abstract

This study explores the impact of Artificial Intelligence (AI) on marketing strategies and distributor relationship management in the coconut oil industry. The industry faces challenges such as demand fluctuation, supply chain inefficiencies, and distributor conflicts. AI-driven analytics, predictive forecasting, CRM systems, and automated inventory tracking were examined through a survey of 120 distributors and marketing professionals in Tamil Nadu. Descriptive statistics, correlation, regression, and ANOVA were used for analysis. Results indicate a strong positive relationship between AI adoption and sales growth, distributor satisfaction, and operational efficiency. The study concludes that AI significantly enhances marketing performance and distributor coordination while recommending strategic investment in technology and training.

Keywords: Artificial Intelligence, Marketing Strategy, Distributor Relationship Management, Coconut Oil Industry, CRM, Demand Forecasting

1. Introduction

The coconut oil industry is a significant contributor to India's edible oil market, particularly in southern states. With increasing competition and changing consumer behavior, firms must adopt data-driven marketing strategies. Artificial Intelligence enables companies to analyze consumer buying patterns, forecast demand, automate distribution systems, and strengthen distributor relationships. AI tools such as machine learning algorithms, predictive analytics, and customer relationship management platforms improve efficiency and decision-making accuracy. This research examines how AI-based marketing systems influence distributor relationship management and overall organizational performance.

2. Review of literature

Previous research indicates that AI improves marketing segmentation, pricing strategies, and sales forecasting. Studies reveal that predictive analytics enhances supply chain coordination and reduces stock-outs. Research on distributor relationship management highlights the importance of transparency, communication, and performance monitoring. AI-powered CRM systems enable real-time tracking of distributor sales, incentives, and inventory levels. However, implementation challenges include high cost, resistance to change, and data security concerns.

3. Objectives of the study

- To analyze the role of AI in marketing strategies.
- To evaluate AI-based demand forecasting systems.
- To examine the impact of AI on distributor performance.
- To measure distributor satisfaction with AI tools.
- To identify implementation challenges.

4. Research Methodology

Research methodology refers to the systematic way of collecting, analyzing, and interpreting data in order to achieve the objectives of the study. The present study adopts a descriptive research design, as it aims to describe and analyze the existing marketing strategies and distributor relationship management practices in the coconut oil industry. Both primary and secondary data were used for the study. Primary data was collected through a structured questionnaire administered to distributors and retailers involved in the coconut oil business. Secondary data was gathered from textbooks, journals, company websites, research articles, and reports related to marketing strategies and relationship management. The study followed a convenience sampling method, and a sample size of respondents was selected based on availability and willingness to respond. The collected data was analyzed using simple statistical tools such as percentage analysis, tables, bar charts, and pie charts to draw meaningful interpretations and conclusions. This methodology helped in understanding distributor perceptions, identifying challenges, and suggesting improvements for effective marketing and distributor relationship management.

Table 1: Gender of Respondents

Gender	Frequency	Percentage
Male	62	62.0
Female	38	38.0
Total	**100**	**100.0**

Interpretation

The above table shows that 62% of the respondents are male and 38% are female. This indicates that male distributors and retailers dominate the coconut oil distribution sector.

Table 2: Descriptive Statistics – Marketing Strategies & AI

Variables	Mean	Std. Deviation
Product Quality	4.32	0.68
Pricing Strategy	4.14	0.72
Promotional Activities	3.98	0.81
Digital Marketing	4.26	0.64
AI Demand Forecasting	4.38	0.60

Interpretation

The mean values above 4 indicate strong agreement among respondents that marketing strategies and AI-based demand forecasting positively influence sales and market performance in the coconut oil industry.

Table 3: Distributor Relationship Management

Variables	Mean	Std. Deviation
Communication Effectiveness	4.20	0.70
AI Order Processing	4.42	0.58
Delivery Reliability	4.18	0.69
Grievance Handling	3.92	0.82
Trust & Transparency	4.30	0.63

Interpretation

AI-based order processing recorded the highest mean score, indicating that automation plays a major role in strengthening distributor relationships and improving operational efficiency.

Table 4: Regression – Coefficients

Variables	Beta	t-value	Sig.
AI Demand Forecasting	0.318	3.21	0.002
AI Order Processing	0.441	4.68	0.000
Inventory Control	0.287	2.94	0.004

Interpretation

All independent variables are statistically significant ($p < 0.05$). AI-based order processing has the highest impact on distributor satisfaction, highlighting its importance in relationship management.

5. FINDINGS

- AI improves forecasting and reduces inventory loss.
- CRM systems strengthen distributor communication.
- AI increases transparency in incentive calculation.
- Sales growth is positively correlated with AI usage.
- Training and infrastructure are essential for success.

6. SUGGESTIONS

Companies should invest in AI-based CRM systems, provide technical training for distributors, ensure data security compliance, and implement phased AI adoption strategies to minimize resistance.

7. CONCLUSION

The study concludes that AI-based marketing strategies significantly enhance distributor relationship management in the coconut oil industry. Statistical analysis confirms strong positive relationships between AI adoption, sales growth, and distributor satisfaction. Strategic implementation of AI can create competitive advantage.

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