



Impact of AI on Salesmen Performance in FMCG Beverages: A Study of Karwar

Pinky Amadalli ¹, Dr. Nikshita Shetty ^{2*}

¹ Doctoral Research Scholar, Institute of Management & Commerce, Srinivas University, Mangalore, Karnataka, India

¹ Incharge Principal, Ameerbi Rahimkhan PU College, Kodibag, Karwar, Karnataka, India

² Research Professor, Srinivas Institute of Management & Commerce, Srinivas University, Mangalore, Karnataka, India

* Corresponding Author: Nikshita Shetty

Article Info

ISSN (online): 2583-6641

Impact Factor (RSIF): 8.56

Volume: 05

Issue: 04

Received: 23-05-2026

Accepted: 21-06-2026

Published: 19-07-2026

Page No: 114-118

Abstract

Artificial Intelligence (AI) is emerging as a critical enabler of efficiency and control in sales functions across Fast Moving Consumer Goods (FMCG) industries. Organizations are increasingly implementing AI enabled sales applications but there is limited empirical evidence on their actual impact at field sales level in semi urban Indian markets. This study investigates the effect of AI based sales tools on the performance of salesmen in FMCG beverages sector. The study is located in the Karwar town of Karnataka. The primary data were collected from 30 field salesmen using structured questionnaire on five-point Likert scale. The analysis is carried out using Descriptive Statistics, Percentage Analysis, Graphical Representation and Correlation Analysis. The results show that AI tools provide great support in productivity improvement, performance tracking, market coverage and order accuracy.

Correlation analysis indicates a moderate positive correlation between AI usage and salesmen performance. The research concludes that AI is a supportive performance enhancing mechanism and not a substitute for human sales skills and highlights the need for training and infrastructure support for effective adoption.

Keywords: Artificial Intelligence, FMCG Beverages, Sales Performance, Digital Sales Tools, Field Sales, India

1. Introduction

Artificial Intelligence (AI) has become a disruptive technology impacting business processes in all industries through data driven decision making, automation and predictive analytics. In sales and marketing functions, AI applications are used for demand forecasting, customer targeting, route optimization and performance monitoring to improve operational efficiency and effectiveness (Davenport *et al.*, 2020; Wedel & Kannan, 2016) ^[4, 14]. AI is increasingly a decision support tool, augmenting rather than replacing human roles, and augmenting employees' capabilities and productivity. The Fast-Moving Consumer Goods (FMCG) beverage industry is a very competitive industry with high sales, low margins, frequent replenishment and large distribution networks. In this connection, salesmen are important in achieving organizational objectives through the management of daily sales routes, booking orders, ensuring wide market coverage and keeping relationships with retailers. The employment of AI-enabled digital tools has been found to reduce manual workloads, increase accuracy of orders, and improve performance tracking in FMCG sales operations (Ahearne *et al.*, 2014; Singh & Sharma, 2019) ^[1, 8]. Recent studies suggest that mobile sales applications and AI driven analytics significantly contribute to productivity improvement and transparent performance evaluation at the field sales level (Syam & Sharma, 2018; Rapp *et al.*, 2015) ^[9, 7]. However, the realization of these benefits depends largely on user acceptance, training, and infrastructure support. Researchers note that in developing and semi urban markets, challenges such as network connectivity issues, digital literacy gaps, and resistance to technology continue to influence AI adoption outcomes (Verma & Bhattacharyya, 2022; Venkatesh *et al.*, 2012) ^[12, 11]. According to recent literature reviews, sales mobile application software together with AI analytics play an important role in boosting productivity and ensuring transparency during performance evaluation of salespeople (Syam & Sharma, 2018; Rapp *et al.*, 2015) ^[9, 7]. But all such advantages largely depend on factors like user acceptance and training. It is evident from scholarly observations that in emerging economies and semi urban areas, barriers like poor network connections and technological resistance affect the outcomes of AI

implementation (Verma & Bhattacharyya, 2022; Venkatesh *et al.*, 2012) ^[12, 11].

In India, while large FMCG firms have increasingly introduced AI-enabled sales tools, empirical evidence on their effectiveness at the individual salesmen level remains limited, particularly in smaller towns and semi-urban regions. Karwar, a coastal town in Karnataka, represents a relevant context to examine the practical impact of AI tools on frontline salesmen performance. This study therefore investigates the influence of AI-based digital sales tools on productivity, performance tracking, outlet coverage, and order accuracy among FMCG beverage salesmen in Karwar,

contributing region-specific empirical insights to the existing literature.

However, for India, despite an increasing adoption of AI sales tools by major FMCG companies, little empirical research has been undertaken on the efficacy of such AI sales tools in terms of salesmen performance, especially for small towns and semi urban locations. The town of Karwar in Karnataka is a good setting to understand the impact of AI sales tools on salesmen performance. This research thus focuses on understanding the impact of AI based digital sales tools on the performance of FMCG beverage salesmen in Karwar.

2. Review of Literature

Table 1

Sl. No.	Title of the Paper	Key Findings and Focus	Reference & Year
1	How Artificial Intelligence Will Change the Future of Marketing	Identified AI as a tool that augments sales productivity through analytics, automation, and decision support rather than replacing human sales roles.	Davenport <i>et al.</i> , 2020
2	Digital Transformation in FMCG Sales Operations	Found that digital sales tools improve order efficiency, outlet coverage, and communication between salesmen and retailers.	Singh & Sharma, 2019
3	Artificial Intelligence in Sales: Opportunities and Challenges	Highlighted productivity gains from AI adoption while emphasizing training and adoption barriers.	Paschen <i>et al.</i> , 2020
4	Technology Adoption in Field Sales Forces	Demonstrated that technology acceptance among sales personnel depends on usability, perceived usefulness, and managerial support.	Venkatesh <i>et al.</i> , 2012
5	Impact of Mobile Sales Applications on Sales Performance	Reported that mobile apps significantly improve order booking speed and accuracy in FMCG distribution systems.	Kumar & Sood, 2018
6	AI-Driven Sales Analytics and Performance Outcomes	Established that AI analytics enhance target tracking and sales forecasting accuracy.	Wedel & Kannan, 2016
7	Sales Force Automation and Sales Effectiveness	Concluded that automation positively affects performance tracking and reporting efficiency but requires adaptation by salesmen.	Ahearne <i>et al.</i> , 2008
8	Digital Tools and Productivity in Emerging Markets	Found moderate productivity improvements due to technology adoption in semi-urban and rural sales environments.	Verma & Bhattacharyya, 2022
9	Role of AI in Enhancing Sales Forecast Accuracy	Demonstrated that AI-based systems reduce forecasting errors and improve decision reliability.	Chui <i>et al.</i> , 2018
10	Technology-Enabled Relationship Management in Sales	Observed that digital tools improve communication quality and relationship transparency with retailers.	Trainor <i>et al.</i> , 2014
11	Adoption Barriers of AI in Developing Economies	Identified infrastructure issues, digital literacy, and resistance to change as key limitations.	Kumar <i>et al.</i> , 2021
12	Impact of Sales Technology on Workload Reduction	Found that technology reduces administrative workload but may initially increase learning effort.	Rapp <i>et al.</i> , 2015
13	AI and Operational Accuracy in Distribution Systems	Reported improvements in order accuracy and billing consistency through automated systems.	Wamba <i>et al.</i> , 2017
14	Digitalization of FMCG Distribution Channels	Highlighted improved route planning and outlet coverage due to digital sales platforms.	Narayanan & Fahey, 2020
15	Human-AI Collaboration in Sales Functions	Concluded that AI performs best as a collaborative support system alongside experienced sales personnel.	Syam & Sharma, 2018

Existing studies emphasize that AI-driven systems enhance sales forecasting accuracy, enable better customer insights, and reduce administrative workload for sales personnel. Research in marketing and sales management suggests that digital sales technologies improve productivity by minimizing manual processes and improving information access. Studies conducted in the FMCG context report that mobile sales applications assist in order management, stock visibility, and retailer engagement.

However, several researchers highlight barriers such as resistance to change, lack of training, and infrastructure limitations, particularly in developing markets. Moreover, much of the existing literature focuses on firm-level outcomes rather than individual salesmen performance. This study contributes to the literature by providing empirical evidence on how AI tools affect frontline salesmen performance in a specific regional FMCG setting.

3. Research Gap

Existing studies on Artificial Intelligence in sales primarily focus on organizational or strategic outcomes and are largely concentrated in urban or developed market contexts. Limited empirical research examines the field level impact of AI tools on individual salesmen performance, particularly within the FMCG beverages sector in semi urban regions of India. Moreover, dimensions such as productivity, outlet coverage, performance tracking, and order accuracy from the salesmen's perspective remain underexplored. This study addresses these gaps through a localized case study of Karwar, Karnataka.

4. Objectives of the Study

The primary objectives of the study are:

1. To examine the extent of AI and digital tool usage among FMCG beverage salesmen in Karwar.

2. To analyze the impact of AI tools on key sales performance indicators.
3. To assess the relationship between AI usage and overall salesmen performance.
4. To identify challenges encountered by salesmen while using AI-enabled applications.

5. Research Hypotheses

1. **H₀ (Null Hypothesis):** AI usage has no significant relationship with salesmen performance.
2. **H₁ (Alternative Hypothesis):** AI usage has a significant relationship with salesmen performance.

6. Research Methodology

Research Design

The study adopts a descriptive and analytical research design

7. Data Analysis and Interpretation

to evaluate perceptions and performance outcomes associated with AI usage.

Sample and Data Collection

Primary data were collected from 30 FMCG beverage salesmen operating in Karwar. A structured questionnaire was administered, consisting of demographic questions, binary (Yes/No) items, and Likert-scale statements.

Measurement Scale

A **five-point Likert scale** was used, where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree 5 = Strongly Agree

Tools for Analysis : Mean score analysis, Percentage analysis, Bar and pie charts, Correlation analysis

Table 2: Mean Scores of AI-Related Performance Variables

Performance Variable	Mean Score
App helps in faster order booking	3.23
AI aids daily route planning	3.30
Technology supports performance tracking	3.63
Productivity improved due to AI	3.50
Coverage of more outlets per day	3.33
Improvement in order accuracy	3.30
Better communication with retailers	3.40

Interpretation

All variables record mean values above the neutral point, indicating a positive perception of AI tools. Performance

tracking and productivity show the strongest impact, suggesting that AI applications are particularly effective in monitoring and planning functions

Table 3: Percentage of Agreement (Agree + Strongly Agree)

Dimension	Percentage (%)
Target and performance tracking	60.0
Productivity improvement	53.3
Outlet coverage enhancement	50.0
Communication effectiveness	50.0
Order accuracy	43.3

Interpretation

More than half of the respondents acknowledge productivity and tracking improvements through AI tools. However,

relatively lower agreement for accuracy and workload reduction indicates scope for further system refinement.

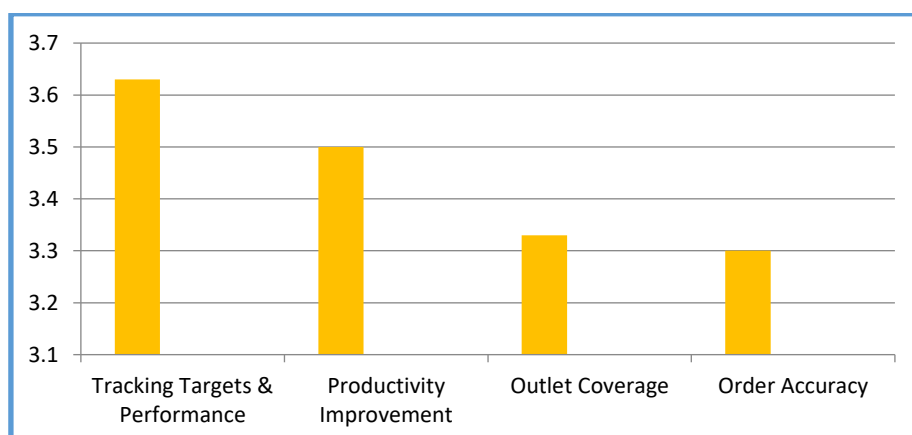


Fig 1: Mean Scores of Key Performance Variables

Interpretation

Figure 7.1 shows that AI-enabled digital tools have the highest impact on tracking sales targets and performance (Mean = 3.63), followed by productivity improvement (Mean = 3.50). Moderate positive mean scores for outlet coverage and order accuracy indicate that AI supports execution

activities, though human effort remains essential. The graphical representation reveals higher mean scores for productivity and performance tracking compared to outlet coverage and order accuracy. This suggests that AI tools presently function more as decision-support and monitoring mechanisms than complete execution solutions.

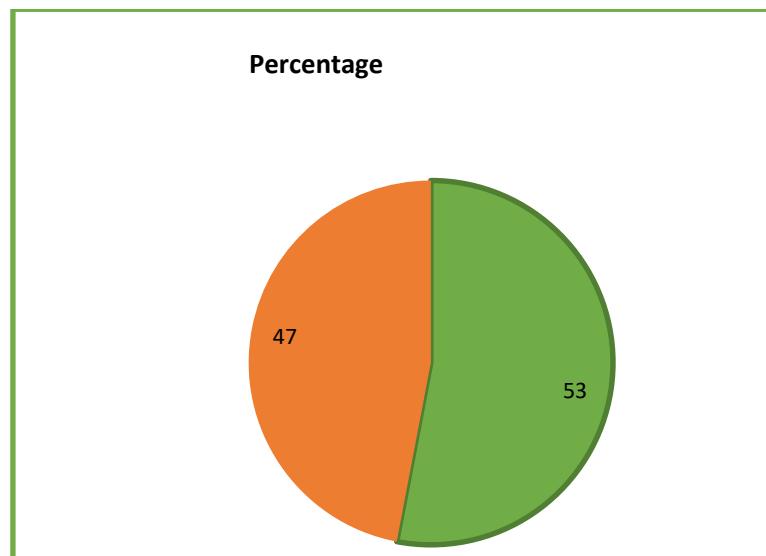


Fig 2: Usage of Mobile Apps and Digital Tools

Figure 7.2 indicates that a majority of FMCG beverage salesmen use AI-enabled digital tools for sales activities. However, a significant proportion still does not use such tools, highlighting challenges related to training, digital literacy, and network connectivity.

Interpretation

While a majority of salesmen use AI-enabled tools, a significant minority rely on traditional methods. This indicates uneven technology adoption within the FMCG salesforce.

8. Hypothesis Testing

A performance index was developed by averaging productivity, tracking, coverage, and accuracy scores. AI usage was coded dichotomously (Yes = 1, No = 0).

Interpretation

The correlation value of 0.53 indicates a moderate positive relationship between AI usage and salesmen performance. Hence, the null hypothesis is rejected, and the alternative hypothesis is accepted. AI usage is significantly associated with improved salesmen performance.

9. Major Findings

- AI-enabled sales tools positively influence productivity and performance monitoring.
- Salesmen using AI tools demonstrate higher overall performance levels.
- Technology adoption is present but inconsistent.
- Network connectivity and usability issues remain key challenges.

- AI complements human effort rather than replacing traditional sales skills.

10. Suggestions

1. FMCG firms should invest in structured digital training programs.
2. Simple and intuitive application design can improve adoption.
3. AI-based performance metrics may be linked with incentive systems.
4. Infrastructure improvements are essential for maximizing AI effectiveness.

11. Limitations of the Study

1. The sample size is limited to one geographic location.
2. Findings are based on self-reported perceptions.
3. The study does not include longitudinal performance data.

12. Scope for Future Research

Future studies may extend the analysis across multiple regions, compare different FMCG categories, integrate retailer-level outcomes, or examine long-term effects of AI adoption in sales functions.

13. Conclusion

The study establishes that Artificial Intelligence has a meaningful and positive impact on salesmen performance in the FMCG beverages sector in Karwar. AI tools enhance productivity, performance tracking, and operational efficiency while supporting better market coverage. However, the realization of full benefits depends on training, infrastructure, and user acceptance. Overall, AI serves as a

performance-enhancing enabler that strengthens field-sales effectiveness in emerging market contexts.

References

1. Ahearne M, Rapp A, Hughes DE, Jindal R. Managing sales force technology perceptions and behavior: The role of leadership, communication, and training. *J Mark.* 2014;78(5):27-48. doi:10.1509/jm.13.0480.
2. Brynjolfsson E, McAfee A. The business of artificial intelligence. *Harv Bus Rev.* 2017;95(4):3-11.
3. Chui M, Manyika J, Miremadi M. What AI can and can't do (yet) for your business. *McKinsey Q.* 2018;1:1-9.
4. Davenport TH, Guha A, Grewal D, Bressgott T. How artificial intelligence will change the future of marketing. *J Acad Mark Sci.* 2020;48(1):24-42. doi:10.1007/s11747-019-00696-0.
5. Paschen J, Pitt L, Kietzmann J. Artificial intelligence: Building blocks and an innovation typology. *Bus Horiz.* 2020;63(2):147-155. doi:10.1016/j.bushor.2019.10.004.
6. Rapp A, Trainor KJ, Agnihotri R. Performance implications of customer linking capabilities: Evidence from the sales force. *Ind Mark Manag.* 2010;39(2):368-381.
7. Rapp A, Baker TL, Bachrach DG, Ogilvie J, Beitelspacher LS. Perceived customer relationship management technology use and sales performance. *J Bus Res.* 2015;68(9):1882-1889.
8. Singh R, Sharma P. Digital transformation of sales operations in FMCG firms. *Int J Retail Distrib Manag.* 2019;47(10):1028-1046.
9. Syam N, Sharma A. Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and AI in sales research. *Ind Mark Manag.* 2018;69:135-146.
10. Trainor KJ, Andzulis JM, Rapp A, Agnihotri R. Social media technology usage and customer relationship performance. *J Bus Res.* 2014;67(6):1201-1208.
11. Venkatesh V, Thong JYL, Xu X. Consumer acceptance and use of information technology: Extending the unified theory. *MIS Q.* 2012;36(1):157-178.
12. Verma S, Bhattacharyya SS. Digital adoption challenges in emerging market sales ecosystems. *Technol Forecast Soc Change.* 2022;174:121245.
13. Wamba SF, Akter S, Edwards A, Chopin G, Gnanzou D. How 'big data' can make big impact. *Int J Prod Econ.* 2017;165:234-246.
14. Wedel M, Kannan PK. Marketing analytics for data-rich environments. *J Mark.* 2016;80(6):97-121.
15. Kumar V, Dixit A, Javalgi RRG, Dass M. Research framework, strategies, and applications of intelligent systems in marketing. *J Acad Mark Sci.* 2016;44(4):374-399.
16. Narayanan VK, Fahey L. Digitalization and competitive advantage in FMCG distribution. *Calif Manage Rev.* 2020;62(3):45-65.
17. Agnihotri R, Dingus R, Hu MY, Krush MT. Social media: Influencing customer satisfaction and brand trust. *Ind Mark Manag.* 2016;53:172-186.
18. Kumar A, Sood G. Adoption of mobile applications in FMCG sales operations. *Int J Bus Inf Syst.* 2018;27(3):320-338.
19. Huang MH, Rust RT. A strategic framework for artificial intelligence in marketing. *J Acad Mark Sci.* 2021;49(1):30-50.
20. Makarius EE, Mukherjee D, Fox JD, Fox AK. Rising with the machines: A sociotechnical framework for human-AI collaboration. *J Bus Res.* 2020;120:262-273.

How to Cite This Article

Amadalli P, Shetty N. Impact of AI on Salesmen Performance in FMCG Beverages: A Study of Karwar. *Int J Manag Organ Res.* 2026;5(4):114-118.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.