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Hariharasudhan S

PG scholar, Department of Agricultural Extension Education, KSNUAHS, College of Agriculture, School of Post Graduation Studies, Shivamogga, Karnataka, India

Basavaraj Beerannavar

Professor and Editor, University Communication Centre, KSNUAHS, Shivamogga, Karnataka, India

Sahana S

Professor and Head, Department of Agricultural Extension Education, KSNUAHS, College of Agriculture, School of Post Graduation Studies, Shivamogga, Karnataka, India

Kiran Kumar R Patil

Assistant Professor, Department of Agricultural Economics, KSNUAHS, College of Agriculture, School of Post Graduation Studies, Shivamogga, Karnataka, India

Archana Bhajantri

Assistant Professor, Department of Horticulture, KSNUAHS, College of Agriculture, School of Post Graduation Studies, Shivamogga, Karnataka, India

Corresponding Author: Hariharasudhan S

PG scholar, Department of Agricultural Extension Education, KSNUAHS, College of Agriculture, School of Post Graduation Studies, Shivamogga, Karnataka, India

Analysis of marketing behaviour of agro-input retailers using COM-B model

Hariharasudhan S¹, Basavaraj Beerannavar², Sahana S³, Kiran Kumar R Patil⁴, Archana Bhajantri⁵

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ABSTRACT

The agricultural input marketing sector in India is undergoing significant transformations in terms of scale of operations, participation and diversification. The present study was undertaken to assess the marketing behaviour of agro-input retailers and examine the contribution of capability, opportunity and motivation using the COM-B framework. The study was conducted among 120 agro-input retailers in Shivamogga district of Karnataka. Marketing behaviour was assessed through multiple linear regression analysis to identify the factors associated with the behavioural outcome. The findings indicated that marketing behaviour was predominantly at a medium level. The COM-B model explained 51.40 per cent of the variation in marketing behaviour ($R^2 = 0.514$), with the overall model being significant ($F = 6.355, p < 0.01$). Among capability factors, inventory and stock management ($b = 0.225, p < 0.01$), use of customer insights for brand positioning ($b = 0.212, p < 0.01$), and understanding market trends, customer needs and seasonal demand ($b = 0.311, p < 0.01$) were significant. Opportunity factors included access to information required for market analysis ($b = 0.201, p < 0.05$) and attracting target customers while strengthening customer relationships ($b = 0.150, p < 0.05$). Under motivation, maximising business profitability through increased sales and efficient management ($b = 0.313, p < 0.01$) and the motivation to outperform competing retailers ($b = 0.268, p < 0.01$) were significant. Overall, the findings suggest that effective marketing behaviour is associated with a combination of managerial capabilities, market awareness, information access, customer orientation and business motivation. Strengthening these areas through need-based training, improved access to market information and managerial and digital capacity building could enhance the effectiveness of agro-input retailers. Such efforts may also strengthen their role as market intermediaries and support more responsive input services for farmers.

Keywords: Agro-input retailers, Marketing behaviour, COM-B model, Inventory and stock management, Market analysis, Profit maximization

1. Introduction

Agriculture occupies a central position in the socio-economic development of India and continues to be closely associated with food security, rural livelihoods and the overall development of the rural economy. The agriculture and allied sector contribute significantly to national income and supports a large proportion of the population, making improvements in agricultural productivity and sustainability important for inclusive development. The agriculture and allied sector have been recorded compound annual growth of 8.83 % for the period 2014-15 to 2023-24 at current prices (PIB, 2026)^[1]. The sector is also undergoing continuous transformation due to changing climatic conditions, emerging technologies, changing consumer and farmer requirements and the increasing need for efficient use of natural resources (Narayan *et al.*, 2021)^[2].

The performance of agriculture depends not only on farmers' knowledge and management practices but also on timely access to quality agricultural inputs. Seeds, fertilizers, plant protection chemicals, bio-inputs and other farm inputs constitute important components of modern agricultural production. Their availability at the right time, in appropriate quantity and with suitable technical guidance can influence farmers' ability to adopt improved production technologies. Therefore, an efficient input delivery system is an essential component of agricultural development (Muduli *et al.*, 2024)^[3].

Within this input delivery system, agro-input retailers occupy an important position at the interface between input suppliers and farmers. They facilitate the availability of agricultural inputs at the local level and maintain regular contact with farming communities. The National Institute of Agricultural Extension Management (MANAGE) recognizes input dealers as an important source of farm information and identifies them as a potential link in strengthening agricultural extension services and the Diploma in Agricultural Extension Services for Input Dealers (DAESI) programme was developed to strengthen their technical competence and enable them to function as *para*-extension professionals (Gattupalli *et al.*, 2025)^[4].

The role of agro-input retailers is therefore gradually extending beyond the conventional function of selling agricultural inputs. Farmers frequently approach retailers for information regarding the selection, quantity

and use of inputs (Purnima *et al.*, 2018)^[5]. This places retailers in a position where their technical knowledge, communication skills and understanding of farmers' requirements can influence the quality of services provided at the point of input purchase (Meti, 2017)^[6]. Recent initiatives by ICAR and other agricultural institutions have also emphasized the importance of strengthening the technical capacity of input dealers so that they can contribute to the scientific and sustainable use of agricultural technologies (Prasad *et al.*, 2019; Meena and Badhala, 2024)^[8, 7].

In this context, marketing assumes considerable importance in the functioning of agro-input retail businesses. Marketing behaviour is not limited to selling products but also it encompasses understanding market trends, assessing customer requirements, maintaining product availability, managing inventory, developing customer relationships, accessing market information and responding to competition. For agro-input retailers, these activities are particularly relevant because agricultural demand is influenced by cropping seasons, local production conditions, farmer preferences, input prices and emerging production technologies. Effective marketing can therefore help retailers respond to farmers' requirements while maintaining the sustainability and efficiency of their businesses.

At the same time, marketing behaviour is influenced by several interconnected personal and environmental factors. A retailer may possess adequate knowledge and skills but may not be able to perform effectively when access to information, customer networks or other market opportunities is limited (Prasad *et al.*, 2019)^[8]. Similarly, motivation to increase sales or improve business performance may not translate into effective action without appropriate capabilities and opportunities. Hence, understanding marketing behaviour requires consideration of both the individual and the environment in which the retailer operates.

2. Methodology

The study was conducted among 120 licensed agro-input retailers selected from all seven taluks of Shivamogga district of Karnataka using a proportionate random sampling technique. Primary data were collected through a structured interview schedule developed in accordance with the objectives of the study. The study adopted an *ex-post-facto* research design, as the variables under investigation had already occurred and were not manipulated by the researcher. The marketing behaviour of agro-input retailers was assessed using the COM-B model developed by Michie *et al.* (2015)^[9]. The model conceptualizes behaviour (B) as being influenced by three major components, namely Capability (C), Opportunity (O) and Motivation (M). Capability represents the physical and psychological capacity of retailers to undertake marketing activities, opportunity refers to the external physical and social conditions that facilitate marketing behaviour, and motivation includes the reflective and automatic processes that influence behaviour (Michie *et al.*, 2015; Willmott *et al.*, 2021)^[9, 10]. Multiple linear regression analysis was employed to assess the contribution of the components of the COM-B model (Padma *et al.*, 2024)^[11]. The overall marketing behaviour is assessed with the help of four statements. The responses were obtained five-point continuum viz., strongly agree, agree, undecided, disagree and strongly disagree. A weightage of 5, 4, 3, 2, and 1, respectively assigned to the response categories. The total score ranged from 4 to 20. Based on the total score obtained the respondents are grouped into three categories by using mean and standard deviation. In addition to that the relationship between selected independent variables and marketing behaviour were analysed using chi-square test.

3. Results and discussion

3.1 Contribution of COM-B model components on marketing behaviour

The results of multiple regression analysis that was carried out to determine the contribution of capability, opportunity and motivation components of the COM-B model towards the marketing behaviour

of agro-input retailers presented in Table 1 shows that the model recorded an R (Gattupalli *et al.*, 2025)^[4] value of 0.514, indicating that the variables included in the model jointly explained 51.40 per cent of the variation in marketing behaviour. The adjusted R (Gattupalli *et al.*, 2025)^[4] value was 0.433, suggesting that the model retained 43.30 per cent of the variation after adjusting for the number of predictors included. The *F*-value of 6.355 was significant at one per cent level, indicating that the regression model as a whole was statistically significant.

Table 1. Model summary of multiple linear regression analysis of COM-B model

Model	R ² value	Adjusted R ²	F value
COM-B Model for Marketing Behaviour	0.514	0.433	6.355**

**Significant at 1% level of significance

The results presented in table 2 shows that among the capability components, the physical capability related to skills and provisions for inventory and stock management had a positive and significant contribution to marketing behaviour ($b = 0.225$, $t = 3.590$, $p < 0.01$), indicating that effective stock management supports product availability and timely response to seasonal demand. Under psychological capability, understanding market trends, customer needs and seasonal demand showed a positive and highly significant contribution ($b = 0.311$, $t = 4.804$, $p < 0.01$), while the ability to use customer insights for valuable brand positioning also contributed positively and significantly ($b = 0.212$, $t = 3.098$, $p < 0.01$). These findings highlight the importance of inventory management, market sensing and customer-oriented capabilities in strengthening the marketing behaviour of agro-input retailers. These results are in line with the observations reported in earlier studies by Morgan *et al.*, 2019^[12].

From the table it can be inferred that, adequate access to information required for market analysis under physical opportunity showed a positive and significant contribution to marketing behaviour ($b = 0.201$, $t = 2.971$, $p < 0.05$). The positive coefficient indicates that greater access to relevant market information was associated with higher marketing behaviour, while the magnitude of the coefficient suggests a meaningful contribution to the overall behaviour of retailers. Similarly, the ability to get target customers to try products/services and strengthen customer relationships under social opportunity had a positive and significant contribution ($b = 0.150$, $t = 2.341$, $p < 0.05$). This indicates that stronger customer-oriented interactions were associated with improved marketing behaviour.

Regarding motivation, maximising business profitability through increased sales and efficient business management under reflective motivation showed a positive and highly significant contribution to marketing behaviour ($b = 0.313$, $t = 4.440$, $p < 0.01$). The relatively high coefficient indicates that profitability-oriented motivation was one of the stronger contributors to marketing behaviour, suggesting that retailers with greater focus on sales growth and efficient management tended to exhibit stronger marketing practices. Similarly, strong motivation to outperform competing retailers under automatic motivation had a positive and highly significant contribution ($b = 0.268$, $t = 4.168$, $p < 0.01$). This indicates that competitive motivation was also an important driver of marketing behaviour, encouraging retailers to respond actively to customer needs, improve product availability and strengthen their market position. These findings are relevant with earlier studies of Gattupalli *et al.*, 2025^[4].

3.2 Overall marketing behaviour

The results presented in Table 3 revealed that more than half of the agro-input retailers (52.50%) had a medium level of overall marketing behaviour, followed by 25.83 per cent with a low level and 21.67 per cent with a high level of marketing behaviour. The predominance of the medium category indicates that most retailers demonstrated a moderate level of marketing practices, with scope for further im

provement in adopting more proactive and market-oriented strategies. Most retailers may have possessed adequate experience and familiarity with routine marketing activities such as maintaining customer relationships, arranging input supplies, providing basic product infor-

mation and responding to farmers' regular input requirements. However, their marketing practices may have remained largely conventional and focused on day-to-day business operations rather than systematic market development.

Table 2. Regression coefficients of COM components with Marketing behaviour ($n = 120$)

Sl. No.	Components	Estimate (b)	Std. error	't' value
1	Intercept	-1.043	0.808	0.241 NS
	I. Capability Physical capability			
2	Ability to organise farmer meetings and demonstrations	0.016	0.063	0.253 NS
3	Having skill and provisions for Inventory and stock management	0.225	0.063	3.590**
4	Competency in record keeping, billing management, and sales performance analysis.	-0.057	0.065	0.875 NS
	Psychological capability			
5	Ability to using customer insights to identify valuable brand positioning.	0.212	0.069	3.098**
6	Ability to understanding of market trends, customer needs and seasonal demand	0.311	0.065	4.804**
7	Discovering competitor's strategies and tactics.	-0.065	0.066	-0.983 NS
	II. Opportunity Physical opportunity			
8	Availability of appropriate storage space for agricultural inputs	0.089	0.066	1.357 NS
9	Favourable licensing procedures and regulatory support	-0.008	0.066	-0.118 NS
10	Having adequate access to information required for market analysis	0.201	0.067	2.971*
	Social opportunity			
11	Establishing retail outlets in areas with existing competitors	-0.073	0.066	-1.097 NS
12	Getting target customers to try our products/services and enhancing the quality of relationships with them	0.150	0.064	2.341*
	III. Motivation Reflective motivation			
13	Availability of attractive incentives and promotional support provided by manufacturers	0.026	0.062	0.414 NS
14	Maximising business profitability by increasing sales and efficient business management	0.313	0.070	4.440**
15	Availability of sales commissions and performance-based rewards	-0.017	0.065	-0.268 NS
	Automatic motivation			
16	Strong motivation to outperform competing retailers in the local market	0.268	0.064	4.168**
17	Personal satisfaction from assisting customers in fulfilling their needs	0.119	0.065	1.841 NS
18	Motivation to expand the scale and scope of business operations	0.045	0.067	0.669 NS

NS = Non-significant, **Significant at 1% level of significance, *Significant at 5% level of significance

The relatively lower proportion of retailers in the high category (21.67%) suggests that only a smaller group had adopted comparatively proactive and diversified marketing practices. These retailers may have had better access to information, stronger business networks, greater experience, better financial capacity and higher expo-

sure to modern marketing techniques. In contrast, the 25.83 per cent of retailers in the low category may have relied more heavily on traditional selling practices, with limited emphasis on market assessment, promotion, customer follow-up and business planning. These findings are in agreement with the findings reported by Muduli *et al.*, 2024^[3].

Table 3. Categorization of respondents according to overall marketing behaviour ($n = 120$)

Sl. No.	Category	Class interval	Frequency	Percentage
1	Low	< 9.29	31	25.83
2	Medium	9.29 - 13.09	63	52.50
3	High	> 13.09	26	21.67

3.3 Relationship between independent variables and marketing behaviour

The selected independent variables were analysed for their relationship with marketing behaviour through chi-square test. From Table 4, it can be observed that the some of the variables such as achievement motivation and decision-making ability had highly significant association with marketing behaviour of agro-input retailers at 1 per cent significance level. Further, education, experience in agro-input dealing, annual income from input dealing and self-confidence had signif-

icant association with marketing behaviour of agro-input retailers at 5 per cent significance level. Whereas, variables such as age, types of input dealing, risk orientation, scientific orientation and extension participation were found to be having no association on marketing behaviour of agro-input retailers.

The significant association of education and experience in input dealing with marketing behaviour may be attributed to the knowledge and practical skills acquired by agro-input retailers over time. Higher educational attainment may enable retailers to better understand technical

information, analyse market situations, communicate effectively with farmers and make informed business decisions. Similarly, greater experience in input dealing provides continuous exposure to farmers, suppliers and market conditions, helping retailers develop practical knowledge of customer preferences, seasonal demand, product movement and changing market requirements. These factors may contribute to the adoption of more systematic and market-oriented marketing practices. These findings are supporting the results of Amitava *et al.*, 2021^[13].

The significant relationship of annual income and achievement motivation with marketing behaviour may be explained by the financial capacity and goal-oriented nature of the retailers. Retailers with higher annual income may have greater flexibility to maintain adequate stocks, respond to customer requirements and undertake business-related activities. Likewise, retailers with higher achievement motivation are likely to set goals, seek improved performance and make greater efforts to achieve better business outcomes. Thus, financial resources and motivational orientation may together encourage retailers to adopt more proactive and effective marketing practices. These results are in line with findings of Panja *et al.*, 2024^[14].

Table 4. Association of independent variables with marketing behaviour ($n = 120$)

Sl. No.	Independent variables	Chi-square statistic
1	Age	1.653 NS
2	Education	9.349*
3	Experience in agro-input dealing	10.614*
4	Types of input dealing	2.218 NS
5	Annual income from input dealing	33.584*
6	Achievement motivation	7.163**
7	Risk orientation	2.175 NS
8	Scientific orientation	3.864 NS
9	Self-confidence	8.374*
10	Decision making ability	11.536**
11	Extension participation	2.458 NS

NS = Non-significant, **Significant at 1% level of significance, *Significant at 5% level of significance

4. Conclusion

The study concludes that the marketing behaviour of agro-input retailers is influenced by the combined effect of their capabilities, market opportunities and business motivation. Effective marketing extends beyond the routine sale of agricultural inputs and involves understanding market trends, anticipating farmers' needs, managing inventory efficiently and developing meaningful customer relationships. Strengthening these areas can enable retailers to respond more effectively to changing market demands. The findings indicate that access to relevant market information and opportunities for interaction with customers are important for translating business motivation into effective marketing practices. Profit orientation and competitive motivation can encourage retailers to improve their market responsiveness; however, sustained improvement requires adequate knowledge, practical skills and a supportive market environment. Thus, capability, opportunity and motivation need to be strengthened together rather than addressing them in isolation. Agro-input retailers also have considerable potential to contribute to agricultural advisory and service delivery because of their regular interaction with farmers. Enhancing their technical, managerial and communication abilities can help them function more effectively as a link between agricultural technologies, input services and farmers.

Declaration of AI use

The author declares that Artificial Intelligence (AI) tools were used only as supportive aids for language refinement, grammar correction and improving clarity of presentation. The research design, data col-

lection, analysis, interpretation and conclusions were independently carried out by the researcher. The author takes full responsibility for the accuracy and originality of the content.

Authors' contributions

HS (Amitava *et al.*, 2021)^[13] designed the study, conducted the field investigation, collected and analyzed the data, interpreted the results and prepared the first draft of the manuscript. BB (Gattupalli *et al.*, 2025)^[4] supervised the research, reviewed the methodology, assisted in interpretation of the findings and critically revised the manuscript. SS (Meena *et al.*, 2024)^[7], KK⁴ and BA (Michie *et al.*, 2015)^[9] contributed to data interpretation, manuscript review and refinement of the scientific content. All authors read and approved the final manuscript.

Conflict of interest

The authors declare that they have no conflict of interest.

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