



Drivers of Lean Marketing Readiness among E-Grocery Stores in Telangana: Insights from Awareness and Perceptual Factors

Mrs. Ashita¹, Dr. Saumendra Das², Prof. Shehbaz Ahmed³

¹Research Scholar, School of Management Studies, Gandhi Institute of Engineering and Technology University, Gunupur, Odisha,

²Professor & HOD, SMS, GIETU, Gunupur

³Director & Professor, Amjad Ali Khan College of Business Administration, Hyderabad, Telangana

Abstract- The rapid digitalization of retail and the growth of e-grocery platforms have increased the need for efficient and innovation-driven marketing practices. Lean Marketing focuses on value creation, process efficiency, waste reduction, and continuous improvement to enhance competitiveness (Womack & Jones, 2003; Kotler et al., 2017). Organizational readiness for Lean Marketing is influenced by awareness and perceptions, which shape adoption behavior (Rogers, 2003; Ajzen, 1991). This study examines Lean Marketing Readiness among e-grocery stores in Telangana using a descriptive and analytical design. Primary data were collected from 500 respondents using a structured questionnaire, and a pilot study of 135 respondents ensured instrument validity. Chi-square analysis was used to test associations between awareness, perceptions, and readiness. The study highlights that awareness and perceptions are key determinants of Lean Marketing Readiness and provides insights for improving digital retail competitiveness in emerging markets.

Keywords- Lean Marketing; E-Grocery Retailing; Readiness; Awareness; Perceptions; Digital Retail; Telangana.

I. INTRODUCTION

The contemporary retail industry is undergoing a significant structural transformation driven by rapid digitalization, platform-based commerce, and increasing internet penetration, which has substantially reshaped consumer purchasing behavior. In particular, the e-grocery sector has emerged as a prominent digital retail channel by offering convenience, accessibility, doorstep delivery, and time-efficient shopping experiences, leading to rapid market expansion and heightened competitive intensity.

In this evolving environment, traditional marketing approaches are becoming less effective, prompting firms to adopt efficiency-oriented and data-driven marketing frameworks. Lean Marketing, derived from Lean Management principles, emphasizes value creation, waste reduction, continuous improvement (Kaizen), and process optimization to enhance marketing efficiency and customer value delivery (Womack & Jones, 2003; Kotler et al., 2017). It enables firms to improve resource utilization, optimize promotional strategies, and strengthen customer engagement in competitive digital markets.

However, the adoption of Lean Marketing practices depends largely on organizational readiness, which is shaped by cognitive and perceptual factors. Awareness of Lean Marketing concepts and positive managerial perceptions regarding usefulness, feasibility, and strategic benefits play a crucial role in determining adoption intention and implementation readiness (Rogers, 2003; Ajzen, 1991).



The e-grocery sector in Telangana, characterized by rapid urbanization and increasing digital adoption, provides a relevant context for examining Lean Marketing readiness. Accordingly, this study investigates the relationship between awareness, perceptions, and Lean Marketing Readiness among e-grocery retailers in Telangana, contributing to the understanding of innovation adoption in emerging retail markets.

II. IMPORTANCE OF THE STUDY

This study is significant as it extends Lean Marketing research into the e-grocery retail sector and contributes to the understanding of marketing innovation adoption through the integration of awareness, perceptions, and organizational readiness constructs (Rogers, 2003; Ajzen, 1991). It provides empirical insights into the preparedness of e-grocery retailers for adopting efficiency-oriented marketing practices, thereby supporting improved resource utilization and operational effectiveness based on Lean principles (Womack & Jones, 2003).

Practically, the study helps managers identify key determinants influencing Lean Marketing adoption, enabling better decision-making, cost efficiency, and customer value enhancement. It also offers guidance for policymakers to design initiatives that promote digital retail efficiency and innovation adoption. The findings further provide region-specific evidence from Telangana, contributing to a better understanding of digital retail transformation in emerging markets.

III. NEED FOR THE STUDY

The expansion of digital technologies and e-grocery platforms has transformed retail operations, but many firms still face challenges in adopting Lean Marketing due to limited understanding of its practical application and benefits. While Lean principles are well established in manufacturing and supply chain contexts, their application in marketing and digital retailing remains underexplored.

In particular, research on Lean Marketing readiness in e-grocery retailing is limited, especially in emerging markets like Telangana. The role of awareness and perceptual factors in influencing adoption readiness is also not adequately examined in prior studies (Rogers, 2003; Kotler et al., 2017). This study addresses this gap by analyzing how awareness and perceptions influence Lean Marketing Readiness among e-grocery stores, contributing to improved decision-making and operational efficiency (Womack & Jones, 2003).

IV. OBJECTIVES OF THE STUDY

- To assess the level of cognitive awareness and conceptual understanding of Lean Marketing among e-grocery store operators in Telangana.
- To examine the perceptual determinants influencing attitudes toward Lean Marketing practices, including perceived usefulness and implementation feasibility.
- To evaluate the organizational readiness and adoption preparedness of e-grocery stores for implementing Lean Marketing strategies.
- To analyze the statistical association between awareness, perceptions, and Lean Marketing Readiness among e-grocery retailers.

V. HYPOTHESES OF THE STUDY

- **H1:** There is a significant association between awareness of Lean Marketing and Lean Marketing Readiness among e-grocery store operators in Telangana.



- **H2:** There is a significant association between perceptions of Lean Marketing and Lean Marketing Readiness among e-grocery store operators in Telangana.
- **H3:** There is a significant difference in Lean Marketing Readiness across different levels of awareness among e-grocery store operators in Telangana.
- **H4:** There is a significant difference in Lean Marketing Readiness across different levels of perceptions among e-grocery store operators in Telangana.

VI. RESEARCH METHODOLOGY

The present study adopts a systematic methodological framework to examine the drivers of Lean Marketing Readiness among e-grocery stores in Telangana, focusing on awareness and perceptual determinants.

Research Design

The study is based on a descriptive and analytical research design, which facilitates the systematic description of existing conditions and enables empirical testing of relationships between variables such as awareness, perceptions, and Lean Marketing Readiness.

Study Area

The research is conducted in the State of Telangana, which has witnessed rapid expansion in digital retailing and e-grocery platforms, making it a suitable context for studying marketing innovation adoption.

Population of the Study

The population comprises e-grocery store owners, managers, and operational decision-makers engaged in online grocery retailing across Telangana.

Sampling Technique

The study employs convenience sampling technique, where respondents are selected based on accessibility and willingness to participate in the survey. This method is suitable for exploratory and field-based studies in emerging sectors.

Sample Size

- **Pilot Study:** 135 respondents were selected to test the reliability, clarity, and validity of the research instrument.

Sources of Data

Primary Data

Primary data were collected through a structured questionnaire designed using a five-point Likert scale. The questionnaire captured information on awareness levels, perceptual dimensions, and Lean Marketing Readiness among respondents.

Secondary Data

Secondary data were obtained from peer-reviewed journal articles, books, industry reports, government publications, conference proceedings, and relevant online databases to support theoretical development and literature review.

Statistical Tools for Analysis

The following statistical tools were used to analyze the collected data:

- Frequency Analysis (to determine distribution patterns of responses)
- Percentage Analysis (to present demographic and categorical data in percentage form)



- Chi-Square Test of Independence (to examine associations between awareness, perceptions, and Lean Marketing Readiness)

VII. PILOT STUDY

A pilot study was conducted with a sample of 135 e-grocery store operators in Telangana to evaluate the reliability, validity, and overall robustness of the research instrument prior to the main survey. The primary objective of the pilot testing was to ensure content validity, construct clarity, internal consistency, and respondent comprehension of the structured questionnaire developed for the study (Bryman, 2016; Creswell, 2014).

The pilot questionnaire was designed using a five-point Likert scale to measure key constructs such as awareness of Lean Marketing, perceptual dimensions (perceived usefulness, feasibility, and strategic relevance), and Lean Marketing Readiness. Responses obtained during the pilot phase were systematically examined to identify item ambiguity, measurement inconsistencies, and redundancy in scale construction, ensuring improved instrument precision and construct alignment.

Based on respondent feedback, necessary refinements were made in terms of question sequencing, linguistic simplification, removal of overlapping items, and enhancement of scale clarity, thereby strengthening the face validity and content validity of the instrument. Such refinements are essential in survey research to improve measurement accuracy and reduce response bias (Saunders et al., 2019).

The pilot study also provided preliminary evidence of internal consistency reliability, which is commonly assessed using reliability indicators such as Cronbach's alpha to ensure that the scale items consistently measure the intended constructs (Nunnally & Bernstein, 1994). This process enhanced the overall psychometric robustness of the instrument.

VIII. THEORETICAL FRAMEWORK

Diffusion of Innovation Theory

The Diffusion of Innovation Theory, developed by Everett Rogers, explains how new ideas, technologies, and practices spread within a social system over time. The theory emphasizes that innovation adoption is influenced by cognitive awareness, perceived attributes of innovation, communication channels, and social system characteristics. Key attributes such as relative advantage, compatibility, complexity, trial ability, and observability determine the rate of adoption among potential users.

In the context of this study, Lean Marketing is considered an organizational innovation in marketing practice, where adoption readiness is shaped by the level of awareness and perceptual evaluation of its benefits and feasibility. Higher awareness enhances knowledge diffusion, while positive perceptions increase perceived relative advantage and reduce uncertainty, thereby improving adoption readiness among e-grocery retailers (Rogers, 2003).

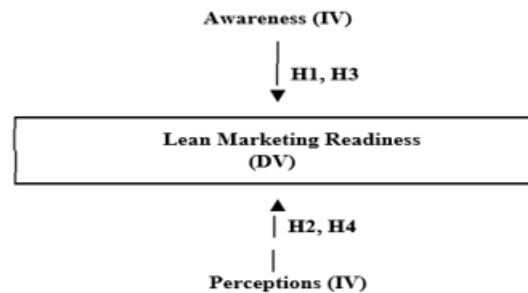
Theory of Planned Behaviour

The Theory of Planned Behavior, proposed by Icek Ajzen, explains that individual or organizational behavior is driven by behavioral intentions, which are in turn influenced by three key determinants: attitude toward the behavior, subjective norms, and perceived behavioral control. Attitudes are formed based on beliefs about outcomes, while perceived control reflects the perceived ease or difficulty of performing the behavior.



In this study, positive attitudinal orientation and favorable perceptual beliefs regarding Lean Marketing—such as perceived usefulness, operational feasibility, and strategic compatibility—are expected to strengthen behavioral intention and increase readiness for adoption. Furthermore, organizational perceived control, including resource availability and managerial capability, plays a critical role in determining whether Lean Marketing practices are implemented effectively in e-grocery retail settings (Ajzen, 1991).

IX. CONCEPTUAL FRAMEWORK



Independent Variables

1. Awareness (IV)

Awareness refers to the cognitive knowledge level and information exposure of e-grocery operators regarding Lean Marketing principles, tools, and practices. It reflects the degree of conceptual understanding, information assimilation, and managerial cognition that enables informed decision-making. Higher awareness is expected to enhance innovation adoption capability and operational efficiency orientation.

2. Perceptions (IV)

Perceptions represent the attitudinal evaluation of Lean Marketing in terms of its usefulness, feasibility, and strategic relevance. It is associated with perceived benefits, perceived ease of implementation, and behavioural intention formation, influencing acceptance of Lean practices in digital retail environments.

Dependent Variable

Lean Marketing Readiness (DV)

Lean Marketing Readiness refers to the organizational preparedness and behavioural intention of e-grocery operators to adopt Lean Marketing practices. It includes willingness, capability, resource alignment, and process adaptability toward implementing waste-reduction, value maximization, and efficiency-driven marketing strategies.

Relationship Between Variables

The framework posits that Awareness and Perceptions act as significant predictors of Lean Marketing Readiness. Operators with higher cognitive awareness and positive attitudinal perceptions are more likely to demonstrate greater readiness for Lean Marketing adoption and implementation.

Furthermore, the study evaluates whether significant differences in readiness exist across varying levels of awareness and perceptions, indicating a potential group-based variation effect.

X. DATA ANALYSIS AND INTERPRETATION

Demographic and Geographic Profile of Respondents



Table 1: Age Distribution of Respondents

Age Group (Years)	Frequency (N)	Percentage (%)
Below 25	22	16.3%
25–35	48	35.6%
36–45	39	28.9%
Above 45	26	19.2%
Total	135	100%

Source: Primary data

Interpretation: Sample respondents are in the 25–45 years' age group (64.5%), indicating a predominantly young and middle-aged operator base with higher potential for digital adoption and Lean Marketing readiness.

Table 2: Gender Distribution

Gender	Frequency (N)	Percentage (%)
Male	92	68.1%
Female	43	31.9%
Total	135	100%

Source: Primary data

Interpretation: The sample is predominantly male (68.1%), while female respondents account for 31.9%. This indicates higher male participation in e-grocery operations, with moderate female involvement.

Table 3: Educational Qualification

Qualification	Frequency (N)	Percentage (%)
Secondary (10th/12th)	28	20.7%
Graduate	67	49.6%
Postgraduate	40	29.7%
Total	135	100%

Source: Primary data

Interpretation: The respondents are graduates (49.6%), followed by postgraduates (29.7%), and secondary educated (20.7%). This indicates a relatively well-educated operator base, supporting better understanding of Lean Marketing concepts.

Table 4: Business Experience

Experience Level	Frequency (N)	Percentage (%)
Less than 1 year	18	13.3%
1–5 years	54	40.0%
5–10 years	43	31.9%
Above 10 years	20	14.8%
Total	135	100%

Source: Primary data

Interpretation: Maximum respondents have 1–5 years of experience (40.0%), followed by 5–10 years (31.9%). Fewer respondents have above 10 years (14.8%) and less than 1 year (13.3%). This shows a majority of operators have moderate experience in e-grocery business operations.

Table 5: Geographic Distribution

Location Type	Frequency (N)	Percentage (%)
Urban	74	54.8%
Semi-Urban	39	28.9%
Rural	22	16.3%



Total	135	100%
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Source: Primary data

Interpretation: The respondents are from urban areas (54.8%), followed by semi-urban (28.9%) and rural areas (16.3%). This indicates a strong urban dominance, suggesting better access to digital infrastructure and higher Lean Marketing adoption potential.

Table 6: Business Location Concentration

Region Type (Telangana)	Frequency (N)	Percentage (%)
Hyderabad Metro Region	62	45.9%
Tier-2 Cities	51	37.8%
Rural Outskirts	22	16.3%
Total	135	100%

Source: Primary data

Interpretation: Most respondents are from the Hyderabad Metro Region (45.9%), followed by Tier-2 cities (37.8%) and rural outskirts (16.3%). This shows a concentration in urban and semi-urban business hubs, indicating stronger digital exposure and higher Lean Marketing readiness potential.

Table 7: Chi-Square Test Results for Hypotheses

Hypothesis	Variables Tested	Chi-Square Value (χ^2)	df	p-value	Null Hypothesis Accept/reject
H1	Awareness vs Lean Marketing Readiness	18.742	2	0.000*	Rejected
H2	Perceptions vs Lean Marketing Readiness	21.365	2	0.000*	Rejected
H3	Awareness levels vs Readiness	16.589	4	0.002*	Rejected
H4	Perceptions levels vs Readiness	19.804	4	0.001*	Rejected

*Significant at 5% level ($p < 0.05$)

- df = degrees of freedom
- χ^2 = Chi-Square value

XI. FINDINGS

- The demographic profile shows that most respondents are aged 25–45 years (64.5%), indicating a young and active entrepreneurial base.
- The sample is predominantly male (68.1%), with moderate female participation (31.9%).
- Most respondents are graduates (49.6%) and postgraduates (29.7%), indicating a well-educated operator base.
- A majority of respondents have 1–5 years of business experience (40%), showing moderate operational exposure.
- The geographic profile reveals urban dominance (54.8%), particularly from the Hyderabad metro region (45.9%).
- Awareness levels of Lean Marketing are generally moderate to high among respondents.
- Perceptions toward Lean Marketing are mostly positive, especially regarding usefulness and efficiency improvement.

XII. SUGGESTIONS

- Training programs should be conducted to improve Lean Marketing awareness among e-grocery operators.
- Digital workshops should be organized focusing on Lean tools and waste reduction strategies.



- Government and industry bodies should promote digital literacy in semi-urban and rural areas.
- Operators should be encouraged to adopt data-driven marketing strategies for efficiency.
- Simplified Lean Marketing frameworks should be developed for small-scale e-grocery businesses.
- Technology platforms should provide user-friendly Lean Marketing dashboards.
- Awareness campaigns should focus on the benefits of cost reduction and customer value optimization.
- Collaboration between e-commerce platforms and entrepreneurs should be strengthened for better implementation support.

XIII. CONCLUSION

The study concludes that Lean Marketing Readiness among e-grocery store operators in Telangana is significantly influenced by Awareness and Perceptions. Operators with higher awareness and positive perceptions demonstrate greater readiness to adopt Lean Marketing practices.

The findings confirm that Lean Marketing adoption is not only a technical decision but also a cognitive and behavioural process influenced by knowledge, understanding, and attitude. The study highlights that improving awareness and perceptions can significantly enhance readiness and adoption levels in the e-grocery sector.

Future Scope of the Study

The study can be extended to other Indian states for comparative analysis with larger and more diverse samples across retail sectors. Future research may include additional variables such as technology adoption, digital infrastructure, and consumer behaviour. Longitudinal studies can examine changes in Lean Marketing Readiness over time. Advanced techniques like regression and Structural Equation Modeling (SEM) can be applied for deeper analysis. The role of AI and automation in Lean Marketing can also be explored. Further studies may compare urban and rural digital marketing readiness models to identify regional differences.

Managerial Implications

Managers should improve awareness and perceptions of Lean Marketing through training and skill development programs. Adoption of data-driven, customer-focused, and AI-enabled marketing tools can reduce waste and improve efficiency. Strengthening digital capabilities and continuous learning will enhance Lean Marketing Readiness and organizational performance in the e-grocery sector.

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