

CHAPTER 4

Determinants of Channel Selection for Businesses in the Prefabrication Industry

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ABSTRACT

The prefabrication industry is going through a major change in how products (modular homes, precast concrete parts, portable structures) are marketed and sold, largely driven by digital transformation. The study explores broadly how companies in India choose between:

- Online,
- Offline, and
- Hybrid Distribution Channels

Using a cross-sectional approach, we gathered responses from 46 professionals including contractors, architects, suppliers and clients through structured questionnaires. Participants evaluated several factors ~ cost, product complexity, logistics reliability, brand image, after-sales service and digital readiness. The results show that 73.9% preferred a hybrid approach. Logistics reliability and brand reputation had the strongest influence, followed by after sale service and product complexity. Contrastingly, cost ranked lowest, challenging the common view that price dominates B2B decision making. It was found that stakeholders' readiness with digital tools varied; it could be easily adopted by architects and suppliers, while clients still preferred offline interaction before making decisions. Drawing ideas from well-known business theories, a 3-phase approach is recommended:

- Online detailed information
- Offline discussions to build trust, and
- After sale support and services combining digital and offline elements

Keywords: Prefabrication industry, Sales channel selection; Hybrid distribution channels.

1.0 Introduction

The prefab industry is experiencing rapid growth, driven by advancements in technology. The advantage of prefab construction is as follows:

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- Reduced construction time
- Cost efficient.
- Improved quality control

This industry primarily deals with high value products such as precast concrete components which are widely used in infrastructure and commercial construction. The solution for these challenges requires a strategic approach to sales channel selection.

With the rise of digitization, this industry is moving beyond the traditional offline channels adopting digital tools like virtual showroom, augmented reality (AR) and interactive catalogues. This transition is rephrasing how customers interact with suppliers which offers new opportunities to optimize sales and marketing strategies. Hence understanding the determinants is very crucial. Few important parameters to be considered:

- Customer preferences and behaviour
- Pricing
- Supply chain coordination and management.
- Impact of technology

These can help businesses to align their strategies to meet market demands. This research aims to focus on these dynamics and provide actionable insights to help businesses succeed in the sector.

1.1 Research objectives

- To identify factors influencing online v/s offline channel selection for prefabricated product sales in the construction sector.
- To analyse customer trust, satisfaction and decision making when purchasing prefabricated components through online, offline or hybrid channels.

1.2 Problem definition

The following research would serve and provide valuable insights on sales channel selection in the prefabricated industry. The research aims at tackling the following identified issues regarding the sales of prefab products in construction industry ~

- All the products in the prefabricated industry are high value products economically.
- There are logistical complexities (being the key reason for dilemma amongst contractors whether to go for prefab or traditional construction technique).
- The uniqueness of the industry and its products, which have sales potential in both online as well as offline channels. The online channels are going well hand in hand with the growing digitization in the construction industry.

1.3 Limitations of the study

- The study might be restricted to a specific region and might not be applicable to all scenarios.
- Varying levels of digitization in the country might affect expansion of business in future.
- Limited access to reliable data as it is still not a prevailing type of construction in the country.

1.3 Scope of work

- Precast Concrete Components
- Modular Homes
- Portable Structures

2.0 Literature Review

2.1 Preface

The channel selection plays a very crucial role in determining how businesses can engage with their customers and reach out to them, especially in cases of specialized industries such as prefabrication. The following literature review tries to investigate the determinants which influence the decision of online, offline or hybrid sales channel selection within the prefabrication sector. The study focuses on following two core objectives ~

- To determine the key factors driving businesses to choose between online, offline or hybrid sales models, and
- Analysing how customer satisfaction, trust and decision making vary across different channels.

By reviewing about 40 industry and scholarly research papers, this literature review gives a well-structured understanding of the interplay between supply chain logistics, digital transformation, consumer behaviour and firm level strategies channel selection of prefabricated products.

2.2 Theoretical foundations of channel selection

The theory pertaining to channel selection has been extensively explored within the domains of marketing and distribution. Kotler and Keller (2016) propose that decisions regarding channel selection are influenced by characteristics of the market, type of product, objectives of the company and intermediary capabilities. Stern, El-Ansary, and Coughlan (1996) were the ones to introduce Channel Design Framework, which considers the following three factors:

- Competitive Environment

- Needs of the Customer, and
- Economic Factors

Transaction cost economics (Williamson, 1981) also supports several decisions, where comparison between the cost of using a market intermediary versus internalizing the function is undertaken by firms. In the prefabrication industry, which is characterized by its bulky and complex products, the channel strategy must consider logistics, need for customization and post-sales service (Gadde & Håkansson, 2001; Love et al., 2019). In addition to this, Anderson and Coughlan (2002) stresses on the significance of aligning channel strategies with the life cycle of the product & consumer buying processes.

2.3 Digital transformation in the construction sector

As reviewed by Marhani et al. (2020) in a coherent manner confirms that the use of digital tools not only increases efficiency but also enhances customer engagement and transparency. In the prefabrication sector, digital transformation enables the following ~

- Product Visualization
- Order Tracking, and Pricing Comparisons

Lee and Yu (2018) have found that a firm's digital maturity also enhances its competitive positioning by making dynamic inventory management and real-time customer feedback possible. The integration of Augmented Reality (AR) and Virtual Reality (VR) technologies further facilitates decision making of the customer in online contexts (Zhao et al., 2020).

2.4 Consumer behaviour and preferences in prefab construction

The channel choice is significantly impacted by the following three factors:

- Perceived Risk
- Consumer Trust, and

Furthermore, Parasuraman et al. (2005) points out the role of service quality and trust in shaping online behaviour, which is significantly applicable in complex and high cost purchasing such as prefab housing. Cho et al. (2021) adds that the digital literacy, transparency and social influence greatly affect consumer confidence in channel selection.

2.5 Logistics and supply chain considerations

Li et al. (2019) review says that firms with an efficient forward and backward integration are more likely to go for multichannel strategies. Digital tools have also proven to improve the following - Order Scheduling, Delivery Tracking, and Inventory Control. (Zhai et al., 2020; Ding et al., 2022) says that this enables the following two things ~

- Better function of sales, and
- Integration between logistics.

Along with this, Meiling and Johnsson (2017) has also brought to attention that synchronized supply chains enhance the predictability of the project and reduce cycle time. Inventory flows and responsiveness can be significantly improved by integration of ERP and CRM systems across channels (Liu & Liang, 2022). Companies must also take the following factors into consideration while choosing channels ~ Warehouse Location, Delivery Times, and Installation Coordination, all of them which together helps to stitch it all together.

2.6 Cost and investment considerations

Estimations of Cost and Investment Incurred Level Up Chan and Lu (2019) suggest that small firms may opt for the online model due to lower costs associated with maintaining physical infrastructure. On the other hand, companies dealing with high-end prefab products tend to invest in offline experiential trust builders and capability showcasing centres (Luo et al., 2022). This decision is equally affected by return on investment (ROI) and customer acquisition costs. Online channels may have lower customer acquisition costs (CAC), but if there is low consumer confidence, online sales can have trouble with converting clicks to sales. (Ghosh et al., 2021) suggests that the single and high involvement purchases in prefabrication are salient.

2.7 Challenges and barriers

Hurdles to adoption remain even with the changing technology. Gamil and Rahman (2017), talks about the barriers in lack of appropriate skills, evolving and gaps in digital infrastructure as hurdles in emerging markets. Sufficient availability of resources in terms of IT is lacking with most of the prefabrication companies for e-commerce facilitation.

Additionally, the lack of clear online prefab transaction frameworks and fragmented digital transaction ecosystems also create ambiguity (Chen et al., 2021). Not having uniform standards in specifying products and delivery makes it complicated to automate selling.

2.8 Conclusion

Most of the literature examined indicates an increasing preference for hybrid models that combine ease of access and efficiency associated with the internet with the more personal interaction necessitated by trust-building offline. Knowing these factors will assist prefabrication companies in refining channel tactics to gain beneficial competitive position. This also further enhances and helps in refining the decision-making criteria for channel selection, which are more appropriate and relatable to decision making.

2.9 Summary of gaps in literature

There is a remarkably bold absence of research on the digital transformation, consumer behavioural shifts & even the logistics of supply chain frameworks, prefabricated

structures. To begin with, there is a lack of empirical evidence analysing the satisfaction and sales performance stemming from the use of online, offline, and even blended approaches to sales in prefab construction. Finally, the ways in which consumer confidence is built in the online purchase of prefabricated structures has yet to receive adequate focus, especially for transactions of high involvement.

3.0 Research Methodology

3.1 Research design

This study follows three distinctive approaches:

- Cross sectional approach
- Descriptive design
- Exploratory designs.

These helps us to evaluate the factors that influence sales channel selection in the prefabrication industry. The structured cross-sectional survey provided insights into the alignment towards ~ online, offline or hybrid channels from the key industry stakeholders. The descriptive aspect of the study offers a clear overview of current channel selection. The exploratory aspect allows for a deeper understanding of uncommon factors affecting the decision-making process in India. Overall, the culmination of three different approaches provides a deeper understanding of the reasons for a specific channel selection in a digitally transforming market conditions.

3.2 Population and sampling

The study targets individuals directly involved in various stages of prefabrication process ~

- Contractors/builders
- Architects/designers
- Suppliers/vendors
- Clients/end users

These participants were involved as they are primary players of procurement, specifications and purchasing prefabricated products. The participants were chosen based solely on their knowledge or experience and further divide them into groups to ensure fair representation across distinct roles and organization sizes, theoretically known as purposively stratified sampling. This approach was appropriate as insights from key professionals are more valuable than random general responses. A total of 46 participants were involved as a part of pilot group, which was considered sufficient for early analysis and assessing the reliability of the survey.

Table 1: Respondent's Role Distribution

Roles	Number of Respondents
Builders / Contractors	24
Designers / Architects	08
Vendors / Suppliers	07
End Users / Clients (Developer / Private Client)	07
Total	46

Source: Author's Survey Data (2025)

Table 2: Respondent's Organization Size

Size of The Organization	Number of Respondents
Individual / Small Businesses (1 – 10 Employees)	06
Small – Medium Enterprises (11 – 50 Employees)	13
Medium Enterprises (51 – 250 Employees)	24
Large Enterprises (250+ Employees)	03
Total	46

Source: Author's Survey Data (2025)

Profiles indicated by the above represented Table 1 & Table 2 show a dominant representation of Contractors and Medium Sized Enterprises, thus showcasing the practicality in terms of decision making in the prefabrication industry.

3.3 Data collection and instrument

The primary data was collected by conducting a survey in the form of a structured questionnaire shared through google forms. The survey consisted of 29 questions, divided broadly into following distinct categories as mentioned below ~

- Participant Background
- Factual / Preference factors
- Decision Factors
- Alignment to Digital Literacy/Tools
- Perceptions/Beliefs
- Satisfactory levels

3.4 Measurement scales

Multiple measuring scales provided us with insights into various aspects involved.

- Categorical scales ~ Participant background and channel preferences.

- Five-point Likert scale ~ Key determinants like price, coordination reliability, brand reputation, after sales service quality, product complexity, and digital readiness. This ranged from “not important” (1) to “extremely important” (5).
- Agreement and satisfaction scales ~ Comparison of qualitative factors like perceptions/beliefs and satisfactory factors.

3.5 Data collection procedure

The survey link was circulated on online platforms with selected participants groups. Participation was voluntary. The academic purpose of the survey was also informed. Responses were collected over a period; their identity and responses were kept anonymous and confidential to protect participants' privacy and to ensure fair data collection.

3.6 Data analysis techniques

The data collected was analyzed using basic descriptive statistics techniques as follows:

- Frequency distribution
- Percentage
- Average scores

These were appropriate to identify the preferred sales channel and rank the effectiveness of various influencing factors. To draw meaningful insights a comparative analysis across stakeholder groups and channel types was performed.

3.7 Ethical considerations

The study adhered to the standard guidelines at every stage. Participation was voluntary, and completion of survey was taken as an implied consent. Participants' identities were kept anonymous and data collected was strictly used for academic purposes only.

4.0 Data Analysis

Frequency distributions, mean scores and visual representations are used to represent the results with pure clarity and interpretation.

4.1 Channel preference distribution

The respondents were instructed to select their preferred sales channel for:

- Purchasing or selling prefabricated products
- Choosing among online, offline and hybrid options

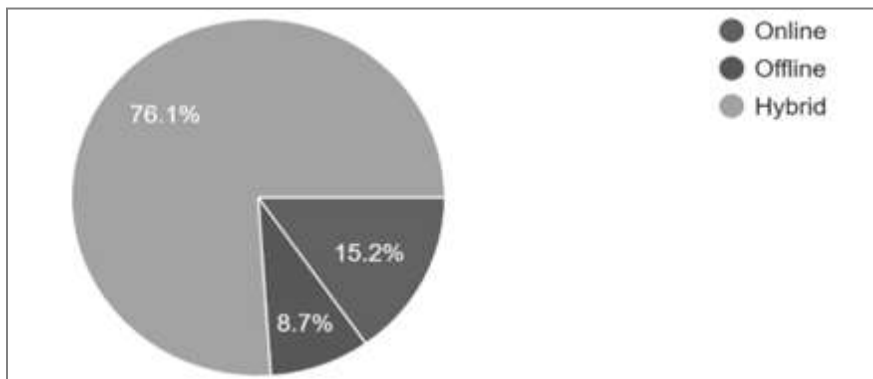
The results present a strong inclination towards hybrid sales channels representing industry need to balance digital efficiency with offline interaction. The descending order

preference of channels are ~ hybrid channels, online channels and offline channels being the least preferred. The reason behind stakeholders preferring hybrid channels is ~

- Digital platforms are convenient and easy to access
- Offline platform facilitates design validation, customization and builds trust

Hence there is a clear shift from traditional sales model to accepting digital literacy particularly among fast-paced growing firms and professionals.

Figure 1: Preferred Sales Channel for Prefabricated Products (n = 46)



Source: Author's Survey Data (2025)

The reasons behind the dominance of hybrid channels among stakeholders are ~

- Complexity of products
- High financial transactions and commitments
- Stakeholder management

Any single channel (offline or online) cannot suffice for the above key characteristics, hence the integration of them is a necessity.

4.2 Importance of channel selection determinants

To understand the key factors behind channel selection, a five-point Likert scale was used. Respondents rated the importance of six determinants accordingly. To identify the relative influence, mean scores were calculated for each determinant. The highest score was recorded for logistics reliability. The crucial indicators of channel selection for the above determinant are:

- Timely Delivery
- Good Coordination
- Handling of Prefabricated Components

Brand reputation is the second most influential determinant. This indicates how trust and credibility play a significant role in reducing uncertainty in customers while choosing products. After sales service and support also ranked high stating the importance of few key factors like:

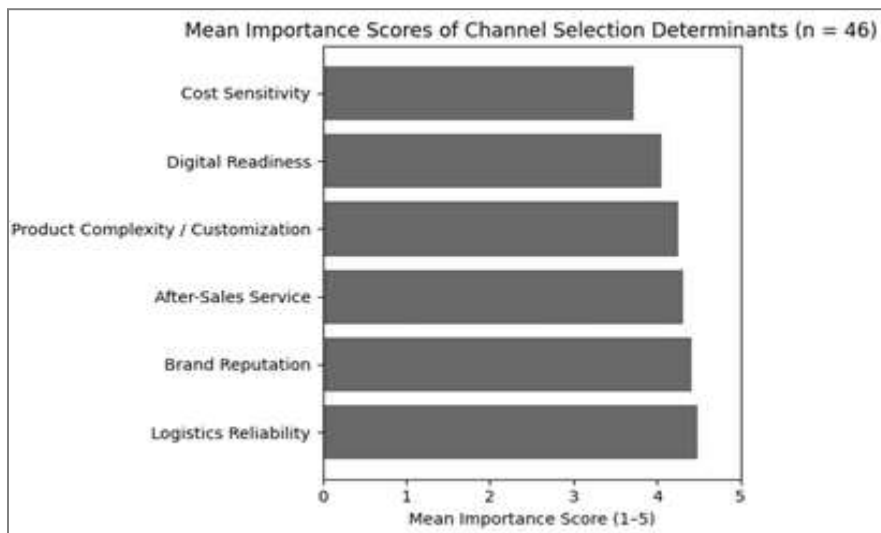
- Repair and Maintenance
- Issue Resolution
- Long Term Service Relationship specially for High Monetary Purchases

Product complexity and customization is another important determinant highlighting the factors like:

- Technical Specifications
- Design Coordination
- Customization

Digital readiness although being an integral part ranked lower indicating lower confidence and capability in adapting to digital tools. Cost sensitivity ranked the lowest, indicating it is the last factor considered while making decisions in purchasing or selling prefabricated products.

Figure 2: Mean Importance Scores of Channel Selection Determinants (n = 46)



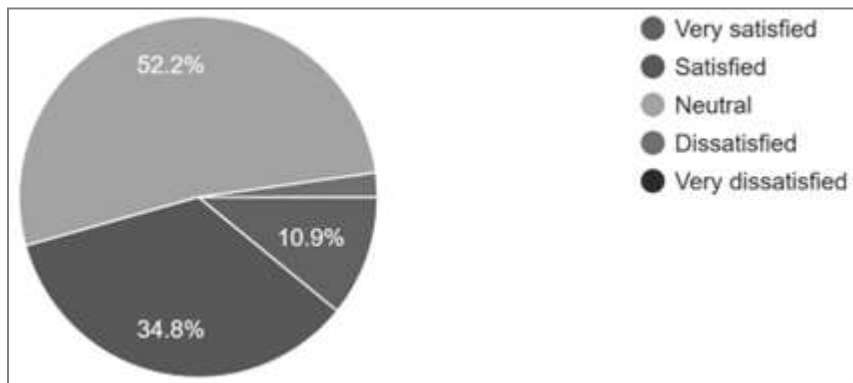
Source: Author's Survey Data (2025)

Hence the ranking of determinants indicates that economic factors are secondary to functional and technical considerations in the decision-making process of channel selection in prefabricated industry.

4.3 Satisfaction across sales channels

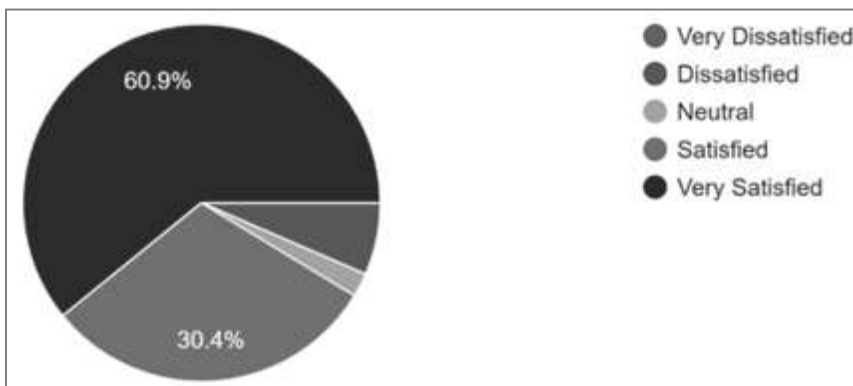
Satisfaction levels related to selection of channels ~ online, offline and hybrid were evaluated by calculating mean satisfaction scores for effective comparison among the channels. The results show strong inclination towards online channels recording high satisfaction levels, mostly among respondents who value factors like ~ Easy Access to Information, Speed of Communication and Transparency. Hybrid channels recorded the highest score indicating the integration of digital and physical elements will lead to reassure both efficiency and trust related needs. Although physical interaction was crucial for channel selection, offline channels recorded low scores due to their limitations like ~ Scalability, Slower Processes and Reduced Flexibility.

Figure 3: Average Satisfaction Levels Across Channels of Preferred Choice (n = 46)



Source: Author's Survey Data (2025)

Figure 4: Average Satisfaction Levels Across the Hybrid Sales Channels (n = 46)



Source: Author's Survey Data (2025)

The results strongly suggest that hybrid channels not only dominate but deliver satisfactory user experience. The ability of hybrid channels to integrate online convenience and offline reassurance is the prominent key driver in prefabrication industry.

4.4 Summary of key analytical insights

The above analysis significantly highlights three important insights:

- The preferred channel is hybrid sales channel among the stakeholders of prefabrication industry.
- The major influential determinants are logistics reliability, brand reputation and after sales service while cost sensitivity is the least considerate.
- To address issues like complexity and trust, hybrid sales channel recorded the highest satisfactory levels.

These insights form a solid foundation for further discussions in the following sections to come and to help us derive a suitable accurate conclusion.

5.0 Results and Findings

The focus is on the following three parameters:

- Focus on dominant trends
- Stakeholder behavior & Implications of pattern in sales channel selection.

5.1 Predominance of hybrid sales channel strategies

The prominent takeaway from data analysis is the strong preference for hybrid sales channels among the respondents. Also, integration of online and offline channels emerged as the most suitable approach among the stakeholders. The above preference suggests how complexity, high financial involvement and customization can be carried out efficiently with transparency. The two major aspects hybrid channels facilitate are:

- To leverage digital tools during early phase of buying process which eases out parameters like information about the product, product comparison and preliminary evaluation.
- Offline interactions allow for design validation, easy negotiations and real time decision making.

Hence the results strongly promote that any of the channel individually would not suffice the demands of the prefabrication industry.

5.2 Determinants influencing channel selection

The findings suggest that economic considerations are secondary to operational and relational determinants in making channel selection. Logistics revealed as the most influential factor, highlighting three important aspects:

- Role of delivery coordination
- Accuracy in scheduling
- Supply chain integration

After sales and service also was ranked under top three influential determinants, which deliberately focuses on:

- Reinforcing trust
- Importance of long-term support
- Quick issue resolution
- Prolonged service in high transaction sales

To the contrary, cost sensitivity ranked the lowest. The above findings challenge conventional assumptions that price is the most dominant factor that drives channel selection.

5.3 Stakeholders differences in digital readiness

Higher comfort and inclination towards usage of digital tools was seen in architects and suppliers depicting their constant involvement in software systems. With a little resistance towards use of digital platforms and digital tools by clients and users they preferred offline interaction to make an informed decision.

Physical interactions are valued more as they could address concerns like quality, customization and investment risk. Contracts and builders showed affinity for integration of online and offline mediums:

- Digital tools for coordination and accessibility to information
- Offline interaction for final decisions related to execution.

5.4 Satisfaction outcomes across sales channels

Hybrid channel indicated the highest satisfactory levels, as they diligently balance efficiency & trust. Online channels are valued for easy accessibility & transparency. While offline channels are valued in customer relationship management, credibility & trust. Despite the offline channels being still relevant, it indicated lower satisfactory levels due to their limitations in flexibility & slow processes.

5.5 Alignment with research objectives

Overall, the findings reveal that hybrid sales channel selection is the most suitable approach in prefabrication industry sales. The primary drivers for channel selection are logistics reliability, brand reputation, after-sales service and support and product complexity by overshadowing the conventional cost sensitivity factor. Hence the hybrid sales channel is bound to deliver the ultimate satisfaction for all the stakeholders.

6.0 Conclusion and Implications

The study's main agenda is to evaluate the determinants influencing sales channel selection – online, offline or hybrid in the prefabrication industry. Drawing insights from responses by industry stakeholders sets a clear picture into how customers and firms make decisions on channel selection. The key elements upon which the decisions are taken are ~

- High product complexity
- Logistical challenges
- Trust intensive transactions

The findings reveal that hybrid sales channel is most suitable and has an effective approach which suffices for the prefabrication industry. The integration of digital tools with offline interaction has advantages like ~

- High efficiency and productivity
- Relational assurance
- Maximum reach by use of digital tools
- Customization and trust ensure through offline interaction

The above parameters make the decision-making process faster which in turn increase the monetary value of sales in prefabrication industry. The uncertainty in providing financial commitment, technical valuation and coordination among stakeholders becomes almost negligible. From the results, logistics reliability emerged as the prominent influential factor valuing the importance of on time delivery, scheduling coordination and supply chain integration. This reinforced conventional values like trust, credibility and long-term support shaped the channel selection. Hence, in contrast to traditional notion that cost would make or break the deal, it emerged to be one of the last concerns prioritizing risk reduction and service assurance. Architects and suppliers were more open to accepting the use of online channels. Clients and end-users preferred offline interaction at key decision stages. This suggests the need for combining both ~ online and offline channels effectively to meet the expectations of all the stakeholders in the prefabrication industry.

6.1 Implications for theory

Based on the existing theories, the findings support few existing frameworks like ~ Channel design theory, Resource based view & Transaction cost economics. The results define how hybrid sales channels help firms to manage key parameters like ~ Transaction uncertainty, Leverage organizational capabilities & Alignment of channel design with customer needs. The study is an addition to the limited existing research on the topic sales channel selection, especially in a growing sector like prefabrication industry by offering real time evidence from a developing market context.

6.2 Implications for practice

The study strongly suggests strategically investment in hybrid sales channel for practitioners in prefabrication industry. It strongly claims that online and offline channels are not to be seen as different verticals. The focus of firms to be prominently on logistics reliability and coordination, enhancing after-sales service and support, and building brand trust and reputation through integration of both the channels. Digital tools will initially help in maximum reach to customers and at early decision-making stages. For validation, customization and customer relationship management, offline interactions to be adopted.

6.3 Implications for policy and future research

On a broader level, the findings suggest better industry standards and stronger digital infrastructure for smooth integration of online and offline channels. More studies in future can build on this research by using large samples, observing trends over time or even comparing them at global level to have clear and better understanding on how sales channel strategies impact a business in prefabrication industry.

7.0 Recommendations

7.1 Managerial recommendations

Prefabrication firms should focus on using hybrid sales channels that combine both online and offline channels. Digital platforms can be used for easy information availability, sharing information and initial comparisons. Offline engagement will enhance customization process, negotiations and customer relationships. It strongly suggests treating both the channels as one and not as different verticals for firms to improve customer trust and overall sales performance.

7.2 Operational and digital strategy recommendations

Logistics reliability being the prominent factor in channel selection, firms should focus on coordination between sales, supply chain and installation teams. To reduce delays and uncertainties firms should mainly invest in the following as mentioned below and expand in detail in further after the pointers to be considered ~

- Delivery planning systems
- Real-time tracking
- Cross functional communication

Firms are strongly encouraged to adopt digital tools. Online platforms enhance features like product visualization, digital drawings and documentation along with offline interaction for assurance and trust and wherever necessary in key decision stages. Training

sales and technical teams to adopt both digital and physical channels is essential for smooth and consistent customer experience.

7.3 Industry and policy-level recommendations

At the industry level, improved standardization of digital frameworks and guidelines for transaction can support mass adoption of hybrid sales models. Industry associations and policymakers should encourage and promote digital skill development. They should also provide good infrastructure support mainly for small and medium-sized firms to expand and grow. This reduces barriers in adopting digital tools and will hence improve channel efficiency across prefabrication sector.

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