

Connecting 'Bharat' Online: An AI Framework of 4Vs — Voice, Video, Visual, Vernacular — for Customer Acquisition in Tier 2–3 E-Commerce



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Abstract

Customer acquisition in e-commerce in India will soon be increasingly led by consumers in tier 2 and tier 3 towns referred to as 'Bharat'. However, there exist several barriers faced by this emerging consumer base, which includes, among others, language barriers, lack of digital literacy, text-heavy platforms, products not being well-understood, concerns of online trust and risk, and shopping cart abandonment issues. This paper reviews the adoption barriers faced by Bharat e-commerce customers and proposes the use of an AI-driven 4Vs (Voice, Video, Visual, and Vernacular) framework to facilitate acquisition of this new customer segment. Voice assistants and voice search technologies enable reduced reliance on typing and navigation, video commerce enhances understanding of the product through demonstrations and live interaction, visual tools like image search and augmented reality make customers less reliant on text and helps bridge the missing touch-and-feel barrier, and vernacular tools enhance trust via a more relatable means of interaction. The paper highlights e-commerce adoption literature, online trust and risk, shopping cart abandonment, voice assistants, video commerce, visual commerce, and localized communications. This paper seeks to contribute to e-commerce literature by offering a framework which incorporates AI-powered tools to facilitate customer acquisition.

Keywords: AI-enabled e-commerce; 4Vs framework; Tier 2 and Tier 3 cities; customer acquisition; vernacular commerce

1. Introduction

There have been immense changes in the way India's digital economy has transformed in the last decade. Increasing internet adoption, mobile phone penetration, digital payments, and changing consumer behavior have resulted in a huge growth in the Indian e-commerce market. What used to remain confined to big cities and a digitally aware urban population is slowly extending its base to Tier 2 and Tier 3 cities. This represents an important stage in the development of the Indian digital economy since the future wave of growth would be generated from the non-metro segment of the population. These consumers, in a large number, constitute what is popularly known as Bharat; a group of consumers who might not be conversant with English, may lack digital literacy, and prefer regional languages while communicate on online platforms (Singh et al., 2025).

The rapid growth of e-commerce in India has been made possible due to a variety of factors. First, affordable smartphones and inexpensive internet connectivity have helped users to become more digitally aware than ever before. Mobile phones have emerged as the most preferred platform for internet users since they do not just serve as communication devices; they enable shopping, banking, entertainment, learning, and access to governmental services. With cheap mobile plans,

users from smaller towns have become increasingly inclined towards discovering online platforms for their requirements. Consequently, the e-commerce industry in India has started seeing new opportunities in Tier 2 and Tier 3 cities where there is lesser competition among established brands.

Alongside the above-mentioned factors, other supporting aspects have played an important role as well. These include infrastructure and digital initiatives that seek to make online platforms more inclusive and user-friendly for the common man. This includes efforts like the Open Network for Digital Commerce that seeks to empower all buyers and sellers in India by providing them with an open platform. The objective behind developing this platform is to encourage participation of small sellers and enterprises from local regions that are not part of big e-commerce ecosystems. With such efforts in place, more users will feel comfortable buying or selling their merchandise online (Mahesh et al., 2022).

However, despite all the growth, e-commerce platforms continue to face significant problems related to the acquisition of new customers. There are several reasons for that. Firstly, the population of Tier 2 and Tier 3 cities consists of people who vary considerably with respect to language, culture, income levels, education, digital awareness, and comfort in making online purchases. For such

consumers, traditional e-commerce websites and apps may be difficult to use. Most e-commerce apps use menus based on English language, rely on written searches, require users to complete multi-page checkouts, and have text-heavy product listings. All this may cause a lot of confusion in first-time online consumers (Tiwari et al., 2024).

Secondly, language plays a crucial role in determining the comfort of users. Since most Indians speak their native language rather than English, they would prefer communicating in regional dialects like Hindi, Hinglish, Marathi, Tamil, Bengali, Telugu, Punjabi, and other regional languages. However, when websites and apps are designed primarily in English, it makes life extremely difficult for consumers. They may be unable to look for products, understand product specifications, review options, comprehend product descriptions and benefits, and even complete the entire transaction process. Sometimes, even the presence of translations is unable to resolve the problem adequately. Users require vernacular communication on such platforms (Sengupta et al., 2024).

Thirdly, digital literacy continues to be a big problem for non-English and low-literacy consumers. They may own a smartphone but still lack the skills required for using various applications, filters, carts, digital payment systems, and even returning merchandise. Moreover, text-based interfaces, different categories, icons, filters, and complex navigations put off such users, thereby discouraging them from making purchases. In offline markets, users can converse directly with sellers, get product demonstrations, bargain for prices, and assess products physically. Unless platforms facilitate such interaction virtually, users will not feel at ease in making any purchase decisions (Sharma & Mittal, 2020).

Lastly, trust issues also play an essential role in influencing customer acquisition. Customers who are making their first online purchases are apprehensive about a range of aspects like quality of products, security of payments, reliability of deliveries, refund policies, and authenticity of merchants. When they are unable to understand the language or are unsure of the product's specifications and characteristics, they may abandon their purchase midway, resulting in lost sales opportunities for merchants. Hence, platforms have to make sure that users feel safe while transacting online and can complete the entire transaction without facing any trouble (Aeron et al., 2019).

In the given scenario, AI can play a significant role in changing the way online platforms acquire customers from Bharat. Various AI-based tools like voice search, conversational assistants, video commerce, visual search, augmented reality, recommendations, and vernacular personalization

can transform digital platforms and attract new users. For this reason, this paper seeks to introduce the 4Vs of Voice, Video, Visual, and Vernacular for acquiring customers in Tier 2 and Tier 3 e-commerce markets. Thus, the paper seeks to discuss the importance of AI in facilitating digital inclusion and making e-commerce accessible to Bharat.

2. Background of Tier 2-3 E-Commerce in India

The development of e-commerce in India is no longer restricted to metro cities or digitally savvy urban populations. In recent times, Tier 2 and Tier 3 cities have become important growth markets for online commerce. Such markets involve semi-urban and small urban areas where consumers have started relying more on digital platforms for purchasing, paying, entertaining themselves, communicating, and using various financial services. The proliferation of smartphones, affordable internet connectivity, digital payment systems, and platform-based retail has made people from these segments more engaged in the online market. In this regard, e-commerce firms in the country are now focusing strongly on 'Bharat', a term which is often referred to when talking about India's non-metro, vernacular-speaking, and evolving digital consumer segment (Misra et al., 2022).

Consumer population in Tier 2 and Tier 3 cities will provide opportunities for the next phase of India's e-commerce industry growth. While customers in earlier stages of online retail development used to belong to metro cities, consumers from other areas have started engaging in the digital shopping experience with certain differences compared to those belonging to metro cities. Being early-stage or nascent online shoppers, such customers might find comfort in offline experiences and practices such as physical market visits, personal interactions with sellers, bargaining, and inspection of items before purchase. For these reasons, such users need simple and trustworthy platforms for carrying out digital purchases (Venkatakrisnan et al., 2024).

Moreover, the rise of Tier 2 and Tier 3 online commerce is associated with the increasing role of mobile-first buying. Unlike desktop users, customers from such segments use mobile devices and application interfaces for engaging in the process of purchasing and using online services. These include visiting websites through mobile applications, social media platforms, WhatsApp, short videos, and voice-based search. As such, e-commerce companies need to adapt their approaches towards acquiring customers through mobile-first technology. Namely, platforms should be developed with easy-to-use interfaces, fast loading, regional languages, voice-based search, and visual product searching facilities. It is required due to the fact that users from non-metro cities could

lack familiarity with English-based platforms and text search interface (Luceri et al., 2022).

Another important aspect involved in Tier 2 and Tier 3 digital shopping experience refers to the increasing use of mobile shopping applications. Using mobile applications allows consumers to conduct product browsing, comparison, check available offers, payment methods, track orders, and seek customer assistance. Depending on their usability and convenience, applications might simplify or complicate the overall process for emerging customers. In this respect, customer acquisition among people from non-metro areas depends not only on the availability of products but also on how easy-to-use shopping applications are (Natarajan et al., 2017).

Meanwhile, the matter of perceived risk becomes important in relation to mobile commerce adoption by customers from Tier 2 and Tier 3 cities. Users might be reluctant to shop through applications due to various risks such as privacy issues, problems in payments, discrepancy between the product's description and actual features, delivery complications, and difficulties in returning products. Being experienced in traditional shopping, these users tend to be more risk-averse, and platforms need to reduce their perceived risks through offering comprehensive information about products, safe payment systems, flexible return policies, and reliable customer services (Chopdar et al., 2018).

Furthermore, smartphone-based shopping has affected the way people conduct search, analysis, and purchase of items. Inasmuch as such customers mostly use mobile interfaces for visiting online shops, platform interfaces and the whole shopping experience need to be optimized for small screens, easy and quick browsing, convenient filters, and simplified checkout process. The issue of smartphone-based shopping experience is especially relevant to India's e-commerce environment since it involves consumers from various regions, diverse financial backgrounds, and different degrees of literacy (Shukla et al., 2022).

As another important characteristic of digital commerce among people in non-metro cities, trust plays a crucial role. Many users from such segments might be reluctant to make any purchases until they learn about product specifications, shipping process, return policy, authentic sellers, and safety of payment methods. In traditional markets, people develop trust based on face-to-face interaction and the inspection of purchased items. In digital environments, similar feelings can be built based on information provision, customer ratings, regional language support, convenient and safe payment procedures, flexible returns, and responsive customer services (Shree et al., 2021).

In addition to that, digital payments became increasingly important aspects of e-commerce in

smaller cities. As people become accustomed to UPI, wallets, cards, and cash-on-delivery payment systems, such methods have improved the process of digital shopping significantly. UPI makes payments more comfortable through mobile phones. For consumers in Tier 2 and Tier 3 cities, developments in the area of digital payments lead to better accessibility and convenience while making payments. However, digital payment adoption will continue depending on customers' confidence and perception of convenience and security (Padma Kiran & Vedala, 2025).

Another important phenomenon related to e-commerce in India's non-metro cities is social commerce. Many consumers visit social media and video content platforms, influencer profiles, and share information about products on WhatsApp. Social commerce is especially significant to customers in such cities since it allows to combine trust gained from social interaction with shopping experience on digital platforms. If customers know that some products were recommended by people from their circles or well-known personalities, they would be more willing to use the platforms for conducting purchases (Kakkar et al., 2025).

Along with mobile shopping, digital payments, and social commerce, voice commerce becomes increasingly common to the Indian scenario. By using voice search and voice-based assistants, customers from Tier 2 and Tier 3 cities can conduct research, ask questions, compare products, and get shopping assistance. Being used to regional languages and face-to-face interaction, users from smaller cities can engage in online purchasing without having problems with finding necessary information on unfamiliar websites and filling in forms (Kaur et al., 2025).

To sum up, the role of Tier 2 and Tier 3 cities becomes crucial to the development of India's e-commerce. On one hand, it involves a great consumer base, while, on the other hand, it calls for addressing several barriers to entry into the market among people from such areas. Mobile-first technology, digital payments, social commerce, and voice shopping can contribute to making the market more inclusive. Considering the background of Tier 2 and Tier 3 digital commerce, customer acquisition should be approached properly.

3. Customer Acquisition Challenges in Bharat

The challenge of customer acquisition in Bharat is one of the biggest problems for e-commerce websites because customers in Tier 2 and Tier 3 regions do not have similar habits while shopping online as people from the urban centres. Whereas customers from the urban areas may be more experienced using English-speaking sites, online payment services, mobile applications, and filtering products, most new customers from small towns

need a more simplistic, trustworthy, and easier-to-use experience when shopping online. These consumers present an important business opportunity for e-commerce firms; however,

acquiring them means dealing with several issues, including language, education, user interface, trust, and purchasing security (Ingham et al., 2015).

Table 1. Customer acquisition challenges among Tier 2-3 e-commerce consumers in Bharat

Challenge	Description	Impact on Customer Acquisition
Language Barrier	Users may prefer Hindi, Hinglish, or regional languages instead of English.	Reduces product search ability, understanding, and confidence.
Low Digital Literacy	Users may be unfamiliar with filters, carts, payments, tracking, and returns.	Increases dependence on support and reduces purchase completion.
Text-Heavy Interfaces	Apps often rely on long descriptions, written menus, and complex categories.	Creates cognitive overload and discourages first-time users.
Lack of Trust	Users may doubt product quality, seller authenticity, payment safety, and return policies.	Leads to hesitation and lower conversion rates.
Cart Abandonment	Users may leave before checkout due to confusion, risk, or unclear instructions.	Reduces sales despite initial product interest.
Product Uncertainty	Users cannot touch, feel, or physically inspect products.	Reduces purchase confidence and increases preference for offline shopping.

The major customer acquisition barriers faced by Bharat’s Tier 2 and Tier 3 consumers are summarized in Figure 1.

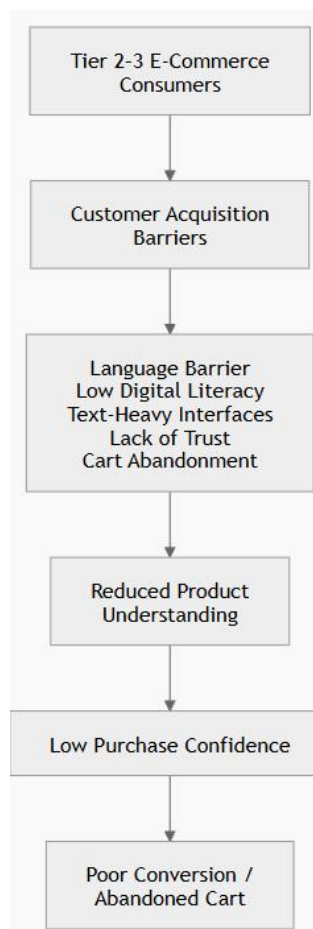


Figure 1. Key customer acquisition barriers in Bharat and their impact on purchase confidence and conversion

3.1 Language Barrier

Language can be considered one of the most challenging problems to gain customers from Bharat.

Users from Tier 2 and Tier 3 locations like to interact in regional languages and not necessarily in English. Even though they have some understanding

of English, they do not want to use it while searching for products, comparing them, getting instructions for payments, return policy, or any other type of communication. This poses difficulties because e-commerce apps are built mostly with the help of English menus, descriptions, and search phrases. The issue is exacerbated by the nature of online shopping that implies that the person needs to get access to certain information prior to making a decision to buy something. This involves reading detailed product information, comparing their specifications, studying different prices, learning about reviews on specific products, choosing delivery options, and completing payment process, which are all things that cannot necessarily be done if there is no relevant information in a language understandable to users. In addition, translation will not work in most cases, since many people use hybrid phrases, like Hinglish (Clemons et al., 2016).

3.2 Low Digital Literacy

The lack of digital literacy is yet another significant barrier when it comes to acquiring customers. Although many people in Bharat may have smartphones and basic knowledge about how to use digital applications, they might find it difficult to confidently navigate advanced applications such as e-commerce platforms. Consumers may face difficulties when it comes to looking for specific products, filtering them out, reading reviews, comparing other products, adding products to the cart, making payments online, tracking their order, and returning their products.

A consumer who faces such difficulties in using digital applications may lose interest in purchasing products. For example, one could look at several products but refrain from purchasing because of the complexities involved in making the purchase. In traditional physical markets, the consumers have the option of seeking help from vendors and examining the goods themselves, among other benefits. When using digital platforms for purchasing, the only guide that consumers have is the interface used by the platform itself.

3.3 Text-Heavy Interfaces

Several e-commerce sites are built with text-oriented designs, including descriptions of the products, filters, menus, and terms and conditions. While such designs can help experienced users, they could overwhelm new digital shoppers. Consumers in Tier 2 and Tier 3 markets might struggle to comprehend lengthy descriptions, detailed technical information, complicated classification systems, and multiple clicks to reach the destination.

Text-oriented designs also limit the convenience of using the platform for users who prefer visual, voice, or video interactions. If too many details are provided in texts, then users may overlook crucial

aspects or misinterpret the offer, leading to decreased trust and reliance on physical stores. To attract Bharat users, e-commerce sites should avoid excessive text usage and include features like icons for navigation, visuals for searches, videos about products, voice assistance, and streamlined checkouts (Ganguly et al., 2010).

3.4 Lack of Trust

Trust forms an important component when trying to acquire customers in e-commerce. First-time or budding online buyers from smaller towns may refuse to make purchases due to their doubts on the quality of products, the authenticity of the seller, the safety of transactions, deliveries, and returns. In the case of offline transactions, buyers gain confidence based on physical presence and actual product viewing. E-commerce sites need to substitute such physical cues with credible information, policy details, reviews, payment security, and support to earn buyer trust (Chawla & Kumar, 2022).

Trust is undermined where information regarding the product is not delivered to the customer in the right language or form. The client might find it difficult to assess the size, quality, functionality, return policies, or delivery processes of the product being offered. Vernacular content, video presentations, product visualization, customer reviews, simple return policies, and AI chatbot assistance can aid customers in making their purchase decisions easier in e-commerce by increasing trust levels (Suurmaa, 2021).

3.5 Cart Abandonment

Cart abandonment can be considered one of the major consequences of the issues raised above. In fact, many people add goods to their cart and abandon the website or platform before finalizing their purchases due to a range of reasons, including confusion, hesitancy, or insecurity. These issues may include language, navigational complexity, confusing product description, additional costs, payment security, and trust (Kukar-Kinney & Close, 2010).

In Bharat, cart abandonment will not only be associated with price but also with hesitancy and discomfort experienced during the digital journey. For example, a person who likes a particular item on the site may hesitate while paying for the order due to concerns about security, delivery conditions, or return policy. Moreover, in case the site has a lot of clutter and requires knowledge of English, it can lead to hesitancy and abandonment (Huang et al., 2018).

Thus, e-commerce sites should create a customer journey which would minimize such problems as complexity, uncluttered interface, English, and hesitancy, among others. Voice guidance and navigation can facilitate the user's activity within the site, while video guidance will show how to use

products and evaluate its quality. In addition, visual and augmented reality searches and vernacular interfaces for payments and returning goods can facilitate the journey and improve acquisition in Bharat.

Therefore, customer acquisition in Bharat depends not only on discount offers, product selection, and speed of delivery but also on the ability to overcome the barriers of customers in Bharat. E-commerce platforms should find out how to help overcome language barriers, digital literacy problem, text-heavy site, and hesitation to make payments or place an order.

4. Review of Literature

A review of literature provides an understanding of the key customer acquisition challenges faced in Bharat's Tier 2 and Tier 3 e-commerce markets. Prior research conducted regarding online shopping found that several behavioural, technological, and psychological factors determine the adoption of e-commerce among consumers. The key factors include: trust, perceived usefulness, risk perception, purchase intentions, perceived ease of use, and information quality. As emerging users transition from offline shopping to online platforms, the factors noted above gain greater significance towards determining purchase intentions. Trust has been extensively discussed in prior studies, particularly in relation to consumer's decision to purchase online. Unlike offline transactions, online shopping cannot guarantee face-to-face interactions or hands-on product inspections, which means that consumers' decisions to purchase online are determined by the credibility of the platform, the seller's reputation, payment safety measures, product information, and return policies. With high levels of trust, consumers can be convinced to engage in e-commerce transactions online (Ha et al., 2019).

Research involving the integration of the Technology Acceptance Model and the Theory of Planned Behaviour showed that the trust in e-commerce platforms played an instrumental role in reducing uncertainty and increasing purchase intentions in online transactions. Other aspects like risk perception also influenced consumer behaviour, leading them to either adopt or avoid using e-commerce services. Risk perception was described as the potential for harm that arises from engaging in online activities. Consumers' adoption of e-commerce is determined by their willingness to take calculated risks as well as the level of perceived risk. According to Mou et al. (2017), risk and trust act independently, with high risks decreasing acceptance and high trust increasing confidence.

Emerging e-commerce markets are characterised by differences in terms of consumers' digital experience, internet literacy, and willingness to

engage in online transactions. Website quality, security perceptions, and information provision significantly determine consumers' trust in the platform as well as purchase intentions. For Bharat's Tier 2 and Tier 3 users, website quality and trust should therefore play key roles in influencing customers to adopt e-commerce platforms. Simple interfaces, clear product descriptions, clear pricing, simple policies, safe payment options, and responsive support can improve the likelihood of users' purchasing products offered on the site (Jadil et al., 2022). Cart abandonment is another critical area in online shopping. Online consumers tend to add products to their carts and then leave the website without buying the products for several reasons, including uncertainty, comparing prices from other sources, unexpected additional costs, complicated check-out procedures, and weak trust in the transactional security. Clickstream analysis indicated that cart abandonment was more systematic than accidental and that users' hesitation and decision-making process influenced the final action of leaving an item in the cart (Kukar-Kinney et al., 2022). The issue becomes increasingly significant for emerging users, who can become hesitant at the payment stage due to various concerns.

Consumers might prefer traditional offline shopping because it allows them to physically assess the items, have them right away, interact personally with sales personnel, and feel more in control of their purchase experience. Such preferences are highly relevant in the context of Bharat because the culture has a strong tradition of offline shopping and market-based trade. Lack of product information, sensory information, and adequate information might lead the consumers to be hesitant about completing online transactions. Thus, bridging the gap between offline and online shopping experiences is crucial in helping users to feel at ease with the e-commerce process. Using technology such as virtual shopping experiences, visual searching, reviews, augmented reality, and vernacular assistance can significantly facilitate purchase decisions online (Wang et al., 2022). Information overload is another significant issue that emerged with the introduction of e-commerce platforms. E-commerce sites provide information about products in the form of detailed descriptions, reviews, specifications, pictures, offers, ratings, filters, and policies. However, when too much information is provided in a chaotic manner, it can confuse consumers, increasing cognitive load, which reduces the consumers' ability to compare and decide on a certain product. For users with little experience of e-commerce transactions, information overload can create a considerable amount of confusion (Regina & Munasinghe, 2022).

The emergence of mobile phones also led to changes in consumer shopping behaviour. More and more

people now use smartphones for accessing e-commerce platforms. At the same time, mobile shopping increased consumer hesitation because of problems related to small screen size, slow loading pages, complicated checkout process, unclear payment instructions, and insufficient product information. Studies conducted regarding mobile shopping cart abandonment noted the importance of conflicts, ambivalence, and hesitation in determining user actions and disengagement from e-commerce transactions. It is particularly important in relation to emerging markets, where consumers might rely heavily on smartphones (Huang et al., 2018).

Summarising the discussion above, it becomes clear that customer acquisition in Bharat will require doing more than just bringing users onto the e-commerce platform. To improve consumers' experience on such a platform, it is essential to address the issues mentioned above to eliminate hesitation, doubts, uncertainties, and reluctance to engage in shopping online. Literature shows that consumers are willing to make online purchases if there is adequate information provided by the platform and it is trustworthy and secure. This is how the 4Vs approach will prove useful in acquiring customers. By introducing elements such as voice, video, visual tools, and vernacular, the 4Vs model would solve many existing problems and contribute to successful customer acquisition.

5. Research Gap

While there are several aspects of e-commerce adoption considered by existing literature, these include trust, perceived risk, web quality, mobile commerce, information overload, and cart abandonment. Nevertheless, the majority of research papers tend to discuss such matters broadly, considering the online consumer's needs from the general point of view rather than focusing specifically on the demands of Tier 2 and Tier 3 customers in India.

There is an evident knowledge gap regarding the problems related to acquiring customers in "Bharat" since the users there encounter various difficulties at once: poor digital literacy skills, preference for the regional language, difficulties with English interfaces, weak product awareness, payment fears, and lack of trust. In contrast, existing works consider these barriers individually while failing to provide an explanation for their interaction through the whole buying process.

Also, while many platforms rely on simple translation or localization, this is not enough for emerging customers who can prefer using voice commands, Hinglish, regional languages, videos, visual search, and even simpler navigation. While voice commerce, video commerce, visual search, and vernacular interfaces have been discussed in previous research, no works have yet combined them into a single AI-based approach.

The conceptual justification for using the proposed AI-based 4Vs customer acquisition framework is illustrated in Figure 1 below.

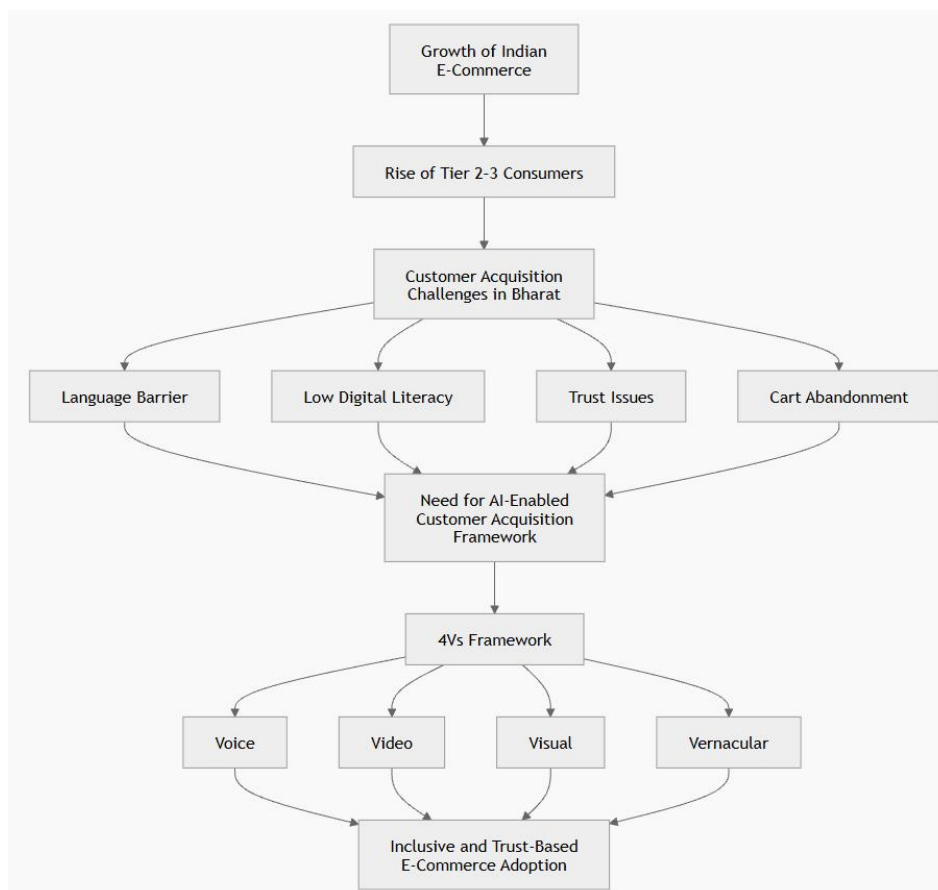


Figure 1. Conceptual flow from Tier 2-3 e-commerce challenges to the proposed AI-enabled 4Vs framework

Hence, this paper introduces the 4Vs approach — Voice, Video, Visual, and Vernacular — as a theoretical framework for attracting Tier 2 and Tier 3 e-commerce consumers. It seeks to overcome linguistic challenges, facilitate navigation, enhance comprehension of products, establish trust, and minimize abandoned shopping carts among nascent consumers in Bharat.

The current review paper suggests the 4Vs framework as an AI-powered framework that will enhance customer acquisition in the Tier 2 and Tier 3 e-commerce market. This framework comprises four main dimensions namely, Voice, Video, Visual, and Vernacular. These four dimensions of the suggested AI-powered framework for enhancing customer acquisition have been illustrated in Table 3 below.

6. Conceptual Framework: The 4Vs Model

Table 3. The 4Vs AI framework for customer acquisition in Tier 2-3 e-commerce markets

4V Dimension	AI-Enabled Tools	Main Function	Customer Acquisition Benefit
Voice	Voice search, voice assistants, chatbots, ASR, NLU	Enables spoken product search and guided interaction.	Reduces typing difficulty and improves accessibility.
Video	Live commerce, product tutorials, influencer videos, demos	Explains product use, quality, and benefits.	Improves product understanding and purchase confidence.
Visual	Visual search, image-based navigation, AR try-ons, virtual previews	Supports product discovery and visualization through images.	Reduces text dependency and bridges the touch-and-feel gap.
Vernacular	Regional language interfaces, Hinglish support, localized content	Provides language familiarity and cultural relevance.	Builds trust and supports checkout completion.

These four factors cover the major barriers for the new consumers in Bharat, like the language barrier, lack of digital literacy, lack of knowledge about the products, lack of trust, and reluctance to buy online. According to the 4Vs framework, the acquisition of customers should not be based merely on discounts, ads, or the variety of products. Rather, the e-commerce websites need to provide an easy and convenient experience of shopping for non-metro consumers. This can be facilitated by AI, which will help to make the digital platforms conversationally, visually, personalized, and linguistically appealing.

6.1 Voice

Voice comes first in the 4Vs approach. Examples of the use of voice technology include voice search, voice assistants, chatbot technology, voice ordering, and voice shopping assistance. Voice technology proves particularly helpful to consumers who cannot type easily in English or those that might have challenges manoeuvring text-laden interfaces. With voice commerce solutions, consumers can do voice searches on e-commerce sites in their native languages like Hindi or even in Hinglish. Instead of typing keywords, consumers simply state the product name. By doing this, consumers save time from typing and enjoy a natural search experience. Voice assistants can assist in voice searches, comparisons, adding items to the cart, payments, and tracking orders. Voice technology can help Bharat consumers overcome their digital reluctance when engaging in e-commerce activities. This will benefit consumers that are illiterate, new shoppers, senior citizens, and those that prefer talking rather than reading instructions.

6.2 Video

The next dimension is video. It involves live commerce, short videos, product tutorial videos, demonstrations of the product, influencer-led videos, and videos educating consumers about the products. In comparison with static images or textual descriptions, video provides a much better comprehension of the product by potential consumers.

Physical markets provide consumers with a chance to see how the product looks, operates, and feels before purchasing it. Such an opportunity might be missing from online platforms. Video fills this gap by giving potential buyers the chance to see the usage of the product, its size, quality, features, style, and advantages. For instance, product demos would help consumers understand how to use appliances, wear dresses, or look when applying certain beauty products.

Live commerce and influencer-led videos may build trust by providing consumers with explanations in a friendlier form. Tier 2 and Tier 3 consumers could

feel more comfortable buying a product if video was included.

6.3 Visual

Visual represents the third dimension of 4Vs marketing. It consists of visual search capabilities, image-driven navigation, icon-based approach, augmented reality, virtual product experience, and camera-based product identification. Visual elements will minimize reliance on textual descriptions and keywords and facilitate a convenient shopping experience for shoppers who have difficulties with text-driven search functions.

First, the visual search functionality enables customers to take a picture and search for related goods or services online. Visual search is extremely useful in cases when a customer is unable to remember the name of a desired item or even its spelling. Second, icon-first navigation functionality helps to navigate around the platform without scrolling through lengthy menu options in text format.

Third, the use of augmented reality and virtual try-on capability will provide better comprehension of products. This will allow shoppers to see how the product will look in real conditions, such as how a piece of furniture will look inside their home, how eyeglasses will fit on their face, or how certain shades of cosmetic products complement their natural colour.

6.4 Vernacular

Vernacular is the fourth dimension of the 4Vs framework. The dimensions are regional language interfaces, Hinglish communication, code-mixing capabilities, localized products' descriptions, localized customer support and culturally relevant content. Support for vernacular languages is very important due to close connections between trust, comfort and understanding on one hand, and languages on the other.

For example, many consumers from Tier 2 and Tier 3 cities do not like to communicate in English, preferring their native languages to interact with websites or make purchases. Therefore, if product descriptions, purchasing procedures, terms of return, customer support and other details will be provided in the native language of users, it will help them feel more comfortable during purchases. However, it is not enough just to translate the text into local languages. There is also a need to use cultural expressions, references, preferences and natural language.

Finally, Hinglish and code-mixing communications are important for India due to using of English words in regional languages.

6.5 Integration of the 4Vs in the Customer Journey

The key advantage of the 4Vs approach is that all four aspects are integrated together. All four aspects are needed to support different phases of the

consumer experience. The mapping of the 4Vs approach at various phases of the customer experience is provided in Table 4 below.

Table 4. Mapping of the 4Vs framework with the customer journey in Tier 2-3 e-commerce

Stage of Customer Journey	4V Dimension	Role
Product search	Voice	Helps users search through spoken commands
Product discovery	Visual	Allows users to find products through images and icons
Product understanding	Video	Explains product use, quality, and benefits
Trust and checkout	Vernacular	Builds confidence through familiar language

These factors together contribute to making the transition from searching for products to buying them easier. The AI-powered customer experience

journey, formed by combining Voice, Visual, Video, and Vernacular, is illustrated in Figure 3.



Figure 3. AI-enabled 4Vs customer journey for Tier 2-3 e-commerce users from product search to repeat purchase

One potential consumer experience could include voice search, then video demonstrations, with product visuals in between, finishing off the journey with vernacular payment.

This makes it evident that the 4Vs framework is not only comprehensive but applicable in helping acquire customers for Bharat. The 4Vs approach helps e-commerce companies' lower language

barriers, simplify user experience, provide clarity regarding products, instil trust, and encourage new customers to complete their purchases.

7. Voice as an AI Tool for Customer Acquisition

Voice technology refers to an AI-driven feature of enabling voice-based interaction. The technology is a critical means of improving customer acquisition in Tier 2 and Tier 3 e-commerce platforms. Emerging users in Bharat may find typing product names in English, searching through complex filters, and analyzing long descriptions challenging. In such situations, the voice search is a better solution for enabling interaction through voice. The users will not have to rely on text command, but they can speak directly to the platform in any of the preferred regional languages, including Hindi, and Hinglish. In terms of relevance, researchers have been exploring voice assistants in relation to consumer trust and brand loyalty (Rawool et al., 2025).

The main voice technologies include automatic speech recognition, natural language understanding, and text-to-speech. These three technologies help translate spoken words to text, comprehend user's intent, and generate a text output. The use of the technologies enables interaction through natural voice. Generally, voice assistants work by using speech recognition, language understanding, and spoken response methods to enable natural language conversations (Hoy, 2018).

Customers who lack adequate digital literacy skills benefit most from voice commerce due to reduced complexity of digital interface. An illiterate or poorly literate user would easily overcome the challenge by speaking the requirement. Spoken requirements can help a customer search for a desired product without having to type and think of its name in English. Consumer adoption of digital voice assistants depends largely on perceived usefulness, ease of use, and automated service interaction quality (Fernandes & Oliveira, 2021).

Besides the reduction in cognitive burden, voice commerce enables interaction in vernacular or mixed languages. Customers in India may feel more comfortable communicating in Hinglish, Hindi, and other mixed languages. First time users of online platforms are expected to find it easier to interact with an online interface if the latter understands their natural languages. In India, code-switching poses both opportunities and challenges for automatic speech recognition systems due to constant switching among languages, accents, and dialects during oral interaction (Jain & Bhowmick, 2025).

E-commerce platforms have been applying voice technology to enable customers to interact in their native languages. Examples of the voice-enabled platforms include Flipkart with voice search, JioMart for voice ordering, and WhatsApp interaction, and

Amazon Alexa for voice shopping assistance and recommendation. According to research on adoption of in-home voice assistants, consumers are driven by perceived usefulness, enjoyment, social presence, and trust in the platform (McLean & Osei-Frimpong, 2019).

Voice assistants can play a key role in improving customer acquisition. The assistants can make it easier for users to search for the products. Also, the voice assistants can guide customers through processes like comparing products, creating shopping carts, checking out, paying, monitoring orders, and receiving customer support. All these processes can be made easier and more interactive to keep emerging users interested in shopping and interacting (Moriuchi, 2019).

A great advantage of voice commerce is that it offers customers the sense of getting assisted. In physical stores, customers usually ask for help in finding products or in choosing alternative items. Voice assistants partially recreate that experience in the virtual environment, which is particularly important for Bharat consumers. Customer service can be improved through socially responsive voice agents that offer cooperation during interactions with digital services (Gnewuch et al., 2017).

Besides assisting customers during their shopping, voice assistants facilitate multitasking and hands-free shopping. Users can search for products in the midst of performing other activities like cooking, driving, or completing household chores. Convenience can drive more engagement of customers in using e-commerce platforms. Mobile-first users in Tier 2 and Tier 3 locations can conveniently use voice search for online shopping. In addition, assistive technologies through voice show promising potential in enhancing accessibility (Tsiourti et al., 2016).

Some of the challenges faced in voice commerce include the complexity of the Indian multilingual environment. The numerous languages, dialects, accents, and ways of pronunciation may lead to errors in voice recognition. Other challenges associated with voice technology include background noise, poor internet connectivity, and lack of enough data on regional languages. In multilingual speech recognition research, it has been found that end-to-end model can work across several languages, but Indian e-commerce platforms need advanced technology for successful voice commerce (Toshniwal et al., 2018).

Security and privacy are other concerns associated with voice commerce. Consumers tend to become concerned about recording of their voice and storage or distribution of their information. Since voice assistants involve handling highly personal voice data, companies are expected to guarantee privacy, security, and proper data storage. Insecurity in voice assistant application has been raised as an

issue in security and privacy literature (Li et al., 2023). Overall, voice technology is expected to contribute greatly to acquiring customers from Bharat. With the technology, companies can make their e-commerce platforms more inclusive, conversational, and user-friendly. As the part of 4Vs framework, voice acts as the entrance point to the consumer journey.

8. Video and Visual Commerce for Product Understanding

Visual and video commerce have emerged as effective ways to enhance product comprehension in online shopping experiences. Product understanding becomes a crucial factor for tier 2 and tier 3 shoppers who are accustomed to offline shopping since these consumers are used to examining products physically through touching, comparison, and questioning prior to purchasing. In an online environment, it is not always possible to examine products physically. Hence, product visualization and demonstration methods such as video, live commerce, visual search, AR, and VR may enhance product comprehension.

8.1 Video Commerce

Among the various forms that fall under video commerce are live streaming, tutorial clips about products, demonstrations by influencers, short video clips, and product explanation videos. Through such types of videos, buyers get to understand what the product offers and what they need to expect about the item when using it. For novice shoppers, videos are an easier way of comprehending the details that are provided about the items in question.

The use of live streaming for commerce purposes is helpful since through live stream, buyers get to enjoy not only entertainment, but also a product demonstration and even interaction from the seller, influencer, or brand representative. It fosters the social connection aspect in a similar way that traditional face-to-face selling did. Furthermore, the use of live stream enables video commerce websites to form stronger relationships with consumers (Hu & Chaudhry, 2020). In this case, video commerce enables buyers to engage in the purchasing process. In addition, video commerce plays a major role in the formation of purchase intentions. Videos help buyers to see how a product looks like and how one uses it. Such videos reduce hesitation and increase speed at which decisions regarding purchases are made. With regards to Bharat consumers, videos offered in regional languages help buyers not only understand products, but also the language used.

8.2 Visual Commerce

Tools associated with visual commerce include image search, camera-based discovery, icon-first

approach, visualization through augmented reality, and virtual try-on features. They allow people to rely less on text-based searching and assist users that are not certain about the names, spellings, or descriptions of the desired goods. Rather than keying in certain keywords, users would be able to understand or discover products based on images, icons, and visual representations.

The visual search tool gives consumers an ability to upload or capture an image and get results related to similar products available at the respective e-commerce website. This feature is useful for fashion, beauty, interior decorating products, electronics, groceries, and other types of products and services. Camera-based discovery allows for making the shopping experience more intuitive as users start their interaction with items they see rather than describe verbally.

Icon-first approach provides an opportunity for more intuitive navigation as users do not have to key in complicated terms and descriptions. Visualizing goods through augmented reality and virtual try-on tools helps customers understand how different types of products would look like before buying them. AR-based approaches help e-commerce to become more engaging and immersive and contribute to increased purchase intention (Yim et al., 2017).

Additionally, the use of mobile augmented reality can facilitate decision-making processes through more engaging and vivid environments in which users can evaluate products and their properties better. The use of such solutions is particularly valuable for Bharat as its e-commerce platform targets mostly mobile users. Mobile AR-based approach could help reduce uncertainties before the actual purchase (Qin et al., 2021).

Therefore, using various visual commerce tools would be particularly valuable for Bharat as it could help overcome the existing gap between offline and online shopping that prevents Tier 2 and Tier 3 consumers from making purchases online.

9. Vernacular Language and Trust Building

In the case of Tier 2 and Tier 3 e-commerce consumers, vernacular language becomes a key factor in establishing consumer trust. Many people in Bharat prefer to use Hindi, Hinglish, Marathi, Tamil, Bengali, Telugu, Punjabi, or some other regional languages in their communication rather than English. If e-commerce platforms limit themselves only to English or translated formalized texts, it might lead to confusion, distance from users, and decreased trust. Consequently, vernacular language should be used as a trust-building tool.

From the point of view of emerging consumers, using familiar language can minimize psychological distance between a customer and an e-commerce platform. Product descriptions, payment procedures,

delivery options, and return policies can become understandable once presented in a native language of a user. It is particularly important for first-time online buyers as they already feel distrust related to product quality, payment security, and refund policies.

However, the usage of vernacular language cannot be limited only to simple translation. Translation can fail to reflect regional meanings, idioms, and language patterns. As many consumers in Bharat use a combination of languages, including Hinglish or any regionally mixed language, there is a need for platforms to develop culturally adapted language. Studies on localized advertising show that ethnic and language cues can affect consumer response if adapted culturally (Lou et al., 2023).

The concept of cultural adaptation is crucial in developing the website and platform because users have positive attitudes towards culturally adapted content. For Bharat's e-commerce population, the development of culturally adapted interfaces becomes a necessity as vernacular commerce includes not only translated words but also regional tone, relevant examples, images, and customer service methods (Singh & Matsuo, 2004).

Moreover, vernacular commerce provides additional opportunities for improving customer service. It will be easier for customers to place orders, report concerns, check order status, and understand refund procedures if a person will interact with the platform using a familiar language. It becomes critically important since users cannot see products in real life, negotiate with sellers, and examine goods before purchase in digital commerce.

Using vernacular language as a part of the acquisition process within the 4Vs framework allows strengthening customer experiences in the final stages of the journey. Voice technologies might be useful for searching for information, video technology – for evaluating products, and visuals – for choosing a desirable product. At the same time, vernacular language enables users to become confident enough for making purchases.

10. Discussion and Managerial Implications

The 4Vs approach offers a concrete direction for e-commerce businesses looking to get customers from Tier 2 and Tier 3 segments. The 4Vs approach indicates that getting the customer in Bharat is not about advertising, discounts, or a range of products; rather, the platform will have to create the whole shopping experience keeping accessibility, simplicity, trust, product knowledge, and language in mind.

The proposed customer journey may be understood as:

Voice search → Video demonstration → Visual/AR experience → Vernacular checkout

This sequence caters to the requirements of nascent users. The use of voice enables nascent users to

initiate the shopping process without having to type anything. Video makes it possible for users to learn about the product in an exciting manner. Visual and AR aid in evaluation of the product. Vernacular checkout facilitates a comfortable purchase process.

10.1 AI Investment

E-commerce organizations should consider AI solutions like speech recognition, image-based searching, recommendation algorithms, AR engines, chatbots, and vernacular natural language processing to improve personalization and user experience on their platforms. In marketing, AI applications can be used to automate processes, make data-driven decisions, personalize services, and communicate with customers (Huang & Rust, 2021).

10.2 User Interface Redesign

Platforms should reduce text-heavy layouts and create simpler, more visual, and more intuitive interfaces. Icons, images, videos, voice buttons, regional language menus, and guided checkout processes can make apps easier to use for low-literacy and first-time users. A Bharat-focused interface should be mobile-first, low-data, and easy to understand even for users with limited digital experience.

10.3 Regional Market Strategy

E-commerce companies should create region-specific customer acquisition strategies. A single national strategy may not work because language, culture, product preferences, payment behaviour, and trust levels differ across regions. Platforms should use local language content, regional influencers, local seller networks, location-based recommendations, and culturally relevant campaigns to build stronger connections with consumers in smaller cities.

10.4 Trust and Inclusion

The 4Vs framework also highlights that AI should not be used only to increase sales. It should also support digital inclusion. Voice tools can help users who struggle with typing, video can support users who need product explanation, visual tools can help users who prefer image-based discovery, and vernacular communication can help users who are uncomfortable with English. In this way, AI can make e-commerce more accessible for low-literacy, non-English-speaking, and first-time digital consumers.

Overall, managers should treat the 4Vs framework as a customer journey redesign model. By integrating voice, video, visual, and vernacular tools, e-commerce platforms can reduce friction, improve trust, support inclusion, and increase customer acquisition in Bharat.

11. Limitations and Future Research

This study is conceptual in its approach. Based on existing literature, secondary sources, and industry-oriented examples, no surveys, interviews, experiments, statistical analysis, and hypothesis testing have been included. This conceptual model will prove its practical value when applied to the customer acquisition process in Tier 2 and Tier 3 e-commerce markets. Still, empirical validation of the proposed model is necessary.

First, it should be noted that this work has not quantified the effect of voice, video, visual, and vernacular applications on the client acquisition process. Future research can focus on the extent to which each of these four elements influences customers' purchase intention, perception of trustworthiness, comprehension of products, and loyalty toward the platform. For example, surveys could be carried out among the Tier 2 and Tier 3 clients, analyzing their attitude toward voice search, video product demonstrations, visual searches, AR try-on, and vernacular checkout features.

A second issue concerns comparing various platforms regarding their usage of voice, video, visual, and vernacular techniques. Future scholars could compare such platforms as Amazon, Flipkart, Myntra, Meesho, JioMart, and ONDC-connected sellers. The research would reveal the best strategies for designing an inclusive platform for Bharat.

Further, researchers could use experimental methods for investigating users' attitudes. They could examine the differences between the effects of such factors as text-based and voice search options, static images and video-based product descriptions, and English-language versus vernacular checkout procedures. The findings would identify those AI-enabled aspects that positively affect clients' decision-making process.

Moreover, longitudinal studies would be required to identify the sustainability of the proposed framework. For example, a client may start using the platform due to its voice or vernacular feature. However, continued engagement with the platform may be determined by other aspects, including timely delivery of orders, customer satisfaction with purchases, ease of returns, and trust. Future researchers should focus on both aspects of using an inclusive e-commerce platform – client acquisition and retention.

Finally, it is important to focus on how the proposed strategy affects small sellers of various products located in Tier 2 and Tier 3 cities. They may also benefit from AI-powered product videos, vernacular catalog descriptions, visual catalogs, and voice-based customer service. Future research could identify the seller-side advantages associated with such strategies.

In conclusion, the 4Vs framework presents the initial step towards developing and testing the concept. However, further empirical research will make it possible to confirm, modify, and validate it. As artificial intelligence reshapes marketing through personalization, automation, customer analysis, and intelligent service systems, future research into this topic would be very relevant (Davenport et al., 2020).

12. Conclusion

Through this review paper, the need for the application of AI-based customer acquisition strategy in the e-commerce market of Tier 2 and Tier 3 cities of India is emphasized. Consumers from Bharat represent a large pool of untapped growth potential; however, they may experience several impediments related to their language abilities, digital proficiency, lack of trust, product uncertainty, difficult interfaces, and hesitation about purchasing. For this purpose, the 4Vs approach – which includes Voice, Video, Visual, and Vernacular technologies – is recommended to overcome the mentioned impediments. Using voice technologies would allow consumers to search and navigate websites in an effortless manner. The introduction of video commerce would enable customers to understand products through demos and active involvement with them. Using visual technologies such as image search and augmented reality could facilitate finding products and creating the necessary confidence. Utilization of vernacular technologies could build consumers' trust through providing relevant information in a language familiar to them, allowing an easy checkout process and convenient customer service. E-commerce providers should shift from relying too heavily on the use of English and text-based approaches to more diverse ones, powered by AI and regionally specific approaches.

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