



Infrastructure Facilities, Awareness, and Consumer Purchasing Behaviour in Organized Retail Stores - feedback of Dairy and Food Consumers of in Anand City

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This research investigates the infrastructure quality, consumer awareness, and purchasing behaviour across retail stores in Anand and Vidyanagar, Gujarat. The study evaluates nine prominent retail outlets, including supermarkets, hypermarkets, and convenience stores, with a

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particular focus on the Amul Green Retail Store. Using a structured questionnaire and direct observation, data were collected from 100 consumers and through in-store assessments. Findings reveal that large-format retailers like D-Mart and Smart Bazaar outperform others in terms of infrastructure, product variety, and customer amenities such as billing counters, parking, and washroom facilities. Amul Green, although offering a moderate range of essential products, lacks key infrastructure elements and brand visibility—only 49% of respondents were aware of its existence, and 52% reported never shopping there. Consumer demographic analysis indicated a predominantly young (86% aged 18–26), urban (81%), and educated sample with strong purchasing power. Purchase behaviour trends showed a clear preference for D-Mart and Sardar Ganj Market, driven by convenience and pricing. The study concludes that to remain competitive, smaller retailers must upgrade infrastructure, improve customer experience, and strengthen marketing efforts. The research offers insights valuable for retail strategists and policymakers aiming to optimize consumer engagement and retail performance in semi-urban Indian markets.

Keywords: Retail infrastructure, consumer awareness, buying behaviour, Amul green retail store, Anand, Vidyanagar, D-mart, retail competitiveness, store facilities, urban retail India.

1. INTRODUCTION

The global retail industry is a dynamic and rapidly evolving sector that encompasses a wide range of businesses selling goods and services directly to consumers. Fuelled by technological advancements, shifting consumer preferences, and increasing globalization, the industry has seen a significant transformation in recent years. E-commerce has emerged as a dominant force, driving innovation in supply chain management, personalized marketing, and omnichannel retailing. Traditional brick-and-mortar stores are adapting by integrating digital technologies and enhancing customer experiences to remain competitive. As sustainability and ethical sourcing gain importance, retailers are also under growing pressure to adopt environmentally and socially responsible practices. Overall, the global retail landscape continues to be shaped by digital disruption, changing demographics, and an increasing focus on customer-centric strategies.

The global retail market, valued at \$31.98 trillion in 2024, is projected to reach \$34.87 trillion in 2025 (CAGR 9.0%) and \$46.78 trillion by 2029 (CAGR 7.6%). Historic growth has been driven by rapid economic expansion in emerging markets, urbanization, FDI, franchising, and increased demand for supermarkets and discount stores. Going forward, technology advances (data analytics, in-store automation, smart shelves, interactive vending, and drone deliveries), local shopping preferences, and e-commerce collaborations will be key growth factors.

India's retail sector is highly attractive due to its large population, growing middle class, rising incomes, and urbanization, with the market set to triple from 2019 levels to ₹2,16,57,500 crore (US\$ 2.5 trillion) by 2035. In 2022, FMCG (65%), apparel and footwear (10%), and consumer electronics (9%) were the top segments, with FMCG alone projected to reach US\$ 220 billion by 2025 and US\$ 615.87 billion by 2027. Traditional retail still accounts for 81% of sales, while organized retail and e-commerce hold 12% and 8%, respectively. India's e-commerce industry is forecast to exceed US\$ 350 billion by 2030 (CAGR 23%), growing from US\$ 53.08 billion in 2024 to US\$ 91.24 billion by 2029, supported by UPI transactions of US\$ 1.51 trillion and over 800 million users in 2022.

2. LITERATURE REVIEW

Har et al., (2022) trace the evolution of the retail sector in the context of technological advancements linked to Industry 4.0. Their study introduces the concept of *Retail 4.0*, which represents the retail industry's response to emerging digital technologies. The authors explain that Retail 4.0 has emerged as a transformative phase, shaped by the integration of cutting-edge technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Cloud Computing, Big Data Analytics (BDA), and Augmented Reality (AR). These technologies are revolutionizing retail operations by enhancing decision-making, improving customer experience, and streamlining supply chains. The paper further reviews the historical progression from Retail 1.0 to Retail 4.0, highlighting how technological milestones have continually

reshaped consumer engagement and operational efficiency. Additionally, the study explores the varying degrees of Retail 4.0 adoption across different countries, offering insights into the global disparities in technological readiness and implementation. This literature underscores the critical role of digital transformation in redefining retail landscapes and emphasizes the need for strategic alignment between technological capabilities and retail practices.

Arya and Bharti (2023) explore consumer awareness regarding emerging technologies in the retail sector, emphasizing the shift in shopper behavior driven by digital transformation. As customers increasingly expect enhanced and interactive in-store experiences, retailers are being compelled to adopt innovative technologies to meet these expectations. The study aimed to assess the extent of customer awareness about various retail technologies through a self-administered survey employing multi-item constructs and standardized measurement scales for agreement, significance, and satisfaction. Their findings reveal that while consumers demonstrate a general awareness of technological developments in retail, their familiarity with specific technologies—such as vending machines—remains relatively limited. This suggests a disparity between exposure to advanced retail systems and the actual depth of consumer understanding, pointing to the need for improved communication and education around less mainstream retail technologies.

Pawar and Sangvikar (2019) present an in-depth case study on the strategic growth and success of DMart, a leading retail chain in India. Their study positions DMart within the broader context of India's rapidly evolving retail sector, which is characterized by substantial market potential and economic momentum. DMart has emerged as a highly profitable retail entity by catering primarily to middle-income households and families, offering a diverse array of everyday essentials at highly competitive prices. The company's appeal lies in its ability to deliver value through consistent discounts and affordable pricing, distinguishing itself from other market players. Often referred to as the "Indian Wal-Mart," DMart's growth trajectory is attributed to its disciplined operational model, strategic pricing, long-term vision, and customer-centric philosophy. The authors identify customers, vendors, and employees as the three foundational pillars supporting the brand's

sustained market and financial performance. The study utilizes primary data gathered through surveys and interviews with customers and employees, alongside secondary data from verified financial reports. The case sheds light on the practical strategies and internal principles that have contributed to DMart's exemplary performance in India's competitive retail landscape, offering valuable insights for both practitioners and researchers in retail management.

Abrudan *et al.*, (2015) explore how shopping centers can enhance competitiveness by innovating key aspects of their operations to influence customer image perception, satisfaction, and loyalty. In a context marked by intense competition, the authors argue that innovation plays a crucial role in shaping customer experience and fostering long-term loyalty. The study, conducted through a questionnaire-based survey among shoppers in Cluj-Napoca, investigates how different components of a shopping center's image—such as product assortment, pricing strategies, loyalty programs, ambiance, service quality, and communication—affect customer satisfaction and, in turn, influence both conative and behavioral loyalty. Using structural equation modeling, the findings show that image components have a significant positive impact on satisfaction, which mediates the relationship between perceived image and behavioral loyalty. Additionally, conative loyalty also plays a mediating role, reflecting the emotional commitment that precedes repeat purchasing behavior. The study provides valuable managerial insights, emphasizing that shopping centers must continuously innovate in areas that shape customer perception to build lasting relationships and strengthen market positioning.

Vadakkepatt *et al.* (2021) emphasize the growing importance of sustainability in retailing, driven by consumer demand for environmentally friendly and socially responsible products. As awareness of the environmental and social impact of supply chains increases, retailers—situated strategically between producers and consumers—are uniquely positioned to influence sustainable practices. The study highlights the role of retailers in promoting a circular economy by facilitating the return, reuse, and recycling of products at the end of their life cycle. Retailers not only serve as operational intermediaries but also as key enablers in advocating for

sustainability across the entire supply chain. By actively engaging in sustainability initiatives, retailers can foster environmental stewardship and enhance social responsibility among stakeholders. The authors also discuss the significant challenges that hinder the scalability of such initiatives and propose mechanisms through which retailers can drive broader impact. Their insights provide a framework for understanding how retail organizations can operationalize sustainability to create long-term value and legitimacy in the marketplace.

Gaur and Panigrahi (2018) argue that the state's role is crucial in providing the necessary infrastructural backbone to ensure continuous and sustainable growth in the retail industry. Their research particularly focuses on the significance of government intervention in infrastructure development during periods of economic recovery. Using a standard differentiation technique, they demonstrate that the state's involvement in building and enhancing infrastructure is most impactful when the economy is in a recovery phase, thus facilitating the retail sector's expansion in a sustainable manner. This insight underscores the importance of strategic state support in enabling the retail sector to overcome infrastructural bottlenecks and maintain its growth trajectory.

Qalati, Barbosa, and Deshwal (2024) explore this interplay amid rising environmental concerns and the rapid digital transformation reshaping retail landscapes. Their work highlights that consumer choices play a pivotal role in advancing sustainability, prompting businesses to adapt marketing strategies accordingly. The rise of e-commerce and digital platforms presents new opportunities to promote sustainability through initiatives such as eco-friendly packaging, carbon-neutral delivery, and interactive digital engagement. However, these developments also bring challenges, including increased packaging waste and environmental impact associated with online shopping. Conversely, offline retail settings remain crucial for fostering direct consumer interactions with sustainable practices, such as in-store recycling programs and environmental awareness initiatives.

General trade refers to the traditional form of retail where goods are sold through small, independent, and often family-run stores or local

kirana shops. These outlets typically operate on a smaller scale, with limited technology use, personalized customer interactions, and often informal credit systems. General trade is widespread in many developing markets and serves the bulk of daily consumer needs.

Modern trade involves organized retail formats such as supermarkets, hypermarkets, large chain stores, and online retail platforms. These outlets are usually part of bigger retail chains, have standardized operations, use advanced technology for inventory and sales management, and offer a wide variety of products under one roof. Modern trade focuses on convenience, product variety, and often competitive pricing (<https://beatroute.io/sales-execution/what-is-general-trade-vs-modern-trade/>).

Dairy cooperative giant Gujarat Cooperative Milk Marketing Federation (GCMMF) has set up a retail outlet and restaurant over a 5,800 square feet area at Anand near Amul Dairy. The retail outlet would sell around 6,500 items including food and other products. The cooperative is selling food items like oil, nuts, spices, grains and pulses under the Amul Green brand at the retail outlet. These are being procured in bulk by the cooperative and are packaged and sold under the Amul Green brand. The idea is to procure directly from farmers so that they get better prices for their produce. India's dairy sector has shown remarkable growth over the last two decades, with Gujarat leading several milestones. According to Modi et al. (2025), Gujarat's milk production has increased by 212% over the last two decades, compared to India's 183% growth. This robust performance underscores the success of the state's dairy industry, particularly due to the cooperative sector led by organizations like Amul (Gujarat Cooperative Milk Marketing Federation, 2025). Gujarat's milk production grew at a faster rate than the national average, resulting in a steady increase in its contribution to India's total milk production—from 6.95% in 2001-02 to 7.65% in 2023-24. Gurjar and Modi (2024) in their district-wise analysis of milk production in Gujarat for the year 2022-23, found that Gujarat, with a total of 17.281 million metric tonnes of milk, and Major districts identified were - Banaskantha, Sabarkantha, Mehsana, Anand, and Kheda.

Also, Dairy products are nowadays most popular FMCG due to their health and nutrition aspects,

they are available nowadays in every General Trade segment and Modern Trade segment Modi et al. (2024) emphasized the complementary relationship between dairy nutrition and yoga for digestive health and overall well-being, suggesting that dairy spreads like ghee or probiotic-based butters play a crucial role in dietary routines across all age groups. The dairy sector in India has undergone significant transformation over the past few decades, largely driven by the cooperative model championed by Gujarat Cooperative Milk Marketing Federation (GCMMF), which manages the iconic Amul brand.

Further Gujrar et al. (2025) studied the product portfolio of Amul's ambient products and their findings suggest that while the ambient products are available in Modern Trade, there is opportunity for General Trade also, Amul's ambient product strategy empowers small retailers without refrigeration to participate in India's growing packaged food market. Stakeholders across the chain—from shopkeepers to distributors, and from public policy to private health brands—can benefit by aligning with Amul's evolving product focus on nutrition, affordability, convenience, and health trends. The small entrepreneurs who don't have refrigeration facilities, but still want to sell Amul products, you are well-positioned to leverage Amul's ambient product portfolio—products that don't require refrigeration and have longer shelf lives.

3. RESEARCH OBJECTIVE

1. To compare the availability and infrastructure facilities of retail stores in Anand and Vidyanagar cities.
2. To assess consumer awareness and analyse buying behaviour towards various retail stores in Anand and Vidyanagar, based on responses from 100 customers.

4. RESEARCH METHODOLOGY

To effectively carry out the study titled “An Analysis of Infrastructure Facilities, Awareness, and Consumer Purchasing Behaviour Across Retail Stores in Anand and Vidyanagar,” a structured research design was developed. The research was conducted in March 2025, utilizing a web-based survey as the primary tool for data collection. A structured questionnaire was

designed to gather relevant information aligned with the study's objectives

The study relies entirely on primary data, collected through structured questionnaires administered to selected retail store managers and customers. For the first objective, data was collected through retail store observations and manager interviews, focusing on infrastructure facilities. A purposive sampling technique was used to select eight prominent retail stores in Anand and Vidyanagar: D-Mart – Karamsad, D-Mart – Vidyanagar, D-Mart – Tulsi Talkies, Reliance – Vidyanagar, Reliance – Grid, Zero Degree – Amul Dairy Road, Zero Degree – Sanket, Amul Green Retail Store, and Param Mart. Each store was evaluated using the same checklist to ensure uniformity in data collection.

For the second objective, a convenience sampling method was used to survey 100 Dairy and Food retail customers who shop at various retail stores in Anand and Vidyanagar. The sample included a diverse mix of age groups, genders, and occupational profiles to gain a broader perspective on consumer buying behaviour.

The collected data was analysed using descriptive statistics, such as frequencies, percentages, and cross-tabulations. A comparative analysis was conducted to identify key differences between retail stores in terms of infrastructure quality, consumer awareness, and purchase preferences. Graphs and tables were used to visually present the findings and enhance interpretability.

5. RESULTS AND DISCUSSION

5.1 To Compare the Availability and Infrastructure Facilities of Retail Stores In Anand and Vidyanagar Cities

5.1.1 Types of retail stores in Anand and Vidyanagar city

This analysis explores the diverse types of retail stores operating within these regions, considering their format, scale, target consumer base, and product offerings. Understanding the retail mix is crucial for assessing consumer behavior, market trends, and business opportunities in this dynamic environment.

Table 1. Types of Retail Stores in Anand and Vidyanagar City

Sr no.	Type of retail store	No. of stores
1	Supermarket	3
2	Hypermarket	3
3	Convenience Store	2
4	Grocery Store	1
	Total	9

**Fig. 1. Types of Retail Store in Anand and Vidyanagar City**

Out of the nine selected stores, three were identified as supermarkets, including Param Mart, Smart Bazaar–Grid chowkadi, and D-Mart (Tulsi Talkies). Similarly, three stores fell under the category of hypermarkets, namely Smart Bazaar–Vidyanagar, D-Mart – Karamsad, and D-Mart –Vidyanagar. Additionally, two stores were categorized as convenience stores, both branded as Zero Degree, located at Amul Dairy Road and near Sanket respectively. The Amul Green Retail Store, which is the primary subject of the study, was categorized as a grocery store and was the only store in this specific format within the sample.

This distribution of store types highlights the dominance of supermarket and hypermarket

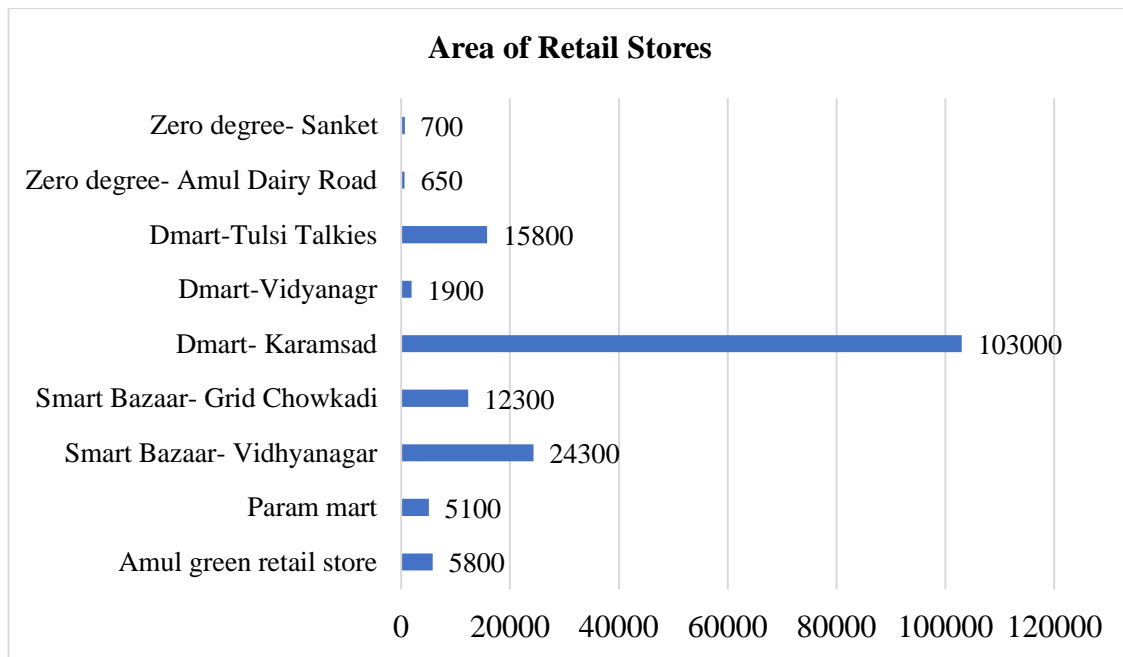
formats in the area, which offer a wider range of products and facilities. In contrast, the Amul Green Retail Store operates in a more niche, compact grocery store format.

5.1.2 Area analysis of retail stores

Store area is a vital component of retail infrastructure, directly influencing product range, customer movement, comfort, and overall shopping experience. In the present study, the built-up area (in square feet) of nine selected retail stores in Anand and Vallabh Vidyanagar was analyzed to compare space capacities across different store formats.

Table 2. Area Analysis of Retail Stores

Sr No.	Name of Retail Store	Area (sq. feet)
1	Amul Green Retail Store	5800
2	Param Mart	5100
3	Smart Bazaar- Vidyanagar	24300
4	Smart Bazaar- Grid Chowkadi	12300
5	D-Mart- Karamsad	103000
6	D-Mart-Vidyanagar	1900
7	D-Mart-Tulsi Talkies	15800
8	Zero Degree- Amul Dairy Road	650
9	Zero Degree- Sanket	700

Source: Secondary Data**Fig. 2. Area of Retail Store**

D-Mart Karamsad is the largest store with 103,000 sq. ft., followed by Smart Bazaar (24,300 sq. ft.) and D-Mart Tulsi Talkies (15,800 sq. ft.). The Amul Green Retail Store (5,800 sq. ft.) is mid-sized, larger than Param Mart (5,100 sq. ft.) but smaller than hypermarkets, while Zero Degree outlets are the smallest with under 700 sq. ft. each

5.1.3 Brightness inside the retail stores

Lighting plays a vital role in shaping the shopping environment, influencing customer mood, product visibility, and overall, in-store experience. In this study, the lighting conditions of nine retail stores in Anand and Vallabh Vidyanagar were evaluated and categorized as too bright, adequate, or dim, based on direct observation.

5.1.4 Product arrangement in retail stores

Efficient and clear product arrangement is a key element of a well-functioning retail environment. It influences customer convenience, encourages product exploration, and enhances the overall shopping experience. In this study, product arrangement inside nine selected retail stores in Anand and Vallabh Vidyanagar was evaluated based on its clarity—categorized as either clear or not clear.

Six of the nine stores, including Amul Green Retail Store and all D-Mart branches, had clear and well-organized product arrangements, enhancing the shopping experience. In contrast, Param Mart and both Zero Degree stores had unclear arrangements, leading to potential customer confusion and lower satisfaction.



Fig. 3. Brightness inside the Retail Stores

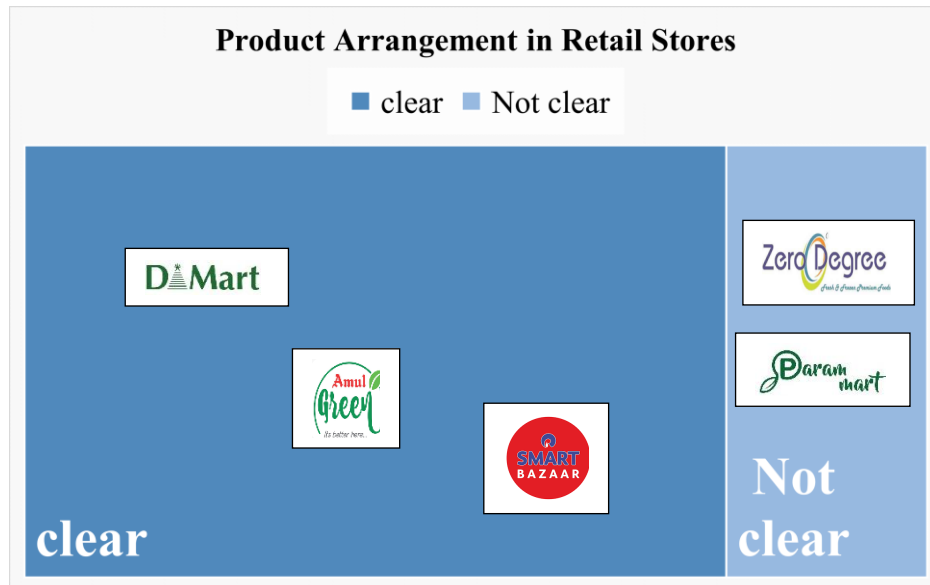


Fig. 4. Product Arrangement in Retail Stores

5.1.5 Billing counters analysis of retail stores

Billing counters are a crucial component of retail infrastructure that directly impact checkout efficiency, customer wait times, and overall satisfaction. An adequate number of counters

helps in managing peak-hour rush, improving operational flow, and enhancing the shopping experience. In this study, the number of billing counters across nine selected retail stores in Anand and Vallabh Vidyanagar was assessed.

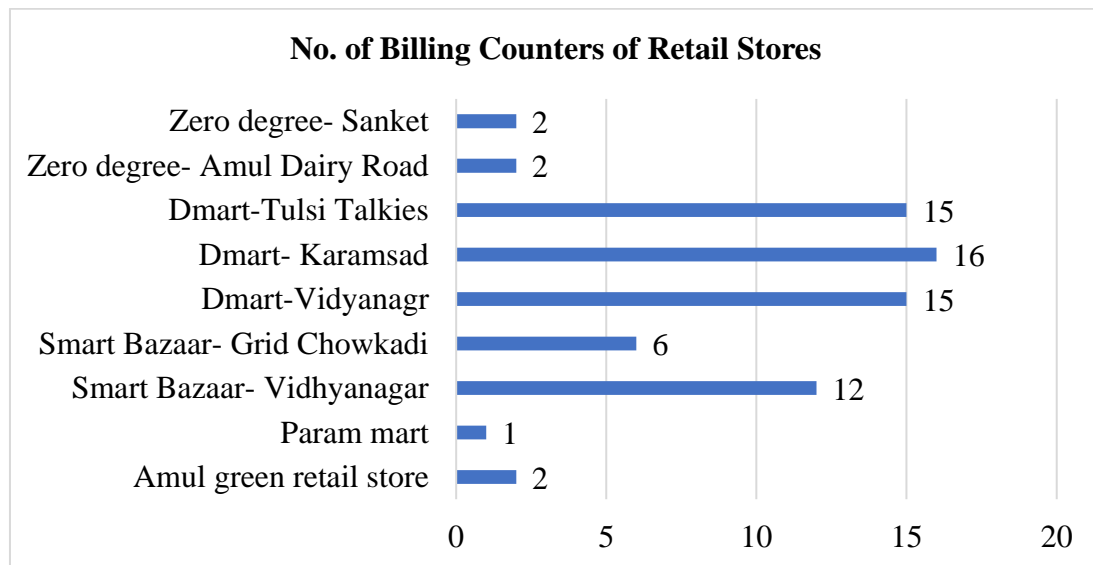


Fig. 5. No. Billing Counters of Retail Stores

D-Mart Karamsad has the most billing counters (16), followed by D-Mart Tulsi Talkies and Vidyanagar (15 each), supporting their large customer base. Smart Bazaar locations have 6–12 counters. Amul Green Retail Store and Zero Degree stores each have only 2 counters, which may limit efficiency during peak times.

5.1.6 Temperature & air quality inside the retail stores

Maintaining a comfortable in-store environment is critical for customer satisfaction and prolonged shopping duration. Temperature control and air quality contribute significantly to shoppers' comfort and directly influence their overall perception of the store. This parameter was evaluated in nine retail outlets in Anand and Vallabh Vidyanagar, and results were categorized as very convenient or neutral based on customer experience.

Six of the nine stores, including Amul Green Retail Store, both Smart Bazaars, and all D-Mart branches, provided a very convenient environment with good temperature and air quality. In contrast, Param Mart and both Zero Degree stores were rated as neutral, indicating only basic comfort levels.

5.1.7 Background music availability inside the retail stores

Background music in retail environments plays a significant role in influencing consumer mood, enhancing the shopping experience, and encouraging longer store visits. It can create a pleasant ambiance, reduce perceived wait times, and promote a brand's identity. In this analysis, background music availability was evaluated across nine retail stores in Anand and Vallabh Vidyanagar.

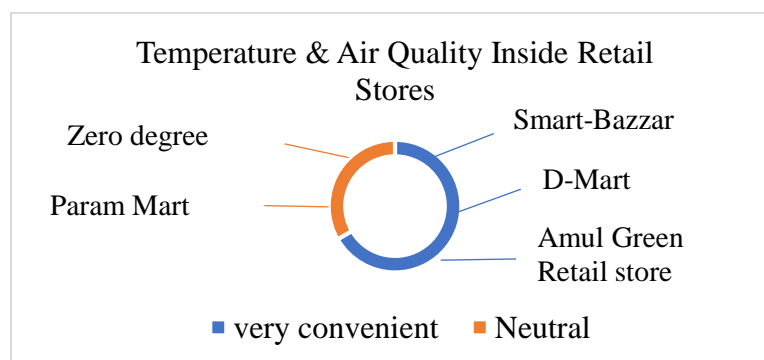


Fig. 6. Temperature & Air Quality Inside Retail Stores

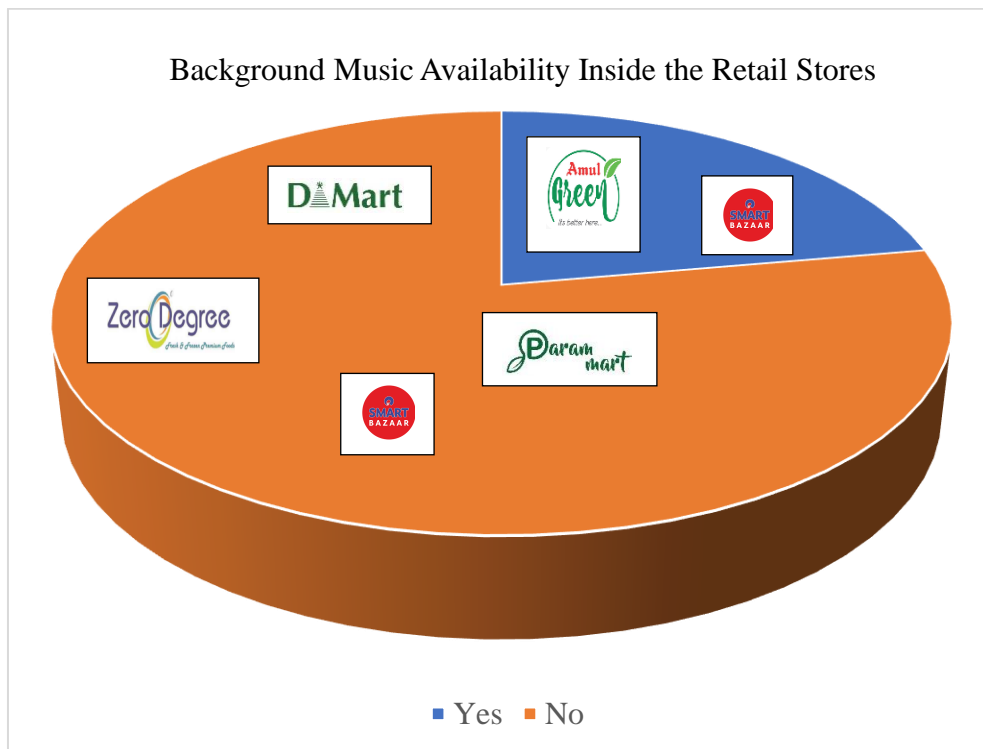


Fig. 7. Background Music Inside the Retail Stores

Only two stores—Amul Green Retail Store and Smart Bazaar – Grid Chowkadi—offer background music, enhancing the shopping experience through sensory engagement. The other seven stores lack this feature, missing an opportunity to improve customer ambiance.

5.1.8 Availability of washroom facility of retail stores

Availability of clean and accessible washroom facilities is a basic yet essential part of retail infrastructure. It significantly influences customer

convenience, especially in large stores where visitors tend to spend more time shopping. Lack of such facilities can deter repeat visits, particularly from families, elderly customers, and those with specific needs.

Five of the nine stores, including both Smart Bazaars and all D-Mart outlets, provide washroom facilities, aligning with their large-format layouts and customer needs. In contrast, Amul Green Retail Store, Param Mart, and both Zero Degree outlets lack this facility, which may reduce customer comfort during longer visits.

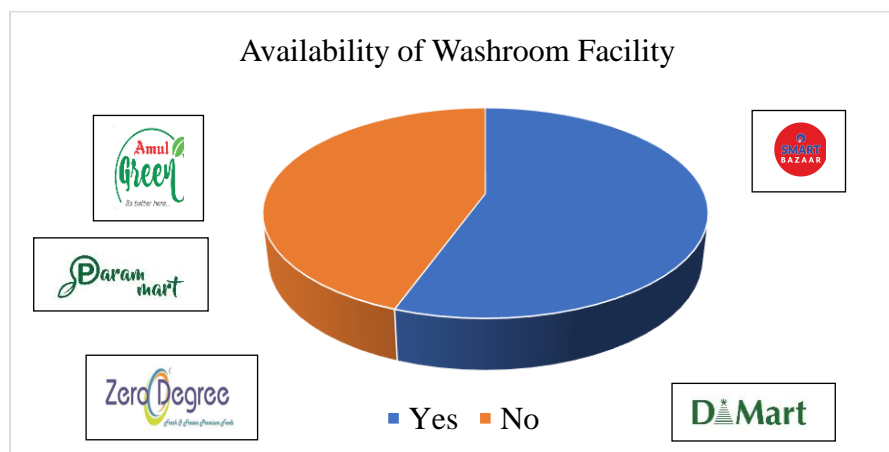


Fig. 8. Availability of Washroom Facility

5.1.9 Availability of parking facility of retail stores

Parking availability plays a critical role in shaping customer experience in retail settings. A good parking facility not only ensures convenience but also influences the time customers spend in the store and their likelihood of returning. In cities like Anand and Vidyanagar, where space constraints and traffic are common, an accessible and well-managed parking area can become a key differentiator for retail stores.

Among the nine stores, three—Param Mart, D-Mart Karamsad, and Zero Degree – Sanket—offer large parking facilities, accommodating customers with personal vehicles. Four stores, including Smart Bazaar Vidyanagar and two D-Mart branches, provide medium parking. Amul Green Retail Store and Smart Bazaar Grid have small parking areas, which may limit convenience for car-owning customers despite their otherwise strong offerings.

5.1.10 Product range availability of retail stores

Product range availability plays a crucial role in attracting and retaining customers. The ability of

a retail store to offer a diverse and comprehensive selection of products directly influences consumer satisfaction, purchase decisions, and brand loyalty. This study aims to analyze the product range availability across five different branded retail stores, utilizing primary data collected through in-store observations, customer surveys, and staff interviews. By evaluating the breadth and depth of product offerings, this research sheds light on how well each brand caters to the varying needs and preferences of its target market.

This analysis holds considerable significance for both academic research and practical retail strategy. Understanding product range availability helps businesses identify gaps in their offerings, align inventory with consumer demand, and enhance operational efficiency. Additionally, the insights derived from comparing multiple retail brands provide a benchmark for best practices in product assortment planning. Retailers can use these findings to refine their merchandising strategies, while scholars can gain a deeper understanding of consumer behavior patterns related to product choice and availability in the retail sector.

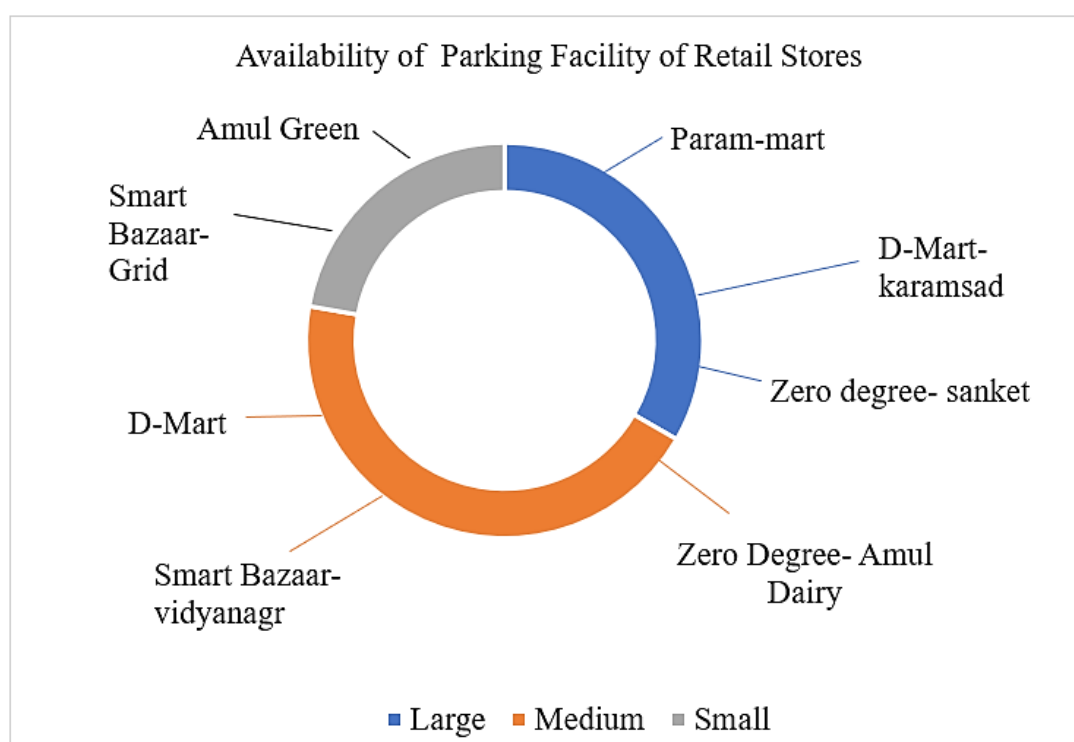


Fig. 9. Availability of Parking Facility of Retail Stores

Table 3. Product Range Availability of Retail Stores

Sr No.	Category of Products	Amul Green	Param Mart	D-Mart	Reliance Mart	Zero Degree	Total
1	Cosmetics	Y	NA	Y	Y	NA	3
2	Dairy Products	Y	Y	Y	Y	Y	5
3	Grocery & Staples	Y	Y	Y	Y	Y	5
4	Tea & Coffee	Y	Y	Y	Y	NA	4
5	Personal Care	Y	Y	Y	Y	NA	4
6	Soft Drinks	Y	Y	Y	Y	Y	5
7	Bath Soap	Y	Y	Y	Y	NA	4
8	Puja Needs	Y	Y	Y	Y	NA	4
9	Hair Care	Y	Y	Y	Y	NA	4
10	Daily Essentials	Y	Y	Y	Y	NA	4
11	Home Appliances (Electrical)	NA	NA	Y	Y	NA	2
12	Crockery & Footwear	NA	NA	Y	Y	NA	2
13	Luggage	NA	NA	Y	Y	NA	2
14	Toys & Games	NA	NA	Y	Y	NA	2
15	Plastic Containers	NA	NA	Y	Y	NA	2
16	Clothing	NA	NA	Y	Y	NA	2
17	Fruit N Vegetables	NA	NA	Y	Y	Y	3
18	Stationary	NA	NA	Y	Y	NA	2
	Total	10	9	18	18	4	

Y= Available, NA- Not Available

For this analysis, I have considered five physical retail stores located in Anand and Vidyanagar city: Amul Green Retail Store, Param Mart, D-Mart, Reliance Mart, and Zero Degree. The availability of various product categories across these stores has been examined. In the analysis, 'Y' denotes the availability of a specific product category in a given retail store, while 'NA' indicates its non-availability.

The analysis presented in Table 3 clearly highlights significant differences in the product range availability across the five surveyed retail stores. D-Mart and Reliance Mart offer the most comprehensive product assortments, each providing 18 different categories out of the total examined. These two retailers feature an extensive selection that includes not only essential daily items such as dairy products, grocery staples, and personal care but also extends to categories like clothing, toys, home appliances, and luggage—areas where many other stores have limited or no offerings.

In contrast, Amul Green offers a moderate range of products, with availability in 10 of the 18 listed categories. While it provides all core essentials such as dairy, grocery, soft drinks, and personal care items, it lacks in extended product

categories such as electronics, clothing, and home goods. Despite this, Amul Green performs better in terms of range than Param Mart (9 categories) and significantly better than Zero Degree (only 4 categories), which appears to have a highly limited assortment. This positioning suggests that Amul Green serves as a mid-range retail option, more diversified than small neighbourhood outlets but not as expansive as large-format hypermarkets like D-Mart or Reliance Mart.

5.2 To Assess Consumer Awareness and Analyse Buying Behaviour Towards Various Retail Stores in Anand and Vidyanagar, Based on Responses From 100 Customers

5.2.1 Profile of respondents

Consumers' socioeconomic backgrounds are likely to influence their perceptions of the Amul Green Retail Store, including factors like purchasing power, product awareness, and buying decisions. Therefore, this section analyses six key personal characteristics of the respondents to assess their impact on store perception.

Table 4. Demographic Profile of Respondents (n=100)

(a) Gender wise distribution			
Sr No.	Particulars	Frequency	Percentage
1	Male	61	61
2	Female	39	39
	Total	100	100
(b) Age wise distribution			
1	18-22	49	49
2	23-26	37	37
3	Above 26	6	6
4	below 18	8	8
	Total	100	100
(c) Educational Qualification Wise Distribution			
1	Primary	2	2
2	Secondary	9	9
3	Under Graduation	57	57
4	Post Graduation	25	25
5	Ph.D.	7	7
	Total	100	100
(d) Residence wise distribution			
1	Anand Rural	19	19
2	Anand Urban	68	68
3	Vidyanagar Urban	13	13
	Total	100	100
(e) Occupation Wise Distribution			
1	student	38	38
2	Employee	24	24
3	Government Employees	16	16
4	Businessman	5	5
5	Spiritual guide	2	2
6	Retired	1	1
7	Unemployed	14	14
	Total	100	100
(f) Monthly Income-Wise Distribution			
1	Below 10,000	4	4
2	10,000-50,000	22	22
3	50,000-1,00,000	36	36
4	above 1,00,000	38	38
	Total	100	100

(a) Gender-wise Distribution: Out of 100 respondents, 61% were male and 39% were female. This indicates a slightly male-dominated sample, which may influence consumer preferences, particularly in categories like electronics, groceries, or general household products that often see higher male participation in decision-making in some demographics.

(b) Age-wise Distribution: The age distribution shows that 49% of respondents were in the 18–22 age group, and 37% were in the 23–26 bracket, making young adults the dominant age group (86% in total). This

reflects a consumer base that is energetic, trend-conscious, and more receptive to modern retail formats, digital payments, and brand awareness.

(c) Educational Qualification-wise Distribution: The educational profile of the respondents shows that the majority were highly educated, with 57% being undergraduates and 25% postgraduates. Only a small portion had primary (2%) or secondary education (9%), while 7% were Ph.D. holders. This implies that the sample population is largely literate and likely to engage thoughtfully with retail environments,

including infrastructure, branding, and service quality.

(d) Residence-wise Distribution: In terms of residence, 68% of the respondents lived in Anand Urban, 19% in Anand Rural, and 13% in Vidyanagar Urban. The strong urban representation is consistent with the study's focus on retail stores located in Anand and Vidyanagar, ensuring that responses are relevant to areas where modern retail formats are more prevalent.

(e) Occupation-wise Distribution: The occupational profile shows that students made up the largest group at 38%, followed by private-sector employees at 24% and government employees at 16%. Smaller segments included businessmen (5%), spiritual guides (2%), retirees (1%), and unemployed individuals (14%). This diverse occupational mix provides insights into various consumer needs and spending patterns, from students with limited budgets to employed individuals with steady incomes.

(f) Monthly Income-wise Distribution: Regarding monthly income, a majority of respondents (74%) earned above ₹50,000, with 38% earning more than ₹1,00,000 and 36% falling in the ₹50,000–₹1,00,000 range. Only a small proportion (4%) earned below ₹10,000. This indicates that the sample mostly consists of middle to high-income consumers who likely have greater purchasing power and can influence retail market trends in Anand and Vidyanagar.

5.2.2 Awareness of retail stores located on anand and vidyanagar city among the respondents

This study reveals into understanding the level of customer awareness regarding different

organized retail stores located in Anand and Vidyanagar city. Through a series of meticulously crafted questions, it was aimed to gauge customers' knowledge about the various retail stores. By analysing customer responses, it is possible to identify the strengths of Amul's market presence and uncover any gaps in awareness that can be addressed through targeted educational campaigns.

The awareness levels of various retail stores among the 100 respondents varied significantly. The D-Mart outlets in Karamsad, Vidyanagar, and Tulsi Talkies had the highest awareness, with over 90% of respondents familiar with these stores (98%, 95%, and 91% respectively). Similarly, Smart Bazaar in Vidyanagar and Sardar Ganj Market were well known, with awareness levels of 96% and 92%.

Smart Bazaar at Grid had a slightly lower awareness at 81%, while Zero Degree Foods was known to 78% of respondents, showing moderate recognition in the area. Param Mart had a noticeably lower awareness, with only 60% of respondents familiar with it, indicating potential for greater marketing or visibility efforts.

Dhara Super Store had the lowest awareness among the listed stores, with only 39% of respondents aware and a majority (61%) unaware, suggesting limited reach or presence in the community. The Amul Green Retail Store had an awareness level of 49%, indicating that just under half of the consumers recognized it, which points to room for improvement in brand visibility despite its unique positioning.

Local stores near respondents' locations were well known to 88% of the sample, reflecting the importance of proximity in consumer awareness.

Table 5. Awareness of Retail Stores Among Respondents (n=100)

Sr No.	Retail Stores	Aware		Not Aware	
		Frequency	%	Frequency	%
1	D-Mart, Karamsad	98	98	2	2
2	D-Mart, Vidyanagar	95	95	5	5
3	D-Mart Tulsi Talkies	91	91	9	9
4	Smart-bazaar, Vidyanagar	96	96	4	4
5	Smart-bazaar, Grid	81	81	19	19
6	Sardar Ganj Market	92	92	8	8
7	Param Mart	60	60	40	40
8	Zero Degree Foods	78	78	22	22
9	Dhara super store	39	39	61	61
10	Amul green retail store	49	49	51	51
11	Local store (nearby location)	88	88	12	12
12	Other online (Amazon, Blinkit,...)	86	86	14	14

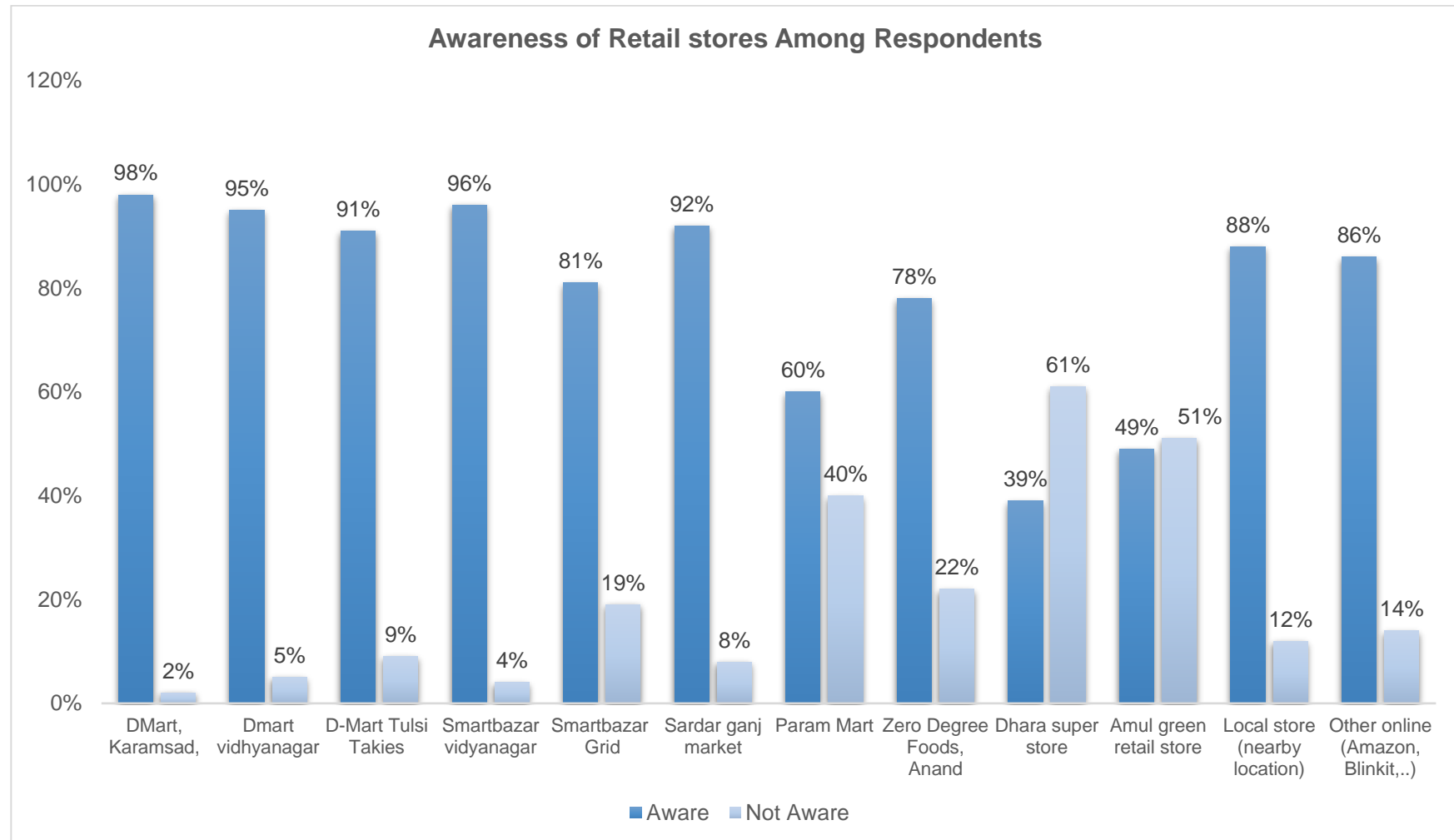


Fig. 10. Awareness of Retail stores Among Respondents

Online retail platforms like Amazon and Blinkit also showed high awareness at 86%, highlighting the growing impact of e-commerce on consumer shopping habits.

Overall, the data reveals strong awareness for major hypermarkets and supermarkets, moderate recognition for smaller or specialized stores, and a notable presence of both local and online retail options in the consumers' shopping awareness.

5.2.3 Visiting status of retail stores among respondents

The visiting status of retail stores among respondents is an important metric in consumer research and retail analytics. Analysing this data can provide several valuable insights and serve multiple strategic purpose. Visiting status of respondents showed in Table 6.

The data from Table 6 reveals varied visiting patterns to different retail stores among respondents. D-Mart branches (Karamsad and Vidyanagar) stand out for their relatively higher frequency of visits, with 16% and 14% of respondents visiting "very frequently," respectively, and significant numbers visiting

frequently as well (26% and 22%). In contrast, smaller or local stores such as Zero Degree Foods and Dhara Superstore show lower footfall, with substantial proportions of respondents either visiting "occasionally" or not at all (33% to 57% never visiting). Amul Green 4% of respondents visit very frequently, 12% visit frequently, 21% visit sometimes, 17% visit occasionally, 46% never visit the store. Online retail platforms like Amazon and Blinkit also show notable interest, with 16% of respondents visiting them very frequently and 28% visiting frequently. These patterns suggest that larger retail chains like D-Mart and online stores dominate consumer preferences, while smaller or more localized retail outlets, despite being visited sometimes or occasionally, struggle to maintain consistent customer traffic. This could reflect a growing trend toward convenience shopping or competitive pricing offered by larger or online platforms.

5.2.4 Purchasing behaviour from retails stores among the respondents

The Table 7 presents the purchasing behaviour of respondents in five 5 criteria Always, often, sometimes, rarely and never. Their Percentage shown in Table 7.

Table 6. Visiting Status of Retail Stores Among Respondents (n=100)

Sr No	Retail Stores	Very frequently Percentage	Frequently	sometimes	occasionally	Never
1	D-Mart, Karamsad,	16	26	36	17	5
2	D-Mart, Vidyanagar	14	22	31	25	8
3	D-Mart Tulsi Talkies	12	23	18	23	24
4	Smar-Bazaar, Vidyanagar	9	24	24	26	17
5	Smart-Bazaar, Grid	11	14	23	14	38
6	sardar Ganj market	7	24	39	24	6
7	Param Mart	13	28	40	14	5
8	Zero Degree Foods	5	9	20	33	33
9	Dhara super store	4	9	15	15	57
10	Amul Green Retail Store	4	12	21	17	46
11	Local store (nearby location)	14	17	23	15	31
12	Other online (Amazon, Blinkit,...)	16	28	22	13	21

Source: Primary data

Table 7. Purchasing Behaviour from Retails Stores Among Respondents (n =100)

Sr No.	Retail Stores	Always Percentage	Often	Sometimes	Rarely	Never
1	D-mart, Karamsad	27	24	25	13	11
2	D-Mart, Vidyanagar	18	29	24	14	15
3	D-Mart, Tulsi Talkies	11	24	25	16	24
4	Smart-bazaar, Vidyanagar	13	22	20	24	21
5	Smart-bazaar, Grid	3	14	21	19	43
6	Sardar Ganj market	14	35	28	11	12
7	Param Mart	15	21	16	2	27
8	Zero Degree Foods	2	7	26	29	36
9	Dhara super store	3	7	9	12	69
10	Amul green retail store	4	8	19	17	52
11	Local store (nearby location)	11	13	24	22	30
12	Other online (Amazon, Blinkit,..)	5	31	22	16	26

The Table 7 highlights varied purchasing behaviours across different retail outlets. Among physical stores, D-Mart Karamsad and D-Mart Vidyanagar show the highest frequency of regular shopping, with a combined 51% and 47% of respondents, respectively, stating they "always" or "often" shop there. Sardar Ganj Market also demonstrates strong consumer preference, with 49% reporting frequent purchases. These results suggest that established retail chains and traditional marketplaces continue to attract a substantial share of consumer traffic.

In contrast, stores like Dhara Super Store and Amul Green Retail Store show significantly lower regular patronage, with 69% and 52% of respondents, respectively, stating they *never* shop there. Similarly, Zero Degree Foods and Smart Bazaar Grid have higher percentages of "rarely" or "never" responses, indicating limited consumer engagement. Online platforms such as Amazon, Blinkit, etc. reflect moderate usage, with 36% shopping "often" or "sometimes," indicating growing but still secondary reliance on digital retail.

Overall, the data suggest that consumers still primarily prefer well-established retail chains and traditional markets for regular purchases, while newer or niche outlets, including the Amul Green store, face challenges in attracting consistent customer traffic.

6. MAJOR FINDINGS

The study of nine retail stores in Anand and Vidyanagar reveals that supermarkets and hypermarkets dominate the market with better infrastructure, size, product arrangement, and

facilities. Amul Green Retail Store, though smaller, maintains a decent product range and in-store environment but lags in billing counters, parking, washroom access, and sensory enhancements like music.

Well-established chains like D-Mart and Sardar Ganj boast over 90% awareness and lead with 51%, 47%, and 49% frequent shoppers, while smaller outlets such as Amul Green (49% aware; 52% never shop) and Dhara Super Store (39% aware; 69% never shop) lag significantly. Online platforms (Amazon, Blinkit) also see growing engagement, highlighting a clear consumer shift toward large-format retailers and digital channels.

7. CONCLUSION

The assessment of nine selected retail stores in Anand and Vidyanagar presents a comprehensive view of the region's retail infrastructure and service offerings. The store types range from supermarkets and hypermarkets to convenience stores and a standalone grocery store, reflecting a varied and evolving retail ecosystem. Hypermarkets such as D-Mart and Smart Bazaar lead in terms of physical space, number of billing counters, product range, and essential facilities like washrooms and parking, positioning them as more customer-centric and better equipped to handle high footfall. In contrast, convenience stores and smaller outlets tend to have limited space and fewer customer amenities, which may affect overall shopping convenience. Most stores maintain clear product arrangements and comfortable in-store environments with adequate lighting and temperature control, though extremely bright lighting in some cases may

affect shopper comfort. Only a few stores employ sensory elements like background music, indicating an underutilization of experiential retail strategies. Additionally, the availability of washrooms and quality parking facilities remain inconsistent across the board. The study concludes that while large-format retail stores are well-equipped and deliver a more complete shopping experience, smaller retail outlets need to improve infrastructure and customer-focused services to remain competitive and meet the growing expectations of modern consumers. The demographic profile of respondents in the study reveals a predominantly male (61%) and young adult (86% aged 18–26) population, with a high level of education and strong urban representation. Most respondents were students or professionals with substantial monthly incomes, indicating a literate, financially capable, and trend-aware consumer base. This suggests that retail preferences in Anand and Vidyanagar are likely shaped by modern expectations, brand consciousness, and a demand for quality infrastructure and services.

Well-established chains (D-Mart, Smart bazaar) and local markets (Sardar Ganj) dominate awareness (90%+), while smaller outlets like Amul Green (49%) and Dhara Super Store (39%) remain largely unrecognized by shoppers, indicating the need for stronger promotional strategies at those locations.

larger retail chains like D-Mart and online platforms such as Amazon and Blinkit attract the highest and most consistent customer visits, highlighting their dominance in consumer preference due to convenience and competitive pricing. In contrast, smaller and local stores, including Amul Green and Zero Degree, receive fewer regular visits, with a significant portion of respondents never visiting them. This trend reflects shifting consumer behaviour toward larger, well-established retail formats and digital shopping platforms.

Retail chains like D-Mart (51% and 47% frequent shoppers) and Sardar Ganj Market (49%) lead consumer preference, whereas smaller stores like Amul Green (52% never shop) and Dhara Super Store (69% never shop) see low patronage, highlighting a clear preference for established outlets.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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