



## Assessment of Physical Environmental attributes impacting the foot traffic at Retail Stores

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**Abstract:** Retail stores is one of the industries which has not fluctuated even at the time of hard days but the competencies of physical shopping and online shopping always attract the consumers with its distinguished determinants. The environmental factors entice most of the rural and urban consumers causing to visit physical stores and spend quality time which is not possible through online shopping. Hedonic needs are well served through an experiential desire involving emotional responses or fantasies through retail environment. This study aimed at assessing the impact of environmental elements on the increase of the customer traffic into the retail stores. The study was carried out in Visakhapatnam city with a method mix of descriptive design, quantitative and qualitative approach, cross sectional survey type and convenience sampling technique. The data gathered through self-administered questionnaire was analysed with inferential statistics of ANOVA and Multiple Regression Analysis. This paper elucidates the importance of the environmental elements to increase the number of customers visiting retail stores.

**Keywords:** Retail Industry, Customer Preferences, Store Environment, Visakhapatnam, Multiple Regression Analysis.

### 1. INTRODUCTION

India is one of the most promising and developing marketplaces in the world. There is a great deal of desire among multinational corporations to take advantage of the consumer base in India and to enter the market first. Nearly 60 shopping malls encompassing a total retail space of 23.25 million square feet are expected to become operational during 2023-25.

India ranks among the best countries to invest in Retail space. Factors that make India so attractive include the second largest population in the world, a middle-income class of households, increasing urbanization, rising household incomes, connected rural consumers and increasing consumer spending.

FMCG, apparel & footwear, and consumer electronics are the largest retail segments, constituting 65%, 10%, and 9% respectively of the retail market.

As of 2021, there were 1.2 million daily e-commerce transactions. Online shoppers in India are expected to reach 500 million in 2030 from 150 million in 2020. The e-Commerce market is

expected to touch US\$ 350 billion in GMV by 2030.

India's retail sector was experiencing exponential growth with retail development taking place not just in major cities and metros, but also in small cities. Healthy economic growth, changing demographic profile, increasing disposable income, urbanization, and changing consumer tastes and preferences have been some of the factors driving growth in the organised retail market in India.

As per Kearney Research, India's retail industry is projected to grow at 9% over 2019-2030, from US\$ 779 billion in 2019 to US\$ 1,407 billion by 2026 and more than US\$ 1.8 trillion by 2030. Revenue of India's offline retailers, also known as brick-and-mortar (B&M) retailers, is expected to increase by Rs. 10,000-12,000 crore (US\$ 1.39-2.77 billion) in FY20. India's direct selling industry is expected to be valued at US\$ 2.14 billion by the end of 2021. E-Retail has been a boon during the pandemic and according to a report by Bain & Company in association with Flipkart 'How India Shops Online 2021' the e-retail market is expected to grow to US\$ 120-140 billion by FY26, increasing at approximately 25-30% p.a. over the next five years.

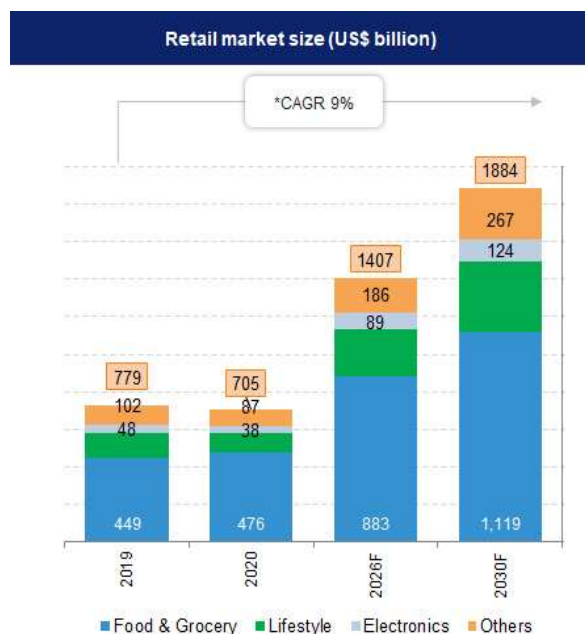
Despite unprecedented challenges, the India consumption story is still robust. Driven by affluence, accessibility, awareness and attitude, household consumption stood at Rs. 130–140 trillion (US\$ 1.63-1.75 trillion) in 2021.

India has the third-highest number of e-retail shoppers (only behind China, the US). The new-age logistics players are expected to deliver 2.5 billion Direct-to-Consumer (D2C) shipments by 2030. Online used car transaction penetration is expected to grow by 9x in the next 10 years.

According to recent industry reports, the e-commerce industry witnessed a phenomenal 36.8% YoY growth in terms of order volumes. As consumers prefer to shop online throughout the year, this fast-changing consumer preference towards online shopping reveals the mature status acquired by e-commerce brands in India.

As of 2021, there were 1.2 million daily e-commerce transactions. The total value of digital transactions stood at US\$ 300 billion in 2021 and is projected to reach US\$ 1 trillion by 2026. Online shoppers in India are expected to reach 500 million in 2030 from 150 million in 2020.

India’s digital economy is expected to touch US\$ 800 billion by 2030 and the e-Commerce market is expected to touch US\$ 350 billion in GMV by 2030.

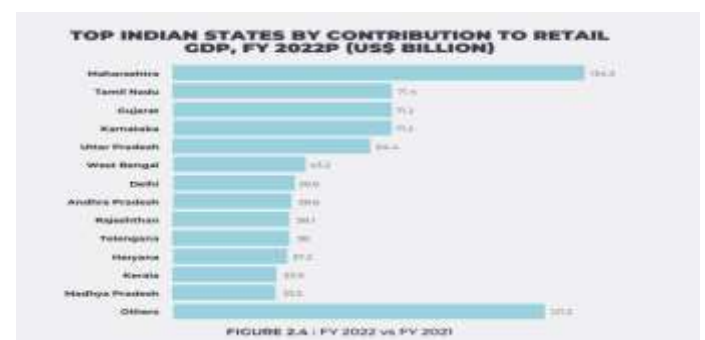


As social media continues to evolve, so do the opportunities for retail. According to our survey, 81% of retailers are planning to expand the number of digital channels they sell on in the next 12 months. Businesses recognize there is a growing number of ways to reach and connect with customers, and they’re in search of one central way to do so.

Online shopping continues to be non-negotiable when it comes to ways to sell products, with businesses reporting that 43% of their revenue comes from online sales, but retailers may benefit from other modes of selling, such as virtual reality. Twenty-two percent of customers are interested in trying a virtual reality that allows them to experience products in a virtual shop.

“Amid economic uncertainty and changing consumer preferences, the current macro landscape is giving retailers a hard reality check that it’s not enough for brands to be present in one place,” says Roshan Jhunja, GM of Square for Retail. “Beyond a physical store and online presence, brands need to be seen and heard...where consumers can come to be inspired and to shop.”

The ideal retail environment makes customers feel comfortable, encouraging them – and making it easy for them – to make a purchase. An effective **retail environment analysis** evaluates every aspect of the physical store environment and the effect it has on customers. This is an excellent way to identify which aspects of your store are performing well and which areas need to be improved.



Source: Wazir Analysis

There are 8 areas to evaluate in Retail Environment Analysis taken in this study

**Store layout:** The business should be simple to traverse and should assist guide customers to all areas of the space. It need to flow naturally, guiding clients in a logical progression to things they might require or find enjoyable. Additionally, your aisles should be broad enough to allow consumers to easily pass one another and give room for wheelchairs, walkers, strollers, and carts.

**Lighting:** Customers like shops with good lighting. There shouldn't be any dark corners and all areas of your store should have adequate lighting. However, this does not imply that you should overdo it because too bright industrial lighting can also put off clients. Instead, make an effort to use natural lighting whenever you can to provide ambient light feel.

**Music:** Store's music selection should be based on the kinds of goods you offer as well as the average age of your patrons. The volume of the music is more crucial than the genre you select. Customers like music to be played at a moderate volume that is both audible and not overbearing. Additionally, customers may find overhead paging systems distracting and irritating. Instead of using overhead speakers to communicate with your personnel, use radios or paging on your phone system.

**Scent:** Customers like well-ventilated areas free of offensive odours. Strong "pleasant" smells (from candles or air fresheners, for example) can also be overpowering if they are contained in a limited area if your business doesn't have enough airflow.

**Atmosphere:** The shop should always be maintained tidy and at a temperature appropriate for the season. Employees should get in the practice of tidying up and cleaning tiny messes while the business is open, even if heavy cleaning (mopping floors, washing windows, etc.) should be done after hours. Customers are generally turned off by sticky floors from coffee spills, disorganized displays, and lanes obstructed by boxes.

**Ease of checkout:** Do you frequently have long checkout lines? Do the registers have sufficient counter space to hold merchandise? A pleasant shopping experience can quickly be undone by a frustrating checkout. If you frequently have long checkout times, consider installing more registers or reworking your current checkout space to speed up the process.

**Signage:** Customers like products to be clearly marked with obvious pricing details. They also like signs that give key details about a product, enabling them to make an informed purchasing decision.

**Displays:** Customers expect their purchases to be simple to find. Shoppers will pass over displays that are overly deep, high, wide, or congested. Displays should instead present items in their best light and enable buyers to engage with them easily.

So the researchers have taken the eight elements i.e. Store layout, Lighting, Music, Atmosphere, Ease of checkout, Signage, Displays into consideration and assess the impact of each element on the intentions of the customers with respect to visit the store or not.

## 2. Objectives

The general objective of the study is to identify and analyse the retail environmental elements with its advantages to improve the traffic in the shopping malls in Visakhapatnam city.

The specific objectives are

1. To identify the physical factors of the retail environment factors attracted by the consumer in Visakhapatnam city.
2. To assess the factors i.e. Store layout, Lighting, Music, Atmosphere, Ease of checkout, Signage, Displays influencing the traffic increase at the retail stores in Visakhapatnam city.

## 3. Literature Review

According to Levy and Weitz (1995), many retailers understand the value of the shop atmosphere as a weapon for market differentiation. The physical surroundings of a business, or the "store environment," are made up of a variety of components, such as music, lighting, layout, directional signs, and human factors. The store environment may also be separated into the "external environment" and the "internal environment," or the "outside and inside of a store." Environmental factors in stores may have complicated consequences. While many of these factors affect customers' emotions, cognition, and physiological states, others of these factors may prompt more immediate responses from customers with little to no effect on their thoughts, feelings, or level of comfort in their bodies. Despite many

research on shop environments, their results are insufficient to give a thorough insight.

Venugopal, K. and Ranganath, N.S. (2012) also explored that the consumers are fantasized towards the facilities of the stores since the products are similar anywhere.

These variables can be studied as groupings (factors) at a more aggregate level, such as the ambient, design, and social factors identified by Baker (1986). The three factors are the ambient factor, the design factor, and the social factor. The ambient factor refers to background elements like temperature, lighting, noise, music, and ambient scent. The design factor also includes stimuli that are at the forefront of our awareness like architecture, colour, and materials. Researchers modify a number of elements that are part of the same factor at the factor level of analysis to project a certain store picture (Baker, Levy, and Grewal, 1992; Baker, Grewal, and Parasuraman, 1994). For instance, in their experiment, Baker et al. (1992) distinguished between high and low images using different combinations of background classical music and soft lighting. Researchers manipulate the surroundings of various shops at the global level of analysis, which is even more aggregated. Instead of focusing on how emotions or behaviours are related to the features of the environment, Donovan and Rossiter (1982) and Donovan, Rossiter, Marcolyn, and Nesdale (1994) are more interested in the relationship between emotions induced by a particular environment and behaviours in this environment.

Numerous factors, including the store environment, might influence customer behaviour (see Figure 1). A particular human response to the environment may be hardwired or conditioned in the brain. For example, for a store layout in a racetrack form, shoppers may follow the path defined by the layout with little thought or emotion aroused by the layout (Levy and Weitz 1997).

Murlikrishna, P.N. et al. (2022) concluded that the consumers now a days are highly interested towards the techno-centric elements of promotion, but at the same time, they are also interested in the physical mode which creates trust and confidence on the company and its staff.

Mehrabian and Russell (1974) shown in the environmental psychology literature that the emotions influenced by the environment may be adequately defined by three states, pleasure, arousal, and dominance (PAD), in a variety of contexts (schools, hospitals, homes, etc.). The bulk of studies on consumers' emotional reactions to retail environments use the PAD paradigm and show that the PAD dimensions may adequately capture consumers' emotional states (Donovan and Rossiter 1982; Bellizzi and Hite 1992; Babin and Darden 1995).

Koppala Venugopal et al. (2022) highlighted the comparisons made by the consumers between physical shopping and online shopping in which the retail environment can make the consumers more attractive and penchant towards the attractive hedonic features of the stores as well as the hospitality of the staff.

These studies also demonstrate that a number of behaviours and results, including how long customers stay and how much money they spend in a business, are influenced by their emotional response. Different research (Bellizzi et al. 1983; Crowley 1993) make use of different scales that incorporate some emotion measurements. However, a lot of these metrics are comparable to those in the PAD dimensions.

Attention, perception, categorization, and information processing are just a few of the cognitive processes that a store's surroundings might affect in a customer. According to studies by Hui, Dube, and Chebat (1997) and Ward, Bitner, and Barnes (1992), consumers' perceptions of waiting times and whether a restaurant qualifies as a fast food outlet rely greatly on the outside of the establishment.

According to Hui et al. (1997), the impact of the store environment on these cognitive phases would ultimately alter assessments of the store, its goods, and services, as well as shopping behaviours or results. Additionally, the environment of the store may have a direct impact on these assessments by giving customers a cue from the outside or tangible evidence to judge the level of service and product quality, or by transferring meanings from the environment (Parasuraman, Zeithaml, and Berry 1988; Bitner 1992).

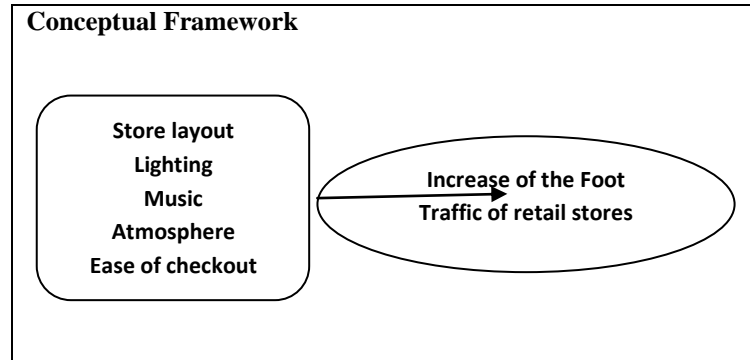
A research study entitled customer perception on visual elements of packaging and labeling practices explained that the consumers are more focused on the signage practices of companies since the importance for the information especially for the products and brands related to health (Aschalew Adane Brhanu et al. 2018).

While the foregoing discussion is mainly concerned about the immediate effects of store environment, store environment may also have lagged or carryover effects on shopping behaviors. For example, consumers' impression of store environment can influence their retail patronage decision (store choice or choice of a shopping area for visit) over a period of time. Customers' perceptions of a store's environment in terms of the shopping value that the environment delivers therefore influence their likelihood of choosing the store for shopping (Darden, Erdem, and Darden 1983). Store environments can offer customers various types of shopping value (such as convenience in locating products and recreation).

According to Bitner (1992), environmental factors like temperature, noise, and air quality have an impact on people's physiological states, including comfort, and as a result, can determine whether they stay in or like a given location. Griffitt (1970) established in a lab setting that affective sentiments and attraction to strangers are adversely connected to the environment's effective temperature. According to Birren (1997), individuals in a lab environment with red walls had higher blood pressure and faster heart rates.

Some researchers found in their study that the challenges faced by the consumers through online shopping can be well served by physical shopping and the reason why most of the people mostly prefer retail stores to online shopping is the retail environment and the feel of touch, smell and listen (Koppala Venugopal et al. 2023).

Aschalew Adane Brhanu et al. (2018) emphasized on the Customer Relationship Management which is an imperative part of any company which can be well executed through the staff in off line mode so that the consumers are connected better than online transactions.



#### 4. Methodology of the study

This research project used descriptive design to serve the purpose of the study and survey approach was applied for this research project to use for scanning a wide field of issues and populations. To investigate the impacting retail environmental determinants, researchers used cross sectional survey with multi stage sampling. This research was conducted through both qualitative and quantitative approaches. Data necessary for this study was generated from primary data sources by using first-hand information such as survey questionnaire, interview and focus group discussion. Additionally, secondary data sources such as different literatures, journals, books, documents and manuals were also employed to attain the desired objective. The sampling technique used for the study was the convenience sampling of non-probability sampling technique. Data collected was processed and analyzed using the appropriate techniques in line with the objectives and the nature of the data. After the data collection, the necessary data encoding and analysis were made. For the quantitative data, entry and analysis was done by using social sciences statistical packages (SPSS) version 24. Quantitative data was analyzed using both parametric and non-parametric statistical techniques. Specifically, ANOVA and Multiple Regression Analysis (MRA) techniques were used to analyze those computed data.

5. Analysis And Discussions:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.614 <sup>a</sup>	.778	.368	1.05020

a. Predictors: (Constant), Store layout, Lighting, Music, Atmosphere, Ease of checkout, Signage, Displays

As shown in the table 1, R Square value is 0.778; it means all the levels of items contributing 77.8 percent in the increase the traffic at retail stores. The remaining 22.2 percent is being contributed by other unknown variables.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	213.402	5	42.680	38.698	.000 <sup>a</sup>
	Residual	351.829	319	1.103		
	Total	565.231	324			

a. Predictors: (Constant), Store layout, Lighting, Music, Atmosphere, Ease of checkout, Signage, Displays

b. Dependent Variable: Increase the traffic at retail stores

Table 2 shows the relationship among the items of Independent Variable (Store layout, Lighting, Music, Atmosphere, Ease of checkout, Signage, Displays) and the increase the traffic at retail stores. The F value between dependent variable and predictors is 38.698, and the p value is 0.00. Which is highly significant at 0.05 and 0.00 levels. On the other hand, we can also conclude whether there is one level in items' increase, there will be the increase of 351.829.

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.571	.164		3.485	.001
	<b>Store layout</b>	.147	.068	.139	2.160	.032
	<b>Lighting</b>	.067	.062	.065	1.090	.276
	Music	.040	.063	.041	.640	.523
	Atmosphere	.199	.061	.199	3.269	.001
	Ease of checkout	.415	.062	.409	6.717	.000
	<b>Signage</b>	.198	.071	.188	2.766	.006
	<b>Displays</b>	.170	.073	.152	2.309	.022

a. Dependent Variable: Increase in the traffic at retail stores

Increase in the traffic at retail stores = 0.571+ (0.147) **Store layout** + (0.067) **Lighting** + (0.040) Music + (0.199) Atmosphere + (0.415) Ease of checkout + (.198) **Signage** + (.170)

Increase in the traffic at retail stores is being influenced by the first factors '**Store layout**' is 0.718 (0.571+ 0.147). If '**Store layout**' is increased by one unit, the traffic at retail stores will be increased by 0.718. Likewise, if the other predictors Lighting, Music, Atmosphere, Ease of

checkout, Signage, Displays are increased by one unit, the traffic at retail stores will be increased for Lighting by 0.638; Music by 0.61; Atmosphere by 0.770; Ease of checkout by 986; Signage by 769; and Displays by 0.741.

Increase in the traffic at retail stores is explained with the highest weightage by "Ease of checkout" with 0.986 followed by "Atmosphere" with 0.770 and Signage with 769. At the same time, the least is explained by "Music" with 0.611 and "**Lighting**" with 0.638.

Hence, it is understood that the ease of checkout, Atmosphere and signage are the most influencing factors that attract the customers to step into the retail stores. At the same time most of the customers feel that the music and lighting arrangements are supposed to be the least considerable factors that gives less added value to the services.

## 6. Conclusions

It is noted that the retail environment associated with certain internal adroit elements is expected to attract the customers which is generally measured by the foot traffic in the retail stores. The influencing elements might be different from place to place and internal facilities to external facilities.

The internal environment included with certain common minimum necessities which are generally expected by the customers being followed by all the retailers. But the most influencing environmental element is found to be the ease of check out which is taken longer time and the management should facilitate the manpower and certain systems according to the traffic being present at the moment since the customers are generally interested to do shopping for much time, but they do not want to wait while prepared to leave.

Atmosphere of the retail store stores associated with cleanliness and temperature control is caught the fancy of many urban consumers since they are accustomed with the elegant look amalgamated with calligraphic fixtures and certain common minimum facilities such as air-conditioning and fire securities. So, the management should concentrate on the maintenance of these factors being managed

with the staff and technology employed in the stores.

Customers like items that are prominently labelled with pricing information. They enjoy signs that provide essential product information so they may choose a product with knowledge which is acknowledged through this research. So, management can focus on the right execution of labeling system especially for the locally made product which may miss the complete information on the label of the product.

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