



# Impact of E-Commerce on Indian Retail Sector – A Study in Andhra Pradesh

**Dr. K. KIRAN KUMAR VARMA M.B.A., Ph.D.**

**Faculty Member**

**P.G. Department of Management Studies**

**D.N.R. College, Bhimavaram**

## Abstract

E-commerce websites can run all the time. From the retailers' point of view, this increases the number of orders they receive. From the customer's point of view, an 'always open' store is more convenient. Buyers and sellers of niche products can find it difficult to locate each other in the physical world. Thus, e-commerce is only a matter of the customer searching for the product in a search engine. In this purpose data was gathered from 450 retailers of three major cities in Andhra Pradesh, i.e. Visakhapatnam, Vijayawada and Guntur through a questionnaire. Since, the main aim of this research paper is to find out the impact of e-commerce on Indian retail sector with reference to retailer point of view. The data gathered reveals that retailers are very much aware about the e-commerce business and they compare different products with different channels of purchase. The basic services like competitive pricing, wide range of product availability and deliveries in time coupled with trust and loyalty factors are the main purpose which not only changes the perception of retailers but it also changes their buying behavior. E-commerce companies should understand the psychology and buying behavior of retailers before launching any new products, new campaign and schemes etc. It is also clear that if pricing and related notifications in time are sent the retailers, can be a good effective media for conveying the message to other fellow retailers. Finally e-commerce firms are suggested to focus on the simple design of the app/webs for faster and easier understanding of the retailers apart from the product, pricing and logistics. Further the research would be more interesting if it could be extended to various different sectors with a mix of both urban and rural areas.

Keywords: e-commerce, retail sector, retailers, customers;

## **Introduction**

Ecommerce or electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. The history of ecommerce begins with the first ever online sale: on the August 11, 1994 a man sold a CD by the band Sting to his friend through his website NetMarket, an American retail platform, which is the first example of "ecommerce" as everyone commonly aware about it.

There are four main types of ecommerce models today that can describe almost every transaction that takes place between consumers and businesses. These are: 1) Business to Consumer (B2C), 2) Business to Business (B2B), 3) Consumer to Consumer (C2C), and 4) Consumer to Business (C2B). When a business sells a good or service to an individual consumer it is B2C, when a business sells a good or service to another business it is B2B, when a consumer sells a good or service to another consumer C2C, and when a consumer sells their own products or services to a business or organization C2B.

India is one of the fastest growing economies in the world. The retail market in India offers significant opportunities for retailers and brands across categories. This is driven by factors such as a large consumer base, rising incomes and job opportunities, increasing consumer awareness, etc. The Indian retail market is estimated to be US\$ 600 billion and one of the top five retail markets in the world by economic value. India is one of the fastest growing retail markets in the world, with 1.3 billion people.

Today, being a retailer doesn't require a physical store; retail activities can be carried out even only in digital form. Moreover, some of the most successful players in the sector, such as Amazon, Flipkart etc., operate primarily online, providing that a brick and mortar shop is not essential to create a successful retail business. In fact, many businesses from big-box retailers to small boutiques have a presence that is both physical and online. In this way, companies have the opportunity, via the internet, to reach a much larger number of consumers and thereby, greater profitability. Thus, the present study on factors influencing e-commerce adoption by retailers in India is very much needed and significant at present scenario.

### Literature review

**Kelvin Cheng (2021)**<sup>1</sup> in his study on "Analysis of the development of e-commerce in the retail industry in recent years", the trend of e-commerce in the retail industry continues to increase at a rapid pace. With the growth of retail e-commerce, it has become more important to various stakeholders. Ecommerce will take an important role in the retail industry; it creates a channel of international business, which expects to become a mainstream business model. In recent years, the effects across mobile technologies, smart phone penetration, and Covid-19 pandemic accelerate the development of retail e-commerce. It has been influencing economic growth and providing opportunities for enterprises to expand, but it has also revealed many challenges and impacts to organizations that focus on e-commerce business. This paper mainly analyzes the factors causing e-commerce development and the economic impacts in the retail industry based on the statistical data and relevant research study, to evaluate its implications on today's economic and business situations.

**Jamal Hasan (2019)**<sup>2</sup> in her study on "E-commerce and its impact on retail stores in Slovakia", E-commerce is the purchase and sale of goods and services over the Internet. It assumed that despite the ever-expanding online transaction, the retail shops would not disappear. Various surveys have shown that customers still prefer to shop in stores and the number of purchases is increasing. Currently, they mainly use combinations of ecommerce and retail stores. Before the final purchase in the store, customers prefer to find out all the necessary information via the Internet. In the case of online shopping, customers prefer to look at the product in a retail shop and then purchase it via e-shop. In this paper, we decided to verify my hypothesis. The article aimed to determine the impact of e-commerce on retail stores.

**Maheswara (2016)**<sup>3</sup> in his study on "Impact of E-Commerce on Indian Retail Sector", The Electronic Commerce, or web based business, industry is a standout amongst the most dynamic segments of the economy. Electronic business, regularly known as E-business or web based business, is exchanging items or administrations utilizing PC systems, for example, the Internet. Electronic trade draws on advances, for example, versatile business electronic, production network the executives, web marketing, online exchange handling, electronic information exchange (EDI), stock administration frameworks, and mechanized information gathering frameworks. Current electronic business ordinarily utilizes the World Wide Web for something like one a player in the exchange's life cycle, in spite of the fact that it might likewise utilize different advancements, for example, email. Online business is the deal or buy of products or administrations led over PC organizes by techniques explicitly intended to receive or putting in of requests. Despite the fact that merchandise or administrations are requested electronically, the installment and a

definitive conveyance of the products or administrations don't need to be directed on the web. In this paper we learn about the effect of E-business on Indian retail division.

**Satyendra Arya et al. (2015)**<sup>4</sup> in their study on "An Impact of E-Commerce Portals on Retailing in India", The Information Technology has transformed the way of people to do the work and electronic commerce has unleashed yet another revolution which is changing the way businesses buy and sell products. The internet gave another boost to e-commerce. Internet marketing or online marketing refers to advertising and marketing efforts that use the Web and email to drive direct sales via electronic commerce. Internet is a great medium that can serve as a unique platform for the growth of retail brands in India. The current web-based models for e-retailing are part of an embryonic phase preceding an era of rapid transformation, challenge, and opportunity in Indian retail market. It is not just the metros that are fueling the online scene in India the demand supply gap in tier 2-3 cities where there is brand awareness but no availability of products and services is also adding to growth. Online retailing portals such as e-Bay.in, Snap deal. com, and Naaptol.com are registering anywhere between 40 and 60% of their sales from rural areas apart from the tier II and III cities. The penetration rate is quite low in comparison to other countries worldwide; however the number of users is significantly high. The present scenarios of e-retailing opportunities and its impact, its market, the viabilities and trends etc., have been discussed in this research paper.

### **Need for the study**

Most of the earlier studies on E-Commerce adoption were on B2C, C2C and C2B transactions. There are very few studies that centers on B2B in developing countries. Extensive research has been done on E-Commerce to demonstrate the tremendous benefits it offers to marketing of various products and various businesses. However, online market especially in developing countries have not completely adopted E-Commerce solutions. Influenced factors of E-Commerce in developing countries like India, especially in Andhra Pradesh, have not been sufficiently researched. Previous studies that have been conducted in the area of E-Commerce did not focus on factors influencing E-Commerce adoption by retailers and failed to establish the relationship between E-Commerce adoption in retailers' point of view and consumers' point of view. Further, there is no research on the analysis of factors that influence E-Commerce adoption and its impact on Business Performance of retailers in India particularly in selected three cities of Andhra Pradesh. Thus, there is a need for research to improve the understanding of the factors that influences the E-Commerce adoption by retailers and also identify the impact of E-Commerce adoption on the Business Performance of retailers in Visakhapatnam, Guntur and Vijayawada cities.

### **Significance of the study**

Online marketing is very important sector to the economies of all countries, including the developing countries like India. Many companies are already demonstrating their business strength by grasping opportunities offered by Electronic Commerce (e commerce). With an optimized and well developed website or app, companies can not only achieve the desired goals but also offer round the clock convenient services to their customers that can boost their business (discoverydesign, 18<sup>th</sup> November, 2016)<sup>5</sup>. Therefore the cutting edge for marketing today is e commerce. The driving forces of e commerce have been internet, growing standards of living, availability of wide range of products, busy lifestyle of people, evolution of many online market places like Amazon, Flip kart, Snap deal, Metro Wholesale, Paytm Mall, Udaan and ShopX etc. With the rapid advancement in the internet and the infrastructure, E-commerce is becoming more and more popular.

Due to the internet's accessibility, thousands of retailers across India can view the website of any product or app at any time, meaning that for those looking to expand their businesses and reach out to a larger audience; they have many more opportunities to do so. Compare the amount of people one can reach through a website or app to the amount they can reach through a high street store or local advertising, there's no reason of any retailer should not look at taking his business online if he is looking to improve his reach (discovery design, 18<sup>th</sup> November, 2016). Thus, the arena of e-commerce covers a wide range of applications, such as electronic marketing, customer support services, electronic ordering and electronic payment systems. E-commerce enhances efficiency of marketing and business activities and hence it is

perceived as a new business approach towards profitability and extended market reach. E-commerce has gripped significant importance in the recent years. This significance has led to vital progress towards strategies, requirements, growth and development of E-commerce applications. It was stated in the National Report on E-commerce Development in India during the year 2019; the online marketing which adopted advanced level of digital technology has experienced annual revenue growth which is higher than those of traditional market.

This study is of great importance considering that e-commerce has become a necessity channel in purchasing and selling the goods and services to remain in the competitive market. Retailers will be able to know the models and developments in products and services, and they can be part of the future developments in the industry by actively sharing their feedback. Also, they can enjoy the benefit by making use of the promotional products being offered by the online platform through various online company websites. Technological advancement has become the strength of a dynamic economy. The recent development of E-commerce has provided suitable ground for improvement of the marketing performance of various businesses. Online companies are reaping the paybacks resulting out of E-commerce as they enlarge the geographical coverage ensuring a larger potential marketplace into which they can sell their products and services.

### Statement of the problem

A conscious awareness of the influencing factors of E-commerce adoption also becomes vital for retailers to suitably address the pertinent issues and to move forward in order to identify the impact of E-commerce on businesses performance. In addition to this, E-commerce applications proves to be an economic affair for retailers to run their business, support new products, develop networking, collect information, timely and effective deliver of products and services and to identify potential business opportunities. The present study is an effort to analyze the factors that are influencing E-commerce adoption by retailers and its impact on their business performance in Visakhapatnam, Guntur and Vijayawada cities. Hence, the research questions have been formed to derive answer from this research.

### Objectives

1. To study the factors influencing e-commerce with reference to retailers point of view.
2. To analyse the priority based factors influencing e-commerce with reference to retailers point of view.
3. To distinguish the perceptions of various demographic group retailers on influencing factors of e-commerce in retailing sector.

### Hypothesis

- H<sub>0</sub>:** There is no significant difference among various demographic group retailers on influenced factors of e-commerce in retailers' point of view
- H<sub>1</sub>:** There is a significant difference among various demographic group retailers on influenced factors of e-commerce in retailers' point of view

### Research Methodology

The methodology adopted for this study is both analytical and descriptive. It is analytical, as the information, facts, and figures are analyzed and evaluated. It is descriptive also since the study highlights the current state of affairs in E-Commerce adoption by the retailers.

### Research Design

The research design provides a framework for obtaining and analyzing research data. The research study initially describes the objectives of the study and problem undertaken. Review of the relevant literature is then collected for finding factors that are influencing E-Commerce adoption by retailers. For data collection, qualitative and quantitative procedures were used to meet the objectives. The questionnaire was designed and circulated among the retailers. Subsequently, interviews were conducted with the

Owners/managers of retail stores to gather inputs and opinions in order to validate the influenced factors that arise from the questionnaire. The data thus collected was then used to develop holistic adoption model for E-Commerce.

### Sample design

In the pilot study and primary data collection, convenience sampling was adopted for this empirical research to collect the responses with regard to influenced factors in E-Commerce adoption by retailers from various parts of the selected top three cities in Andhra Pradesh state. To collect empirical data, a survey research design was used, in which questionnaires were either mailed or personally handed over to the respondents.

### Questionnaire

Perhaps the most important part of the survey process is the creation of questions that accurately measure the opinions, experiences and behaviors of the research subjects that are retailers. While an accurate random sampling and high response rates will be wasted if the information gathered is built on a shaky foundation of ambiguous or biased questions. In the surveyed questionnaire, all the questions' Cronbach's Alpha values are greater than 0.70 and hence, the scale can be considered reliable with the sample.

### Techniques used for data collection and analysis

Questionnaire, Personal Interview and Observation techniques have been used to collect the Primary data relating to the factors that influences the adoption of E-Commerce by the retailers in Visakhapatnam, Guntur and Vijayawada. The duly filled questionnaires were scrutinized in accordance with the requirements of the objectives and hypothesis. Based on this, various tables (Frequency, Percentage, etc.) and charts were prepared. The data, after collection, was classified, scrutinized and analyzed through various statistical tools to get the results with reference to the objectives and hypothesis. The data processing was carried out using the SPSS software, version 20. The data analysis techniques used for the purpose of the research study are:

- Descriptive Analysis
- Rank order score analysis
- One-way ANOVA

### Sources of data

The study is an empirical analysis where the perceptions of the respondents are the key indicators of the research. On the other hand literature review of various authors also collected from various sources. Hence, the study deals with the both primary and secondary data.

**a) Primary data:** The primary data was collected from the e commerce retailers with the help of pre-designed questionnaire which was standardized by Crombach's Alfa method. In this purpose the list of retailers in the selected cities was gathered from business directories, databases of Chamber of Commerce, Industries and from online e commerce companies.

**b) Secondary data:** Secondary data was obtained from various sources including, publications of Government, Websites, Books, Journals, Newspapers and Magazines. The concepts and theories were referred from text books and research papers which are published in various publications and journals.

### Data collection

The study was conducted in three phases. In the first phase, the study was involved in preliminary investigation, where the researcher met with Proprietors / Owners / Managers of retail stores of online marketing outlets to get a direct interaction. The second phase of pilot study was carried out by survey with questions to assess the reliability of the attributes, and to ensure that the language and words use in the questionnaire were clear. The third phase was a questionnaire survey which was conducted through survey and personal interview method. In each selected city, 150 retailer owners or their managers were contacted and distributed the questionnaires. The collected questionnaires were scrutinized on a condition that the

selected retailers needed to be adopted at least one of the E-Commerce application. Each and every retailer comprised to be filled completely by the respondents without keeping any columns blank or insufficient information. The methodology is presented here.

**Table-1: Methodology of Research**

Research type	Descriptive and Analytical Research
Population	E-Commerce retailers
Sample size	450
Sampling Area	Visakhapatnam, Guntur and Vijayawada
Sampling Method	Probability Sampling – Stratified Random Sampling
Research Method	Survey Method
Data type	Primary and Secondary Data
Sources of Primary Data	Questionnaire, Personal Interview and Observation techniques
Sources of Secondary Data	Newspapers, Magazines, Reports, Books, Journals, Research Articles, Internet, etc.
Research instrument	Structured Questionnaire
Validity and Reliability of Questionnaire	Pilot Study was conducted during January 2019 and July 2019 followed by final study (Overall Cronbach's Alpha value = 0.000)
Software used for analysis	SPSS (Version 20)

### Scoring Procedure

The retailers are requested to give their opinion by putting a tick (√) mark against each statement with any one of the alternatives. The scoring procedure of the research questionnaire is presented in the following table. The researcher considered a five point Likert scale and the ratings to each factor in the questionnaire are Very Important, Important, Neutral, Less important and Very Less important; Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. Each alternative has its scoring and the answer against the statement scored on the basis of these scores. The scores given to various attributes are respectively; 5, 4, 3, 2 and 1.

### Variables of the study

Present study carried out under the descriptive survey research design to describe the present condition of the selected variable where researcher has use two types of variables. Hence the variables of the study are 1) Dependent variable and 2) Independent variable. Here dependent variable is factors influencing e-commerce adoption by the retailers and the independent variables are demographic groups of retailers.

### Data analysis

Data analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. In this study to reach the objective of the study and test the hypothesis the data was processed through SPSS and the output tables are analysed in the following.

**Table – 2: Influencing factors of e-commerce on Retailers point of view**

SL. No	Statement	Very Important	Important	Neutral	Less Important	Very Less Important	Total
1	Delivery in time (within the mentioned TAT)	270 (60.0)	146 (32.4)	27 (6.0)	5 (1.1)	2 (0.4)	<b>450</b> <b>(100.0)</b>
2	Good page loading time – Speed of the APP	170 (37.8)	221 (49.1)	49 (10.9)	7 (1.6)	3 (0.7)	<b>450</b> <b>(100.0)</b>
3	User friendly & ease of navigation Eg. Product search facility & ease to place order etc	153 (34.0)	201 (44.7)	52 (11.6)	37 (8.2)	7 (1.6)	<b>450</b> <b>(100.0)</b>
4	Good Customer Service availability and accessibility through call centers	175 (38.9)	214 (47.6)	33 (7.3)	23 (5.1)	5 (1.1)	<b>450</b> <b>(100.0)</b>
5	Getting important & related notifications in time	156 (34.7)	198 (44.0)	58 (12.9)	28 (6.2)	10 (2.2)	<b>450</b> <b>(100.0)</b>
6	Availability and accessibility of 24 hours services of apps	163 (36.2)	170 (37.8)	59 (13.1)	26 (5.8)	32 (7.1)	<b>450</b> <b>(100.0)</b>
7	Competitive Pricing	138 (30.7)	169 (37.6)	63 (14.0)	56 (12.4)	24 (5.3)	<b>450</b> <b>(100.0)</b>
8	Credit Facility	180 (40.0)	195 (43.3)	57 (12.7)	13 (2.9)	5 (1.1)	<b>450</b> <b>(100.0)</b>
9	Availability of Product range	168 (37.3)	182 (40.4)	65 (14.4)	29 (6.4)	6 (1.3)	<b>450</b> <b>(100.0)</b>
10	Packaging at the time of delivery	160 (35.6)	194 (43.1)	71 (15.8)	22 (4.9)	3 (0.7)	<b>450</b> <b>(100.0)</b>
11	Availability of Genuine Products	156 (34.7)	170 (37.8)	76 (16.9)	38 (8.4)	10 (2.2)	<b>450</b> <b>(100.0)</b>

The Table-2 represents the perceptions of respondents on implementation of service factors influencing the e-commerce retailer. It is observed out of total respondents that majority group of 60.0 percent mentioned very important and 32.4 percent are mentioned important to delivery in time i.e., within the mentioned TAT. 49.1 percent rated important and 37.8 percent rated very important on good page loading time i.e speed of the APP. 44.7 percent of the respondents are treated important and 34.0 percent are treated very important to user friendly and ease of navigation of the app eg., product search facility and ease to place order etc. Regarding good customer service availability and accessibility through call centers, 47.6 percent retailers felt important and 38.9 percent retailers felt very important. 44.0 percent are given importance and 34.7 percent are given very importance on getting related notifications in time.

The data reveals that 37.8 percent retailers felt important and 36.2 percent retailers are felt very important to availability and accessibility of 24 hours services of apps. 37.6 percent given importance and 30.7 percent rated very importance on competitive pricing. Above forty percent of the respondents (48.3%) felt important and 40.0 percent felt very important on credit facility. The table shows that 40.4 percent retailers are rated important and 37.3 percent retailers are rated very important on the availability of product range. 43.1 percent given important and 35.6 percent are given very important to packaging at the time of delivery. Regarding availability of genuine products, 37.8 percent retailers treated important and 34.7 percent retailers treated very important.

**Table –3: Perceptive score analysis of retailers on influenced factors of e-commerce**

SL. No	Statement	Very Important	Important	Neutral	Less Important	Very Less Important	Total	
	<b>Scale Value (SV)</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>		
1	Delivery in time (within the mentioned TAT)	270	146	27	5	2	<b>450</b>	
	<b>Frequency x Scale Value</b>	1350	584	81	10	2	<b>2027 – I</b>	
2	Good page loading time – Speed of the APP	170	221	49	7	3	<b>450</b>	
	<b>Frequency x Scale Value</b>	850	884	147	14	3	<b>1898 – II</b>	
3	User friendly & ease of navigation Eg. Product search facility & ease to place order etc	153	201	52	37	7	<b>450</b>	
	<b>Frequency x Scale Value</b>	765	804	156	74	7	<b>1806 – VIII</b>	
4	Good Customer Service availability and accessibility through call centers	175	214	33	23	5	<b>450</b>	
	<b>Frequency x Scale Value</b>	875	856	99	46	5	<b>1881 – IV</b>	
5	Getting important & related notifications in time	156	198	58	28	10	<b>450</b>	
	<b>Frequency x Scale Value</b>	780	792	174	56	10	<b>1812 – VII</b>	
6	Availability and accessibility of 24 hours services of apps	163	170	59	26	32	<b>450</b>	
	<b>Frequency x Scale Value</b>	815	680	177	52	32	<b>1756 – X</b>	
7	Competitive Pricing	138	169	63	56	24	<b>450</b>	
	<b>Frequency x Scale Value</b>	690	676	189	112	24	<b>1691 – XI</b>	
8	Credit Facility	180	195	57	13	5	<b>450</b>	
	<b>Frequency x Scale Value</b>	900	780	171	26	5	<b>1882 – III</b>	
9	Availability of Product range	168	182	65	29	6	<b>450</b>	
	<b>Frequency x Scale Value</b>	840	728	195	58	6	<b>1827 – VI</b>	
10	Packaging at the time of delivery	160	194	71	22	3	<b>450</b>	
	<b>Frequency x Scale Value</b>	800	776	213	44	3	<b>1836 – V</b>	
11	Availability of Genuine Products	156	170	76	38	10	<b>450</b>	
	<b>Frequency x Scale Value</b>	780	680	228	76	10	<b>1774 – IX</b>	
	Total score for rate implementation service factors influencing the e-commerce Retailer						<b>20190</b>	
	Maximum Possible Score rate implementation service factors influencing the e-commerce Retailer	5 (Maximum score points) 450 (number of respondents) X 11 (number of statements)						<b>24750</b>
	Percentage of score of rate implementation service factors influencing the e-commerce Retailer	Total score for general working condition display/Maximum Possible Score X 100						<b>81.6</b>
	Average						<b>1835</b>	

According to the Table-3 the data shows that the perceptive score analysis of respondents in their rating of implementation service factors influencing the e-commerce retailers, there are 11 statements and each one is secured a score on the basis of perceptions of the respondents. Based on the perceptual score the ranks have been generated and the rank order analysis has been discussed in the following.

It is found from the data that first rank is given to the statement in which ‘Delivery in time (within the mentioned TAT)’, with a scale value of 2027, and the second rank has been given to ‘Good page loading time – Speed of the APP’, which is carrying a scale value of 1898, and from the third rank is given to ‘Credit Facility’, with a scale value of 1882. In this regard, it shows that the fourth rank has been given to the statement in which ‘Good Customer Service availability and accessibility through call centers’, which is secured a scale value of 1881, and the fifth rank is given to ‘Packaging at the time of delivery’, with a scale value of 1836, whereas, the sixth rank is given to ‘Availability of Product range’, with a scale value of 1827.



The seventh rank has been given to the statement in which 'Getting important and related notifications in time', with a scale value of 1812, and the eighth rank is given to 'User friendly and ease of navigation Eg. Product search facility & ease to place order which is carrying a scale value of 1806. The ninth rank has been given to 'Availability of Genuine Products', with a scale value of 1774. The data reveals that tenth rank is given to the statement in which 'Availability and accessibility of 24 hours services of apps', with a scale value of 1756, and finally the eleventh rank has been given to 'Competitive Pricing', with a scale value of 1691.

According to the scores of the eleven statements the total score obtained was 20190 and the average score is 1835. Hence, the statements are separated by more positive and less positive statements according to their individual scores.

**More positive statements:**

1. Delivery in time (within the mentioned TAT)
2. Good page loading time – Speed of the APP
3. Credit Facility
4. Good Customer Service availability and accessibility through call centers
5. Packaging at the time of delivery

**Less positive statements:**

1. Availability of Product range
2. Getting important and related notifications in time
3. User friendly & ease of navigation Eg. Product search facility & ease to place order etc.
4. Availability of Genuine Products
5. Availability and accessibility of 24 hours services of apps
6. Competitive Pricing

Hence from the above perceptible score analysis of respondents rating of implementation of service factors influencing the e-commerce retailers, there are eleven statements. It is observed that the maximum number of respondents are given importance to the statement that due to delivery in time (within the mentioned TAT), with a scale value of 2027, whereas the minimum number of respondents are given importance to the statement in which competitive pricing, which is carrying a scale value of 1691.

**Table-4: Level of difference among various demographic group retailers on influenced factors of e-commerce on retailing sector**

Sl. No.	Demographic variables	N	Mean	Std. Dev	Std. Err	f-value	p-value
1	Visakhapatnam	150	43.94	6.657	0.544	7.609**	0.001
	Guntur	150	46.51	5.775	0.472		
	Vijayawada	150	44.15	6.576	0.537		
2	Male	277	44.85	6.451	0.388	0.061	0.951
	Female	173	44.89	6.444	0.49		
3	21 -30 years	173	43.65	6.867	0.522	3.847*	0.010
	31-40 years	114	45.11	5.915	0.554		
	41-50 years	90	45.92	6.313	0.665		
	above 50 years	73	46.07	5.947	0.696		
4	U.G	86	43.60	7.572	0.897	3.290*	0.027
	Graduation	100	45.45	5.430	0.454		
	Technical	143	45.24	6.630	0.663		
	Others	121	43.85	7.472	0.806		
5	Mobiles store	111	31.29	4.157	0.395	3.872**	0.004
	Super Market	68	32.50	4.635	0.483		
	KGS	129	33.04	4.345	0.414		
	Fancy Store	81	30.58	5.73	0.657		
	Wholesale Stores	61	32.05	5.277	0.676		
6	Less than 1 Lakh	39	27.10	4.516	0.548	3.360*	0.019
	1-5 Lakh	68	27.39	4.483	0.372		
	5-10 Lakh	278	29.01	3.797	0.403		
	Above 10 Lakh	65	27.73	4.361	0.358		
	Total	450	27.78	4.354	0.205		

The Table-4 represents the perceptive score analysis of e-commerce retailers in various cities on influenced factors of e-commerce in retailer point of view.

It is observed that in rating the influence of implementation of service factors in e-commerce retailers, the average performance of Guntur customers is (46.51) found significantly higher than Vijayawada (44.15) and Visakhapatnam (43.94) customers, and the respective standard deviations are 5.775, 6.657, and 6.657. With these mean differences, the calculated f-value 7.609 indicates significant at 1 percent level because the p-value is 0.001. This infers that there is a significant difference among the e-commerce retailers of various cities towards the influence of implementation of service factors.

In the rating of the influence of implementation service factors in e-commerce retailers, it is observed that the average score of male is 44.85 and female is 44.89 and their respective standard deviations are 6.451 and 6.444. With these mean and standard deviations, the tested t-value 0.061 is not significant because the p-value is 0.951. This infers that there is no significant difference between the male and female e-commerce retailers towards rating the influence of implementation of service factors.

It is observed that in the influence of rate implementation service factors on e-commerce retailer, the minimum average performance of 21-30 years age-group customers is 43.65 and maximum average performance of above 50 years age-group customers is 46.07 and respective standard deviation are 6.0867 and 5.947. With these mean differences, the calculated f-value 3.847 which indicates significance at 5 percent level because p-value is 0.010. This infers that there is a significant difference among e-commerce retailers of various age groups on influence of rate implementation service factor on e-commerce retailers.

The data reveals that the rating of influencing factors of implementation of service factors in e-commerce retailers, the maximum average score of graduates was 45.45 and minimum average score of others group was 43.60. The respective standard deviations are 5.430 and 7.572. According to these mean and standard deviations, the calculated f-value 3.290 indicates significance at 5% level because p-value is 0.027. This shows that there is a significance difference among the different educational groups e-commerce retailers in influencing the implementation of service factors.

According to the rating of influence of privacy factors in e-commerce retailers, it shows that the maximum average score of 33.04 perceived by KGS and the minimum average score of 30.58 perceived by fancy stores and their respective standard deviations are 4.345 and 5.730. With these mean and standard deviation differences, the calculated f-value 3.872 is significant at 1 percent level because the p-value is 0.004. This infers that there is a significant difference in the perceptions of various business types of e-commerce retailers towards the influence of privacy factors.

It is observed that the rating in the influence of implementation of service factors in e-commerce retailers, the maximum average score of 45.65 perceived by 5-10 Lakh income group and the minimum average score of 43.40 perceived by less than 1 Lakh income group, and the respective standard deviations are 6.533 and 6.280. With these mean and standard deviation differences, the calculated f-value 1.973 is not significant because the p-value is 0.117. This infers that there is no significant difference among various income groups of e-commerce retailers towards the influence of implementation of services factors.

Out of total 6 demographic variables, as many as 5 are found significant. This infers that there is a significant difference among various demographic group retailers on influenced factors of e-commerce in retailers' point of view. Hence, the null hypothesis is rejected.

## Discussion

### ➤ City:

The researcher has adopted random stratified sampling method and hence selected the top three cities of AP which are Visakhapatnam, Vijayawada and Guntur. In each city, 150 retailers has been surveyed – A total of e-commerce retailers of 450 shows that the three cities are equally having each 33.3 percent of retailer respondents.

### ➤ Gender:

It is observed that the male percent (61.6) is significantly higher than the female percent (38.4) in the sample retailers overall. It is observed that the female population in retailers of Guntur (42%) is observed higher than that of female retailers in Visakhapatnam (37.3%) and Vijayawada (36%).

### ➤ Age:

Overall, in all the cities put together, it is observed that younger 21-40 years group is significantly higher (63.7%) than the older age group i.e., above 40 years (36.2%) in the e-commerce retailers. The sample shows that the younger age group 21-40 years retailers are significantly higher in Vijayawada (70.7%) and Guntur (61.3%) when compared to Visakhapatnam (59.4%), whereas 21-30 years age group retailers in Vijayawada (58.7%) are significantly higher when compared to Visakhapatnam (42.7%) and Guntur (14%).

### ➤ Education qualification:

From the study, it is observed that a majority of 31.8 percent retailers are having technical qualification (ITI, diploma and skilled etc) followed by 26.9 percent are having other education group (Below Intermediate). Also it is observed that the technical and other education group retailers in Visakhapatnam (70%) are found more when compared to Vijayawada (56%) and Guntur (50%). This indicates that the graduated (Who are degree and degree+) and under graduated (Who are 10+2 and undergoing graduation) retailers are more in Guntur (50%) followed by Vijayawada (44%) when compared to Visakhapatnam (30%).

### ➤ Business type :

The study revealed that around 75% are FMCG stores and the rest 25% are mobile stores which indicates the general spread in the present market scenario. Out of the sample respondents surveyed, majority are KGS (28.7%) and mobile stores (25.7%), followed by Fancy stores (18%) and super markets (15.1%) and finally wholesalers (13.5%).

### ➤ Gross annual income:

From the study it is observed that the most of the retailers (61.8%) are in 5 to 10 Lakh income group normally consist of small and medium range of KGS, Mobile and Fancy stores. It is also observed that in 5 Lakh and above income group, retailers of Visakhapatnam (81.4%) are higher than Guntur (76.7%) and Vijayawada (70.7%) as Visakhapatnam is the highest populated city in AP with larger mobile stores and super markets in the chosen sample. It is also observed that in the lower income group retailers who are having less than 5 Lakh gross annual incomes are observed more in Vijayawada (29.3%) followed by

Guntur (23.3%) than that of Visakhapatnam (18.7%) since Vijayawada and Guntur are having more new and SME retailers in the surveyed sample.

### Conclusion

E-commerce websites can run all the time. From the retailers' point of view, this increases the number of orders they receive. From the customer's point of view, an 'always open' store is more convenient. Buyers and sellers of niche products can find it difficult to locate each other in the physical world. Thus, e-commerce is only a matter of the customer searching for the product in a search engine.

The data gathered reveals that retailers are very much aware about the e-commerce business and they compare different products with different channels of purchase. The basic services like competitive pricing, wide range of product availability and deliveries in time (TAT) coupled with trust and loyalty factors are the main purpose which not only changes the perception of retailers but it also changes their buying behavior. E-commerce companies should understand the psychology and buying behavior of retailers before launching any new products, new campaign and schemes etc. It is also clear that if pricing and related notifications in time are sent the retailers, can be a good effective media for conveying the message to other fellow retailers. Finally e-commerce firms are suggested to focus on the simple design of the app/webs for faster and easier understanding of the retailers apart from the product, pricing and logistics. Further the research would be more interesting if it could be extended to various different sectors with a mix of both urban and rural areas.

### References

1. Kelvin Cheng (2021). Analysis of the development of e-commerce in the retail industry in recent years. See discussions, stats, and author profiles for this publication · March 2021 at: <https://www.researchgate.net/publication/350287174>.
2. Jamal Hasan (2019). E-commerce and its impact on retail stores in Slovakia. *Studia commercialia Bratislavensia*, Volume 12, Number 41 (1/2019); pp. 16-23
3. Maheswara B. (2016). Impact of E-Commerce on Indian Retail Sector. *Journal of Advances and Scholarly Researches in Allied Education, Multidisciplinary Academic Research* Year: Oct, 2016 Volume: 12 / Issue: 23 Pages: 266 - 269 (4) Publisher: Ignited Minds Journals
4. Satyendra Arya et al. (2015). An Impact of E-Commerce Portals on Retailing in India. *Retail: Challenges, Issues & Practices*, March 2015, [https://www.researchgate.net/publication/280534852\\_An\\_Impact\\_of\\_E-Commerce\\_Portals\\_on\\_Retailing\\_in\\_India](https://www.researchgate.net/publication/280534852_An_Impact_of_E-Commerce_Portals_on_Retailing_in_India)
5. Discoverydesign (18<sup>th</sup> November, 2016). 5 Reasons why e-commerce is so important for your business.