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FROM THE DESK OF EDITOR…

The COVID-19 pandemic has severely impacted many industries and increasing economic hardship for Consumers, Businesses and Communities. Impact of Covid-19 has been multiple related to social, educational, economic, political, agricultural, psychological levels and many more. The 'Lockdown' and 'Social Distancing' has been recognized as the only method to control the spread of the pandemic and almost every country has adopted this method. Although the technology to facilitate remote work has been around for over a decade, COVID-19 has forced hundreds of millions of people worldwide to engage in a sudden, massive, real-time experiment with remote work arrangements.

However, this pandemic created an opportunity for change in pedagogical approaches and introduction of Virtual Education in all levels of education. Due to pandemic coronavirus schools, colleges and other educational institutions are witnessing a shift towards online learning. Education is defined more innovatively today as compared to what it was centuries ago when teaching originally began. this model built the bridge through which learning was delivered in a manner that helped create and develop the most brilliant minds and there was also a development of a whole new era of education.

Online education in India has witnessed an enhanced acceptance over a few years. It is becoming an integral part of the school, colleges and even in offices across India. Easy availability of the internet is the primary reason for the growth of online education in India. Between 2019 and 2020 the number of internet users in India increased by 128 million. For the first time, rural India has a greater number of internet users compared to urban India.

UGC and MHRD have lunched many virtual platforms with online depositories, e-books and other online teaching/learning materials. Combination of the traditional technologies (radio, TV, landline phones) with mobile/web technologies to a single platform with all depositories would enhance better accessibility and flexibility to education. A large open on-line course (MOOC) is an internet course aimed toward limitless curiosity and open entry by way of the net. India is taken into account to be the largest marketplace for MOOCs after the USA.

However, digital learning is not without its challenges, since face-to-face interplay is perceived as the perfect sort of correspondence as in comparison with the relatively impersonalized nature of remote learning. The construction of the digital education infrastructure by the Government of India presently seems to be troublesome as a consequence of absence of price range. Further, remote learning more depends on the dependable energy flexibly and common Web connectivity which can be a critical factor for Tier 2 and Tier 3 cities in India.

In spite of all limitations now the time has come to push India's economy towards solving all such Socio-economic issues. Inculcating strong Higher Education Base with Online Learning in the light of futuristic Vision laid down by New Education Policy could be the right weapon of solving many such issues which have been inherited over Generations. All such efforts require mindset towards "Continuous Research".

Keeping all such ideas in mind and heart I feel extremely delighted to bring out the *Second Issue of E- Journal "MMK: ACE"* with the Papers included from a community of Researcher, Academicians from different strata addressing various aspects of COVID-19 which was the central theme of *Second Issue of E-Journal "MMK: ACE"*.

I extend my sincere gratitude to the Management of HSNC Board and our dear I/C Principal Dr.CA Kishore Peshori for their constant support and motivation towards strong Research foundation.

My heartfelt thanks to the Editorial Board Members Dr. Megha Somani and Mr. Manikandan Iyer for guiding me on several fronts.

Finally, big thank you to Peer-reviewers and Publishing House for helping us in publishing this E- Journal. Last but not the least I would like to sincerely thank to all the academicians' who have wholeheartedly contributed in this *Second Issue of E-Journal "MMK: ACE"*.

I invite feedback and suggestions from our Readers, Researchers and Academicians for further improvement in *E-Journal "MMK: ACE"*.

Dr. Aashish S. Jani

Executive Editor

PRINCIPAL'S MESSAGE

I am very happy to observe that our Research Committee has been very active during this lockdown period and has successfully brought out the second volume of our Ace Online Research Journal, where academicians and students are given a platform to publish their research articles. Last year, our college had the privilege of hosting a mega event, i.e. the XXVII HSNC Board's International Economics.

Convention – 2019 from December 1st December to 14th 2019, where many enthusiastic researchers from various colleges including West Georgia University from U.S.A, presented their research papers. At this Convention, we had launched the first volume of our E-journal, ACE, which was an academic initiative to encourage our young, upcoming researchers. Little did we expect at that time, that this online mode of communication would become the order of the day, as we have been witnessing in these current times. Nevertheless, we are glad that it was an initiative taken in the right direction and at the right time.

The greatest gains of all times in history has always been research driven. Whether it was discovering a vaccine for Polio, or drugs to combat HIV, these were all borne out of research projects. Therefore, Research activities are fundamental to every society, and should be especially encouraged in educational institutions. As Scientists around the world were struggling with their research to find a vaccine for the COVID 19 virus, we realize that it is highly imperative to cultivate this research culture amongst our present generation. I am glad that the editorial team has chosen to have deliberations on this very topical theme of the impact of COVID 19 on various aspects of the Economy and Education sector. I appreciate all the academicians, scholars and students for their valuable contributions and the thoughts that they have shared through this journal.
I also applaud the initiative taken by my editorial board in their continuous efforts to inculcate research attitude and aptitude among our faculty and students.

I wish them all the best and hope that the ideas shared through this volume will find a way in bringing out some positive outcome and encourage many more students and teachers to become good researchers and thinkers.

Dr.CA Kishore Peshori

(I/C Principal)

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RESEARCH PAPERS & ARTICALS ON ECONOMICS

Study on Changing Buyer's Behavior Due to E-Commerce: A Comparative Study between Online Shopping & off Line Shopping
(Research Paper Study during March 2019 to Sept.2019)

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Abstract:- Digital economy refers to an economy that is based on digital computing technologies, based on the internet and it includes e-commerce. E-commerce defined as anything that involves an online transaction. E-commerce provides multiple benefits to the consumers in form of availability of goods at lower cost, wider choice and saves time online shopping has become a new trend of shopping nowadays and is quickly becoming an important part of lifestyle. Due to wide spread internet access by people and e-commerce usage by traders, online shopping has seen a massive growth in recent years. Trend towards e-commerce is now not restricted to particular strata but it includes various segments of society.

This particular paper attempted to find out changing consumers buying behavior with respect to traditional offline shopping. It covers Parameter wise analysis of shopping trends & behavior which helps to understand consumer perception & its impact in India. It mainly focuses on changing patterns & habits of consumers in comparison with traditional-offline shopping.

There are several demographic & financial aspects also related to e-commerce but present study mainly determines the general buying behavior in comparison with traditional shopping.

The study was undertaken based on convenience sampling in the city of Mumbai in western suburban areas. It represents cosmopolitan population. The results of the study highlighted that there is a significant change in buying behavior due to expansion of e-commerce in India, when we compare that with offline shopping.

Based on study it may be concluded that in spite of many issues & challenges, immense opportunities exist in e-commerce of India & it is immensely useful not only for organizations but also for consumers if one can take optimum benefit of it. At the same time traditional shopping will have to modify their patterns of selling as per the changing consumer's behavior.

I. INTRODUCTION

Digital economy means an economy that is based on digital computing technologies, mainly refers to conducting business through markets based on the internet and the World Wide Web. The digital economy is also sometimes called the *Internet Economy*. It provides a global platform through which people and organizations devise strategies, interact, communicate, collaborate and search for information.

The advent of the Internet has had an impact in our lives in all sorts of ways such as in the manner in which we communicate and most importantly, how we shop. When retailing on the web started, sometime in the middle to the late 1990s, it gave rise to the debate which is still ongoing, about online vs. traditional shopping.

The contemporary e-commerce trend recommends companies to shift the traditional business model where focus on "standardized products, homogeneous market and long product life cycle" to the new business model where focus on "varied and customized products".

E-COMMERCE: Electronic commerce or ecommerce is a term for any type of business, or commercial transaction that involves the transfer of information across the Internet. It is currently one of the most important aspects of the Internet to emerge. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail. Some common applications related to electronic commerce are:

- Digital Wallet
- Electronic tickets
- Online banking
- Shopping cart software
- Social networking
- Teleconferencing

> *Types of e-Commerce Business Models: -*
Typically, e-Commerce business models can be divided into six major types, such as:

- Business-to-Business (B2B) **Business-to-Business (B2B):** These basically are conducted between companies and include conventional wholesalers and producers dealing with retailers.
- Business-to-Consumer (B2C) **Business-to-Consumer (B2C):** The Business-to-Consumer E-Commerce is related to the transactions and relationship between businesses and the end customers.
- Consumer-to-Consumer (C2C) **Consumer-to-Consumer (C2C):** This consists of electronic transactions of products and services between two customers.

- Consumer-to-Business (C2B) **Consumer-to-Business (C2B):** In this case, individuals make their items or services and sell them to companies. Some examples are proposals for company site or logo, royalty free photographs, design elements and so on.
- Business-to-Administration (B2A) **Business-to-Administration (B2A):** In this kind of e-Commerce transaction, there are dealings between companies and public administration. It encompasses different services, such as social security, fiscal measures, legal documents, employment and so on.
- Consumer-to-Administration (C2A) **Consumer-to-Administration (C2A):** In this e-Commerce model, electronic transactions are carried between individuals and public administration. Some examples are distance learning, information sharing, electronic tax filing, and so on.

> *On-Line Shopping Vs Traditional Shopping*

Comparison Feature	Traditional commerce	E-commerce
Definition & Meaning	Traditional commerce focuses on the exchange of products and services through personal interactions	E-commerce focuses on the exchange of goods and services via the Internet
Accessibility	Limited to several hours during the day	Can be accessed anytime 24/7
Customer Interface	Customers interact with business face-face	Customers use computing devices to access and interact with business
Business Scope	Geographically limited to business location	Global business scope
Mode of Delivery	Instant	Time-consuming
Transaction Processing	Manual	Automatic
Product Physical Inspection	Can be done before purchase	Cannot be done before purchase
Mode of Payment	Cash, Credit Card, Cheques	No Cash, Credit card, Wire Transfer,

Table 1

❖ *Objectives of Study*
1. To study factors influencing buying behavior of a consumer towards shopping in India.
2. To analyze strengths & weakness of online/offline shopping behavior in India.
3. To compare the Indian consumer perception in terms of different parameters of shopping behavior provided by online/offline platforms.
4. To give suggestions while buying product online as well as from offline platforms.

❖ *Scope of Study*
This is not a specific study over impact of demographic factors on online shopping, but this study mainly determines impact of online shopping on consumer behavior in general over offline shopping.

❖ *Limitations of Study*
As with most researches, this study has also some limitations. The sample size of the study, which consists of only 100 respondents, cannot be generalized and applied for everyone. Again, opinions are dynamic; hence, the results of the study based on the opinions are likely to differ.

Data gathered from the consumers cannot represent the all the consumers around the world, as that is impossible to do so. Also, there will be participants who are going to provide some untrue answers to the survey questions.

Again, the result also depends upon the integrity of respondents in giving true and fair opinion and their level of knowledge in the subject under study. Both sample error and non sampling error may exist in the study and also biasness among the responses cannot be ignored.

As online shopping depends on World Wide Web which has a global reach, hence a multi cultural, cross cultural research need to be undertaken to correctly understand the online shopping attitude. Empirical research could also be carried out to find out similarities and differences of online shoppers of different countries and compare between the perception, attitude and purchase behavior of the shoppers.

Future researches can also be carried out to find out comparison on online shopping attitude among students based on difference of Online Shopping Attitude among the Youth, gender wise, and income & occupation wise.

❖ *Need of the Study*

The e-commerce industry will be a leader with popularity in electronic business world in the upcoming years. The e-commerce revolution has fundamentally changed the business of transaction by giving new opportunities and breaking borders easily. It has strongly impacted the traditional business system and changing the life of people by making it easier. While it gives benefits to customer and seller, e-commerce gives challenges to traditional business for competitive position. When the internet cost will be low then the e-commerce will flourish easily and will make many of traditional business to run out of their business.

But e-commerce business faces a lot of challenges in flourishing their business. This study is immensely useful to Indian e-commerce firms to decide their strategy & policy towards e-commerce by evaluating its impact at micro and macro level, and also on the other side offline traditional retail business also can design their policies accordingly to compete with online platforms in a better manner.

Further it also helps government to check global trends & modify policies accordingly. Finally consumers also get benefited by viewing global purchasing patterns with attractive offers and he can demand the same here. This research paper attempt to fill this gap of, perceived usefulness & perceived ease of use by identifying various factors towards online shopping.

❖ *Hypothesis Of Study*
1. H_0= There is no significant change in buying behavior due to E-commerce.
2. H_1= There is significant change in buying behavior due to E-commerce.

II.   REVIEW OF RELATED LITERATURE

NO.	TITLE	AUTHOR	AREA OF RESEARCH	FINDINGS
1.	Electronic Commerce and Business Change	Clayton and Criscuolo,2002	EDI	E-business has changed processes within and between enterprises. Electronic Data Interface (EDI), widely introduced twenty five years ago on dedicated links between firms, showed how information could be directly passed from the operating systems of one enterprise into the order processing, production and logistics systems of another
2.	E commerce an Indian perspective	Farooq Ahmed, 2001	IT act, Contract act, challenges for the legal system	Many issues raised by the e-commerce await judicial resolution. The information transferred by electronic means which culminates into a contract raises many legal issues which can't be answered within the existing provisions of the contract act.
3.	The ethics of Banking	Harris, L. and Spence, L. J., 2002	Global relations & opportunities	The development experienced in internet and other global online networks have, thus, created new commercial opportunities for e–commerce and creation of completely new sets of global and national trading relationships. This consequently, led to the perception that e-banking and e-commerce are now an inevitable aspect of financial services.
4.	Adoption of E-banking in Bangladesh: An exploratory study	Hasan, A.H.M., Saidul. et al, 2010	E-commerce & Economic development	Nowadays e-commerce industries have increasingly become a necessary component of business strategy and a strong catalyst for economic development.
5.	Introduction to E-commerce	Laudon, K. C., and Traver, C.G.	Basics of E-commerce	Commercial transactions involve the exchange of value across organizational or boundaries in return for products and services. Exchange of value is important for understanding the limits of e-commerce. Without an exchange of value, no commerce occurs
6.	Is that authentic or artificial? Understanding consumer perceptions of risk in e-service encounters.	Mauricio S. Featherman, Joseph S. Valacich & John D. Wells,2006	Customers' perception about e-services.	The results from this study supported the contention that e-services of less risky e-service categories will be perceived as more authentic and less risky to use. Thus, e-service providers must carefully assess their respective categories and plan accordingly.

7.	The History of Ecommerce: How Did It All Begin?	Miva, M. and Miva, B. ,2011	Evolution of E-commerce	The growing use of the Internet, tablet devices, and smart phones coupled with larger consumer confidence will see that ecommerce will continue to evolve and expand. With social media growing exponentially in recent years, the conversation between businesses and consumers has become more engaging, making it easier for transactional exchanges to happen online.
8.	Exploring E-commerce benefits for businesses in a developing country.	Molla, A., and Heeks, R., 2007	Benefits of E-commerce	E-commerce could deliver a significant benefit to businesses in developing countries by increasing their control over its place in the supply chain, thus improving its market efficiency
9.	An Introduction to Electronic Commerce.	Nanehkaran, Y. A. ,2013	E-commerce opportunities'	Electronic commerce is creating new opportunities to the global economic, for example in global travel and tourism industry. Transforming from traditional business method to electronic commerce method is hard and there were many different factors for companies to adapt them with electronic commerce factors.
10	Determinants of the locus of Global E-commerce	Nir B kshestri, 2001	Factors influencing the distribution of global e-commerce	The analysis indicated that the twin forces of globalization and multiple revolutions in ICT (communication technologies) are fuelling the growth of global e-commerce.
11	E-commerce Challenges, Solutions and Effectiveness Perspective Bangladesh.	Ohidujjaman, et al.,2013	E-commerce revolution & Challenges	Internet and e-commerce are closely wrapped towards developed countries. But they can achieve tremendous benefits to developing countries if it is applicable as an ideal business purpose. E-commerce is a revolution in business practices.
12	TV, PC or Mobile? Future media of e-commerce:	Patric Barwise,2001	Various new media for B2Band B2C e-commerce.	Consumer marketers are still in the early stages of adjusting to the unprecedented complexity of a world with so many physical, online and traditional offline consumers.
13	E-Commerce in the Indian Insurance Industry: prospects and future	Prithviraj das Gupta & Kasturi sengupta,2002	E-commerce in Indian industry	The study has identified that e-insurance offers a potentially vast source of revenue for insurance companies that venture to go online. E-insurance also makes the insurance procedure more secure since the policy details are stored digitally and all transactions are made over secure channels.
14	Leveling E-Commerce Opportunities for Developing Countries.	Ray, J. S., 2011	Leveraging E-commerce technologies	If implemented properly, E-commerce technologies can result in business process improvements and increased efficiencies. Leveraging E-commerce technologies should result in improvements to developing countries, but so far have not produced the desired results.
15	E-commerce in developing countries: Opportunities and challenges for small and medium-sized enterprises.	World Trade Organization, 2013	Opportunity for developing countries	E-commerce has been hailed by many as an opportunity for developing countries to gain a stronger foot hold in the multilateral trading system. E-commerce has the ability to play an instrumental role in helping developing economics benefit more from trade

Table 2:- A Brief Review of Literature on E-Commerce

III. RESEARCH METHODLOGY

A survey was conducted with a structured questionnaire. A total of 100 responses were collected. Convenience sampling, which is one of the non-probability sampling methods, has been used in this research because of ease of accessibility of the sample. Statistical tools such as Central Tendency, Dispersion Analysis and Chi Square Test for independence has been conducted to compute the findings.

IV. ANALYSIS OF DATA

In this stage author will be analyzing the information gathered from the surveys. In order to analyze the data there will be tables, diagrams and other ways to analyze the data

to translate into meaningful findings, correlation analysis and z test etc. based on the design of the survey questionnaires are prepared. Correlation analysis is to evaluate the correlation's strength between the variables.

➢ *Implication:-*

When the research is done and the results come out, there will more understanding of consumers of both online and traditional in-store shopping. Also, there will be more understanding of what are the main factors affecting consumer's positive and negative attitude, perception towards online shopping and what are main reasons that consumers actually choose online shopping over traditional in-store shopping. So the companies can apply to their businesses to improve their goods and services. The study will also show that who the potential users of the online are shopping; this will be examined by respondents demographic information that includes gender, age group and occupation etc.

The perception and satisfaction of bank customer is evaluated on the basis of 25 parameters. The degree of

perception towards the use of technology is quantified by using 5 point likert scale. Each parameter is identified for the study is based on following dimensions.

1. **Monetary transactions-**It refers to different monetary transaction offered to consumers while shopping.
2. **Efficiency**-The second dimension is identified with effective & efficient services provided to consumers while shopping.
3. **Suitability-** the third dimension is associated with different Products suitability & related buying behavior while shopping it.
4. **Reliability:** the dimension reliability takes in to consideration the dependability service necessary to offer while shopping.
5. **Motivation-.**it is associated with efforts taken by seller to encourage shopping customers.

The parameters have been quantified by calculating Mean Scores, Standard Deviation, and Coefficient of Correlation, with regard to Online & Offline Shopping Behavior**.**

NO.	PARAMETER	Mean online	Mean offline	Std.Dev. online	Std.Dev. offline	Coeff.Var. online	Coeff.Var. offline
	MONETARY TRANSACTIONS						
1	Bills payment	2.94	2.68	1.7146	1.6371	58.32	61.08
2	Updated information	3.08	2.62	1.7550	1.6186	56.98	61.78
3	Refunds & Exchange	2.3	2.32	1.5166	1.5232	64.81	65.65
4	Increases expenditure/budgets	2.54	2.36	1.5937	1.5362	62.75	65.09
5	Receive alerts	2.26	2.06	1.5033	1.4353	66.52	69.67
	EFFICIENCY						
6	Convenience	2.94	2.56	1.7146	1.6000	58.32	62.5
7	Customer correspondence	2.76	2.72	1.6613	1.6492	60.19	60.63
8	Cost effective service	2.78	2.64	1.6673	1.6248	59.98	61.55
9	Network coverage	3.02	2.66	1.7378	1.6310	57.54	61.31
10	Cash on delivery	2.96	2.72	1.7205	1.6492	58.12	60.63
	SUITABILITY						
11	Electronic goods	2.72	2.58	1.6492	1.6062	60.63	62.26
12	FMCG	3.18	3.16	1.7833	1.7776	56.08	56.25
13	Warranty	3.28	3.22	1.8111	1.7944	55.22	55.73
14	Income groups	3.4	2.66	1.8439	1.6310	54.23	61.31
15	Multiple choices	3.12	3.08	1.7664	1.7550	56.61	56.98
	RELIABILITY						
16	Timeliness	3.36	2.78	1.8830	1.6673	54.55	59.98
17	Accuracy	2.6	2.4	1.6125	1.5492	62.50	64.55
18	Privacy/security	2.42	2.12	1.8815	1.4560	53.00	68.68
19	Legal policies/concern laws	2.94	2.88	1.7146	1.6971	58.32	58.93
20	Hidden cost	2.48	2.1	1.5748	1.4491	63.50	69.01
	MOTIVATION						
21	Heavy advertisements	3.5	3.36	1.8708	1.8330	53.45	54.55
22	Bulk buying discounts	3.7	3.44	1.9235	1.8547	51.99	53.92
23	Sales promotion	3.64	3.42	1.9079	1.8493	52.41	54.07
24	Brand value	3.1	2.8	1.7607	1.6733	56.80	59.76
25	Impulsive buying behavior	3.62	2.92	1.9026	1.7088	52.56	58.52

Table 3:- Statistical Response of Buying Behavior

❖ *Parameter Wise Interpretation of Data:*

1. **Bills payment:** Bill payment through e-channels is very popular among the customers of online shopping. This is evident from the fact that the mean score of online shopping is 2.94 higher than offline shopping 2.68. The standard deviation regarding payment of bill being 1.7146 (for online) 1.6371 (for offline) seems to be different. This is further confirmed by the coefficient of variation which is 58.32% & 61.08% respectively. There is 0.83 high positive correlation in the consumer perception pattern which means consumer perception vary in the same direction towards the both online & offline shopping behavior.

2. **Updated information:** online shopping provides updated product information more effectively through e-channels as compared to offline shopping. The mean score of online is 3.08 whereas that of offline shopping is 2.62 with a difference of 50 basis points. It indicates that online shopping platforms are more accurate in providing recent and new information to their customers. The standard deviation of offline is 1.6186 which is slightly lower than online i.e.1.7550. This is further seen by coefficient of variation which is 61.78% [offline] & 56.98% (online). There is a moderaeltly high positive correlation in consumer perception pattern.

3. **Refunds & Exchange**: In terms of refund & exchange online & offline shopping behavior is quite different. The offline shopping seems to score high over the online shopping, i.e. mean score of offline is 3.02 & online 2.64. The standard deviation being 1.7378 & 1.6248 respectively seem to be divergent. This is this is further given by coefficient of variation which is 61.55% (online) & 57.54% (offline). There is high degree positive correlation in consumer perception pattern.

4. **Increases expenditure/budgets:** With reference to increasing expenditure or budget online shopping is score more than offline shopping. This is evident from the fact that the mean score of online is 2.54 higher than offline 2.36. The standard deviation regarding this being 1.5937 (for online) & 1.5362 (for offline) seems to be different. This has been seen by the coefficient of variation which is 62.75% & 65.09% respectively. There is moderately high positive correlation in the consumer perception pattern.

5. **Receive alerts:** Nowadays, vendors are sending important transaction alerts to their regular customers regarding payment of bill, delivery schedule etc, via e-mail or mobile specifically for online shopping, hence the mean score of online shopping is 2.26 which is higher than offline shopping 2.06, with a difference of 20 basis points. The standard deviation being 1.5033 & 1.4353 respectively does not seem to be significantly divergent, which is visible by coefficient of variation which is 66.52 % (online) & 69.67% (offline). There is high positive correlation in consumer perception pattern.

6. **Convenience**: Regarding this parameter, online shopping has perceived much better than offline shopping. It is reflected in mean scores of online shopping which is 2.94 over 2.56 mean score of offline trend. The standard deviation with reference to rating pattern is 1.7146 (online) & 1.6000(offline) indicating a high degree of divergence. This has been confirmed by coefficient of variation which is 58.32% (online) & 62.5% (offline). There is moderately high positive correlation in consumer perception pattern.

7. **Customer correspondence:** There is major difference in terms of instant feedback provided by shoppers using e-channels, i.e. through E-mail/mobile banking. The mean score of offline vendors is 2.72 which is lower than online channels 2.76. Standard deviation being 1.6492 &1.6613 respectively, does not seem to be significantly divergent, the coefficient of variation is 60.19% (online) & 60.63% (offline). There is very high positive correlation in consumer perception pattern.

8. **Cost effective service**: The online shopping platforms appear to provide better time saving services while operating accounts, i.e. majority of customers of online shopping are of the opinion that e-channels are time saving. It is evident from the mean score of online shopping which is 2.78 over 2.64 mean score of offline shopping. The standard deviation is 1.6673 (online) & 1.6248 (offline) showing a high degree of divergence, which is confirmed by coefficient of variation which is 58.98% (online) & 60.63% (offline). There is positive correlation in consumer perception pattern.

9. **Network coverage**: obviously the online channels are more perceived to be better in providing network coverage over offline, because in offline shopping network may not be more relevant except for payment through online. This is evident from the fact that the mean score of online is 3.02 whereas that offline shopping is 2.66 with a difference of 35 basis points, which is very significant. Facing poor network coverage which ultimately affects their service quality. The standard deviation being 1.7378 & 1.6310 respectively, seem to be significantly divergent, this has been further emphasized by the coefficient of variation at 57.54% (online) & 61.31% (offline). There is high degree positive correlation in consumer perception pattern.

10. **Cash on delivery:** With regard to cash on delivery online shopping is scoring marginally high as compared to offline. Further because nowadays such system is also offer by small retailers in local area basis. The mean score of online is 2.96 which is comparatively high than offline i.e.2.72 It is further confirmed by standard deviation which is 1.7206 & 1.6492 respectively. The coefficient of variation is 58.12% (online) & 60.63% (offline) which is showing high degree positive correlation in consumer perception pattern.

11. **Electronic goods:** With respect to shopping of electronic goods e-chennals are scoring slightly better than offline. The mean score of online shopping is 2.72 whereas that of offline is 2.58. Even customers of online shopping are availing better discounts & offers than offline customers. The standard deviation is 1.6492 (online) & 1.6062 (offline) showing marginal degree of divergence, which is given by coefficient of variation which is 60.63% (online) & 62.26% (offline). There is positive correlation in consumer perception pattern.

12. **FMCG:** With respect to shopping of FMCG goods e-channals are also scoring slightly better than offline. The mean score of online shopping is 3.18 whereas that of offline is 3.16. Even customers of online shopping are availing better discounts & offers for bulk buying than offline customers. The standard deviation is 1.7833 (online) & 1.7776 (offline) showing marginal degree of divergence, which is seen by coefficient of variation which is 56.08% (online) & 56.90% (offline). There is positive correlation in consumer perception pattern.

13. **Warranty:** Both the shopping patterns are showing almost similar response from their respective customers towards the warranty of the product. However offline customers are better in getting after sale service, warranty & guarantee towards product than online shopping which is limited and restricted. Mean score of offline warranty is 3.28 whereas online is 3.16. The standard deviation being 1.7776 online & 1.8111 respectively seems to be divergent. The coefficient of variation is 55.22% (offline) & 56.25 % (online). There is very high degree of positive correlation in consumer perception pattern.

14. **Income groups**: The online shopping are slightly better regarding options towards product segments as per individual income type as highlighted by mean score of 3.4 (online) & 2.66 (offline). There is a difference of 44 points indicating high difference. The standard deviation 1.8439 & 1.6310 respectively indicates slight divergence which is proved by coefficient of variance 54.23% & 61.31% respectively. There is very high degree of positive correlation in consumer perception pattern.

15. **Multiple choices:** E-channels are very useful for getting wide varieties of various product at central convenient place. In this context there is no significant difference between the public and private banks. The mean score is 3.12 (online) & 3.08 (offline) there is a difference of 4 basis points. The standard deviation is 1.7664 (online) & 1.7550 (offline) indicating slight divergences, which has been confirmed by coefficient of variation at 56.61% (online) & 56.98% (offline). There is almost perfect positive correlation in consumer perception pattern.

16. **Timeliness:** Majority of customers, of online customers are making use of this facility due to quick time saving advantage as compared with offline channels. The mean score is 3.36 (online) & 2.78 (offline) there is a high difference of 58 basis points. The standard deviation being 1.8830 & 1.6673 respectively seems to be divergent. The coefficient of variation is 54.55% (online) & 59.98% (offline). There is positive correlation in consumer perception pattern.

17. **Accuracy:** With regard to accurate & error free transactions almost both the platforms of buying sounds similar. It shows online is more accurate than offline. However, the difference is slightly higher for online than offline. The mean score of offline is 2.4 whereas online is 2.58. The standard deviation is 1.6062 online & 1.5492 offline respectively, which is slightly divergent, further visible by coefficient of variation which is 62.26% (online) & 64.55% (offline). There is high degree of positive correlation in consumer perception pattern.

18. **Privacy/security:** In 21st century due to heavy use of technology almost everywhere, security is inevitable. In this parameter customers are slightly conservative towards offline shopping as fear of data leakage through online shopping. Most of the respondents feel online shopping ask more personal information than offline. It is evident from mean score of online shopping is 2.42 & offline 2.12 with a difference of 30 points in favor of offline shopping. The standard deviation being 1.5556 & 1.4560 respectively, this shows more divergent. The coefficient of variation is 64.28% (online) & % 68.68 (offline). There is high positive correlation in consumer perception pattern.

19. **Legal policies/concern laws:** more clear guidelines & legal terms of policy available for retail offline shopping as compared to online shopping. this results into fear in the mind of customers while shopping online in the situations of refund/ exchange/ warranty/ originality of products etc. hence mean score of offline shopping is 2.94 whereas online is 2.88 The standard deviation is 1.7146 & 1.6971 respectively, which is slightly divergent ,further affirmed by ,coefficient of variation which 58.32% (offline) & 58.93% (online). There is a moderately high degree of positive correlation in consumer perception pattern. Hence offline channels are more reliable.

20. **Hidden Cost:** The online shopping platforms appear to charge more hidden cost than offline by taking advantage of customer's ignorance. This is evident from the mean score of online customers is 2.48 whereas offline customers is 2.10 with a difference of 8 in favor of offline shopping. Private sector does not ensure privacy as efficiently as public sector banks. The standard deviation is 1.5748 & 1.4491 respectively; it is further affirmed by, coefficient of variation which is 63.50% (online) & 69.01% (offline). There is a high degree of positive correlation in consumer perception pattern.

21. **Heavy Advertisements** Most of the customers agreed that online shopping gives more heavy advertisements and then charge more hidden cost, as highlighted by mean score of 3.5 (private) & 3.36 (public), there is a difference of 14 points indicating moderate difference. The standard deviation 1.8708 & 1.8330 respectively indicates slight divergence which is proved by coefficient of variance 53.45 % (Private) & 54.55% (public) respectively. There is very high degree of positive correlation in consumer perception pattern.

22. **Bulk Buying Discounts** The online shopping platforms score over traditional offline with regard to this parameter. They are conducting more effective promotions during festivals than offline promotions. The mean score of online shopping trend is 3.7 whereas offline is 3.44 with a difference of 26 base points. The standard deviation is 1.9235 & 1.8547 respectively; it is further confirmed by, coefficient of variation which is 51.99% (online) & 53.92% (offline). There is a high degree of positive correlation in consumer perception pattern.

23. **Sales Promotion** heavy Advertisement & effective sales promotion is well placed by both the platforms of shopping to make their customers aware, but slightly in online platform it is more aggressive than offline. The mean score is 3.64 (online) & 3.42 (offline). The standard deviation being 1.9079 & 1.8493 respectively does not seem to be divergent. However, the coefficient of variation is 52.41% (online) & 54.07% (offline) which shows slight difference. There is moderately high positive correlation in consumer perception pattern.

24. **Brand value:** Sometimes online shopping trends high in terms of more brand appeal rather than offline specifically for those customers who are not so tech savvy. In this front online shopping is scoring marginal better than offline shopping. This is evident from the mean score of online shopping is 3.1 whereas offline shopping is 2.8. The standard deviation is 1.7607 & 1.6733 respectively; it is further affirmed by, coefficient of variation which is 56.80% (online) & 59.76% (offline). There is a high degree of positive correlation in consumer perception pattern.

25. **Impulsive buying behavior:** it is well known fact that with more use of technology results into frequent & impulsive buying behavioral trend among online users. And it is accepted by majority of online customers with a mean score of 3.62 however offline customers are also of the opinion that they tend to buy impulsive manner sometimes for certain products. It is evident from the mean score of offline which is 2.92, however with a high difference of 70 base points. The standard deviation being 1.9026 (online) &1.7088 (offline) respectively, seems to be divergent. Further the coefficient of variation is 52.56% (online) & 58.52% (offline).But there is almost perfect positive correlation in consumer perception pattern.

Correlation analysis indicates the relationship between online & offline shopping behavior. The relative measure for correlation between two types of shopping is given by Karl Pearson's Coefficient of Correlation(r).

NO.	PARAMETER	CORRELATION (r)
	MONETARY TRANSACTIONS	
1	Bills payment	**0.83**
2	Updated information	**0.67**
3	Refunds & Exchange	**0.86**
4	Increases expenditure/budgets	**0.68**
5	Receive alerts	**0.81**
	EFFICIENCY	
6	Convenience	**0.54**
7	Customer correspondence	**0.98**
8	Cost effective service	**0.76**
9	Network coverage	**0.87**
10	Cash on delivery	**0.92**
	SUITABILITY	
11	Electronic goods	**0.63**
12	FMCG	**0.99**
13	Warranty	**0.99**
14	Income groups	**0.87**
15	Multiple choices	**0.93**
	RELIABILITY	
16	Timeliness	**0.87**
17	Accuracy	**0.72**
18	Privacy/security	**0.53**
19	Legal policies/concern laws	**0.90**
20	Hidden cost	**0.69**
	MOTIVATION	
21	Heavy advertisements	**0.99**
22	Bulk buying discounts	**0.82**
23	Sales promotion	**0.96**
24	Brand value	**0.90**
25	Impulsive buying behavior	**0.92**
	Refer Annexure 1	

Table 4:- Correlation Analysis-Response of Consumer Perception

The Z test has been adopted to test the significance of co-efficient of variation percentages.

NO.	PARAMETER	Z value
	MONETARY TRANSACTIONS	
1	Bills payment	0.327
2	Updated information	0.571
3	Refunds & Exchange	-0.475
4	Increases expenditure/budgets	0.259
5	Receive alerts	0.327
	EFFICIENCY	
6	Convenience	0.489
7	Customer correspondence	0.051
8	Cost effective service	0.183
9	Network coverage	0.448
10	Cash on delivery	0.298
	SUITABILITY	
11	Electronic goods	0.187
12	FMCG	0.023
13	Warranty	-0.131
14	Income groups	0.865
15	Multiple choices	0.046
	RELIABILITY	
16	Timeliness	0.669
17	Accuracy	0.256
18	Privacy/security	0.467
19	Legal policies/concern laws	-0.001
20	Hidden cost	0.588
	MOTIVATION	
21	Heavy advertisements	0.144
22	Bulk buying discounts	0.258
23	Sales promotion	0.22
24	Brand value	0.359
25	Impulsive buying behavior	0.758
	Refer Annexure 2	

Table 5:- Z Test Analysis -Response of Consumer Perception

The above parameter wise analysis indicates the positive perception for online shopping behavior by the use of technology. Even though offline shopping culture is scoring high with respect to refunds & exchange, warranty, accuracy, privacy/security, legal policies/concern laws, and hidden cost against online shopping scores.

After statistical analysis, it shows significant difference in mean score between two types of shopping behavior specifically with respect to following parameters;

Updated information, convenience, network coverage, income groups, timeliness, privacy/security, hidden cost, brand value and impulsive buying behavior

Further difference has been observed in the standard deviation and co-efficient of variation in the rating pattern between two types of shopping cultures particularly for the above parameters.

It also indicates that online shopping suffers from several weaknesses such as privacy/security, hidden cost, impulsive buying behavior, legal policies/concern laws & accuracy.

However, the online shopping behavior is perceived to be better than offline with regards to the parameters such as updated information, convenience, cost effective service, timeliness, and sales promotion.

The coefficient of correlation was calculated to understand whether the customer perception towards shopping trends using technology is same for online & offline shopping. After calculation of r, testing of correlation using PE indicates that the co efficient of correlation is accepted *(Annexure 1).*

Out of 25 parameters there was almost, a moderately high positive correlation for 7 parameters, and very high positive correlation for 18 parameters. This indicates that for

majority of parameters there is no significant difference exists in behavior of the consumers towards shopping.

Some significant suggestions can be given in this regard as follows: -
1. Use *Social Media Platforms*, blogs, for promoting your products. Research International Markets, in which one might be successful.
2. *Return and refund are also part of great customer services*; therefore, it will be the big mistake to underestimate them.
3. Set up local preferred & secured payment options to encourage sales.
4. Don't forget to check *governments new policies, legal guidelines etc.* towards e-commerce.
5. Offline platforms can focus on *promotional strategies* during festivals, seasonal sales etc.

V.   CONCLUSION

E-commerce is also showing a tremendous growth in promotion of global business wiping out the barriers of boundaries between nations. It is also an integral part in GDP contribution.

Key areas of strength, observed in case of online shopping behavior are;
Bills payment, updated information, convenience, Customer correspondence, cost effective service, cash on delivery, timeliness, sales promotion, bulk buying discounts, brand value.

The area of significant improvement possible, applies to the following areas:
Refunds & exchange, warranty, accuracy, privacy/security, legal policies/concern laws, hidden cost, impulsive buying behavior.

On the other hand, key areas of strength in offline shopping behavior are:
Refunds & exchange, warranty, accuracy, privacy/security, legal policies/concern laws, hidden cost.

The area where improvements are required with reference to;
Convenience, customer correspondence, cost effective service, cash on delivery, timeliness, sales promotion, brand value.

It is evident that most of the customer prefers e-channel shopping with time and cost utility, but they are more concern about legal policies, security of data etc. After realizing the potential of e-shopping, policymakers will have to change in order to grab the opportunity and to face the challenges posed by technology. Though the number of customers using technology may not be too large, it is just a matter of time and efforts inculcated by online platforms to make e-shopping popular among customers

From our study indicates that there is a positive perception on use of technology while shopping goods online. However, policy makers should create awareness towards use of technology with care along with strict & secured legal guidelines for payment, personal data security etc.

Offline platforms of retail shopping like malls should also offer maximum convenience to their customers with attractive schemes & offers & discounts.

After taking a complete view of the e-industry trends, there is no doubt that e-commerce is emerging as an important tool to certify exploding growth of various economies including Indian economy. It has the power to make and to lead India into an economic superpower.

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ANNEXURE 1

Formula for Probable Error (PE) of Karl Pearson's coefficient of correlation

For testing of Karl Pearson's correlation coefficient 6PE should not be greater than correlation coefficient.

NO.	PARAMETER	PE
	MONETARY TRANSACTIONS	
1	Bills payment	0.18
2	Updated information	0.31
3	Refunds & exchange	0.15
4	Increases expenditure/budgets	0.31
5	Receive alerts	0.19
	EFFICIENCY	
6	Convenience	0.40
7	Customer correspondence	0.02
8	Cost effective service	0.24
9	Network coverage	0.14
10	Cash on delivery	0.08
	SUITABILITY	
11	Electronic goods	0.35
12	FMCG	0.01
13	Warranty	0.03
14	Income groups	0.14
15	Multiple choices	0.07
	RELIABILITY	
16	Timeliness	0.14
17	Accuracy	0.27
18	Privacy/security	0.41
19	Legal policies/concern laws	0.10
20	Hidden cost	0.30
	MOTIVATION	
21	Heavy advertisements	0.01
22	Bulk buying discounts	0.18
23	Sales promotion	0.04
24	Brand value	0.11
25	Impulsive buying behavior	0.09

Table 6

Testing of correlation indicates that 6PE is not greater than the correlation coefficient and therefore correlation coefficient is accepted.

ANNEXURE 2

Testing of hypothesis by conducting Z test

At 5% level of significance in 2 tailed tests the table value is ± 1.96. The value of z for each parameter has been calculated in table 3.

In cases there is no significant difference between two types of shopping because it does not exceed z value of ± 1.96 at 5% level of significance.

ANNEXURE 3

QUESTIONNAIRE
(1) Type of customers:
(2) Name of the customer:

Select appropriate option from the following and put "√"against the given parameter:

Sr. No.	Parameter	Not at all (1)	Some extent(2)	Very much (3)	Fully extent (4)
1.	While shopping consumer is given multiple facility for payment of bill through e-channels'.				
2.	Consumer is provided updated information on varieties of new products before shopping.				
3.	Consumer is given easy refund & exchange policies.				
4.	Consumer is frequently buying more than actual budgeted amount.				
5.	Consumer is given easy transaction alert towards movement & payment of goods.				
6.	Consumer gets 24*7 door to door services world wide.				
7.	Consumer is provided instant feedback of query towards shopping.				
8.	Consumer is provided savings towards price through cost effective services.				
9.	Shopping is dependent upon internet/telephone network coverage.				
10.	Consumer is given with easy COD system.				
11.	Consumer occasionally do shopping for their electronic & consumer durable goods.				
12.	Consumers do shopping frequently for FMCG goods.				
13.	consumer is given get better guarantee/Warranty towards product				
14.	Consumer is provided multiple price range which is accessible to all income groups.				
15.	Consumer gets individual attention with multiple choices suits to their requirements.				
16.	Shopping is time saving & quick.				
17.	shopping is more accurate & error free				
18.	Shopping needs personal information while shopping.				
19.	consumer is given legal guidelines & policy towards product while shopping				

20.	Consumer often charge more prices by including several hidden costs.				
21.	shopping is based on advertisement during seasons/ festivals				
22.	shopping offers catchy discounts during season/festivals				
23.	shopping offers various schemes of free vouchers. coupons, free gifts etc.				
24.	Shopping is more appealing towards usage of branded goods at reasonable prices.				
25.	Shopping results into snob appeal results into impulsive buying behavior.				

Table 7