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FOREWORD

We are glad to present SIMS Journal of Management and Research (SIMSJMR), Volume 6, Issue 1, 2022. The Volume is a compilation of student-research papers.

First paper, **“The Study on the Changing Phase of Tradetech: A Glimpse of Industrialization 4.0”** authored by **Diya Akbar** discusses Tradetech as the set of technologies and innovations that enable global trade to be more efficient, inclusive and equitable, the rich became richer by \$683 billion which was greatly fueled by the Tradetech. But Tradetech is not confined to what is currently existing in the trade realm; it is being upgraded every second. The ‘TradeTech’ phase; encompasses the study to comprehend the stand of Tradetech, the existing and probable challenges obstructing the complete inclusion of Tradetech, which throws light on its practical and managerial implications and its role in future development.

Second paper, **“Analysis of State Bank of India and HDFC Bank with respect to Cash Flow Statements over a Period of 5 Years”** authored by **Himani Gupta** the cash flow statement of SBI and HDFC bank. Cash flow statements are an essential source of information about how a business generates cash from operations. The researcher has undertaken a study to compare two banks; first, a public sector bank i.e., State Bank of India and other, a private sector bank i.e., HDFC Bank in relation to their cash flow statements for the year ending Mar’15 to Mar’19. The paper describes how State Bank of India and HDFC Bank are performing with respect to all three activities; operating, investing and financing.

Third paper, **“Role of Digital Marketing in the Pharmaceutical Industry”** authored by **Palash Saroware** discusses how the pharmaceutical industry has increased its investment in digital platforms during the last several years. Numerous companies struggle with determining if their investment is profitable and whether they are successfully connecting with and attracting the attention of their customers. It was possible to demonstrate a link between the antecedents (informativeness, risk acceptance, and favorable attitudes toward advertising) using a sample size of 186 healthcare customers using a standardized and updated questionnaire. The study's main results encourage marketers to use creative and successful strategies in order to begin changing customer perceptions of digital channels such as email marketing and to undertake more research into digital channels.

Fourth paper, **“Key Factors Affecting the Consumer Attitude and Purchase Decision of Electric Vehicles (E.V.S) in India”** authored by **Priyanka Brahma** discusses key factors that influence a consumer's adoption of an E.V. Electric vehicle (E.V.s) are being vigorously marketed worldwide to reduce the impacts of fossil fuel emissions and solve environmental concerns (ECS). The Government of India has issued a demand for 'only Electric Vehicles' to be used on Indian roads by 2030. The researcher connects with respondents who are actual automobile owners in India. Researcher used Structured Equation Modelling (SEM) was used to analyze the data. Attitude (ATT) emerged as a potent mediator in the adoption of electric vehicles.

Fifth paper, **“The New Consumer Behaviour Paradigm in Grocery Shopping amid Covid-19: Perpetual or Transient?”** authored by **Ruchi Bali** discusses panic purchasing, bare shop shelves, low stock levels, and a significant rise in internet sales due to the Covid-19 epidemic.

Because of COVID-19, it seems that consumers' purchasing habits related to the price and quality of goods like meat, fruit, and vegetable have changed. There was no evidence that residence had a moderating impact. As a result of its exploratory character, the paper provides numerous indications for future research in a unique crisis scenario that has never been examined previously.

Sixth paper, **“Skilling of the Indian Workforce”** authored by **Shantanu D. Choudhari** discusses skilling, reskilling, and upskilling. The researcher has reviewed secondary data in the literature review. Key points were upskilling in the adjacent area of skill is essential in this pandemic to survive in the job market. Basic soft skills should be starting for the reskilling.

Seventh paper, **“Augmentation in Tourism Sector”** authored by **Shashank Prakash Rajkar** discusses how augmented reality is replacing the environment of the real world, but it is augmenting that environment with the help of overlapping the digital components. This paper is specifically focused on the interference of augmented reality in the tourism sector. After an in-depth analysis of the components, the researcher found that augmented reality is also experiencing some aspects regarding attention from people and it is possible that we can experience augmented reality on our smartphones.

Eighth paper, **“Impact of Artificial Intelligence and Virtual Reality on Consumer Buying Behaviour”** authored by **Shubham Choubey** discusses extensive reality (XR) technologies including VR, AR and MR, and how it's attracting the attention of marketing practitioners as highly promising technical tools for creating satisfying customer experiences that match those experienced in physical shops. The researcher talks about the technical advances in e-commerce that seek to influence consumer behavior in favor of certain goods and brands. Personalization and customization of goods using artificial intelligence (AI) are becoming more important.

Ninth paper, **“Impact of Covid-19 on Customers' Preference of Dining Out”** authored by **Shweta Tripathi** discusses various factors which are responsible for customers' preference for dining out post-pandemic. Covid - 19 has created a new threat to online food delivery as customers are still concerned regarding the safety and hygiene of the delivery partners. After reopening, there are certain sections of people who prefer to dine out. The researcher took various factors into consideration and determine customer preferences. This will be helpful to the restaurants' owners and if implied it can help them to retain as well as increase their customer base.

Tenth paper, **“Factors Influencing Customers' Purchase Behaviour for Apparels on E-Commerce Platforms in India”** authored by **Sunaina Thapa** discusses e-commerce platforms such as Amazon, Flipkart, and Myntra etc. and determines the factors that are the most influential in motivating customers' purchase intentions for apparel. The researcher found that in most cases customers value the Apparel's aesthetics with a wide range of variety available on the e-commerce sites, apparels quality and features, Customer loyalty and satisfaction towards selective Brands.

Eleventh paper, **“A Study on Opinions of Students towards E-Learning during Covid Pandemic”** authored by **Vansh G. Kolhe and Aniket S. Nandurkar** discusses how e-learning is performing an important role in covid times. Technology discovers a new way for teaching and learning method which depends on information technology. As per researchers view today's world is interested in online education because they think that online education is very flexible and very useful for them in pandemic situation there are many institutions they want to customization in modern technology for improvement in online education.

Twelfth paper, **“A Study about the Integration of Technology with Commerce Education”** authored by **Yash Dharmendra Chaudhari** discusses how technology is leveraging commerce education, business education and research are interrelated terms that include marketing, finance, accounting, human resource management, business law, commercial and entrepreneurship development, etc. Commerce education train the new generation in different aspects of the business environment and also plays a very important as well as fundamental role. In this research paper, the use of E-learning in commerce education is explained. There is immense importance, scope and use of skill-based commerce education.

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THE STUDY ON THE CHANGING PHASE OF TRADETECH: A GLIMPSE OF INDUSTRIALISATION 4.0

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Abstract:

“TradeTech is the set of technologies and innovations that enable global trade to be more efficient, inclusive and equitable” (Sotelo, J, 2020). Trade is the crux of the world and it has been under improvisation since its discovery. Amidst the pandemic, the world presumed that global trade would crumble, but it didn’t, and it is only because of the ever-evolving phase of trade. It adapted to this adverse situation in a trice. According to a certain study, the rich became richer by \$683 billion which was greatly fuelled by the tradetech. But TradeTech is not confined to what is currently existing in the trade realm; it is being upgraded every second. This paper aims to learn the ‘TradeTech’ phase; it encompasses the study to comprehend the stand of tradetech, the existing and probable challenges obstructing the complete inclusion of tradetech, which throws light on its practical and managerial implications and its role in future development. Various factors associated with trade and other disciplines such as politics, environment, IT, etc, are highlighted vigilantly. This paper is a result of various secondary data, with the perfect synergy of the eye for detail and in-depth analysis. However, the availability and reliability of the secondary data did turn out to be adversity at certain points. The study revealed the necessity of the upcoming elements of tradetech for the future and the walls obstructing their implementation. It divulges the astonishing future scope of it as well. After a meticulous study and analysis, the probable solutions are discussed which could turn the tables in the trade realm. The paper concludes by briefing what the future withholds being an enigma and once again invoking the new essence of trade, which most definitely will be polishing the realm of trade and traders. Thus, unravels the reality which was once a fantasy – a new normal.

Keywords: TradeTech, Industrial revolution 4.0, AI, techno-nationalism, technology, new normal, fintech, digitalisation

Introduction:

As the world is moving forward at a fast pace, people hear about a myriad of futuristic means and concepts; one such is TRADETECH. TradeTech is not fully new to the world, yet it is something that falls under the term – Latest. “TradeTech is the set of technologies and innovations that enable global trade to be more efficient, inclusive and equitable” (Sotelo, J, 2020). In the pandemic situation, TradeTech stopped many economies from sinking into the abyss of loss. Along with a set of epoch-making technologies, TradeTech also put forward

certain trends that have and will ultimately lead to new phases of trade teeming with effectiveness. However, it is under the manacles of dire hurdles.

Statement of the problem:

Trade could be called the 5th element of nature, as it is extremely important for the entire world. Trade has been under improvisation since forever. That is exactly what TradeTech is. but TradeTech stays in a perplexing state of “happening” and “yet to happen”. Moreover, what are the possible and existing challenges faced by it? TradeTech is most definitely a tool for development, but is this development just confined to MNCs or large corporate projects.

Objectives:

- To conduct a thorough study on involvement of Trade Tech in Trade.
- To study the spliced challenges on the field of Trade tech.
- To gloss the potential future role of Trade tech in development.

Methodology:

The methodology opted for this study is secondary data which is the research method that involves the usage of already existing data. It indeed facilitated substantiating the objectives. Various journal articles, reports, websites etc were referred for efficient analysis and study. The reports did have enlightening content which channelized the insights to exact prepositions. The area of study encompasses various aspects of the latest technology and innovation, which is ceaseless. Thus, the study mandated the employment of secondary data methodology. Reports and Articles of experts who are in direct contact with the latest Trade Tech components proved to be favourable. Thereby, this method facilitated the divulgence of crucial epiphanies. The Trade Tech realm is under constant development as an effort to fuel the upcoming innovations and technological advancements. Moreover, it withholds the vehement essence of futurism, which makes usage of primary data completely non-feasible. Therefore, the usage of alternative research methods transpires to be not viable. Hence, Secondary data methodology proved suitable for the study.

Limitations:

The major obstacle confronted was the availability and reliability of certain data. TradeTech being an upcoming as well as a scattered concept, the extraction of correct data at the right time was indeed challenging, but not hard enough to be obstructed from proceeding with the paper.

Literature review:

‘Trade’ is nimbly known as the action of buying and selling goods and services, and technology is passionately described as the epitome of human brilliance. Their coherent combination is the

phenomenal - TradeTech. Like air to humans, trade has been stimulating the existence and growth of the world's economy profusely. "TradeTech is the set of technologies and innovations that enable global trade to be more efficient, inclusive and equitable" (Sotelo, J, 2020). The union of trade and technology is indeed history. It commenced with the advancement in transportation and now the infusion of AI and so on. According to several reports from the World Economic Forum, TradeTech can be comprehended on two levels; first as the level of transforming internal systems and processes from analogue to digital. And the second layer comprehend the trade process optimisation and synchronisation.

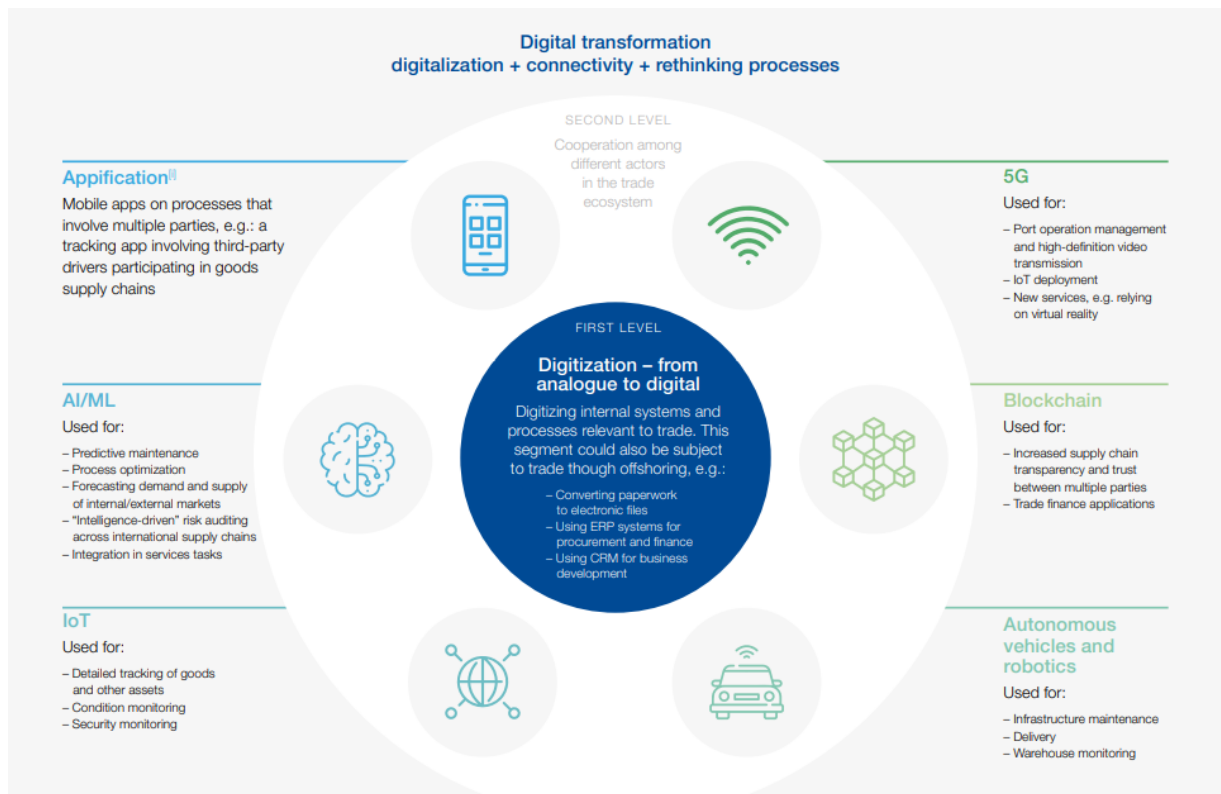


Figure 0.1, Source: Sotelo, J., & Fan, ziyang. (2020). *Trade Tech – A New Age for Trade and Supply Chain Finance*. Mapping TradeTech: Trade in the Fourth Industrial Revolution.

Interpretation

The above picture is a diagrammatic representation of the two levels of Trade Tech. It depicts the Trade Tech ecosystem. The first level is the conversion of analogue to digital and the second level comprehend the trade process optimisation and synchronisation. The emerging technologies of the industrial revolution play a crucial role in the second level function. As per the diagram, the first level depicts the means and forms of digitalising information and processes essential for trade. Using Customer relation management is a suitable example for it. The next level of the Trade Tech ecosystem portrays the components acting on this level and the cooperation among them. This level accommodates 5G, AI/ML, IoT etc.

Therefore, by analysing the Trade Tech ecosystem following points can be interpreted.

- The prominence of the Trade Tech components
- The brightening phase of Trade
- The interconnection of the components
- The dire need for digitalisation, which is indeed the foundation of all the above interpretations.

Artificial intelligence (AI)

Artificial Intelligence crisply known as AI has been an intriguing discipline since its discovery. It is essential for anything that is labelled futuristic.

AI and trade are the ultimate formula for supremacy. AI's role in trade is ever-evolving, upbrining new means and catalysts for improvement of trade.

- AI is enabling process automation and consequent development of products and services that facilitate trade and otherwise; such as Precision consumption discipline which is painting a new phase of trade.
- AI will have the most ascendancy over more routinised and information-based functions. Mainly low value-added chores and tasks in business process outsourcing (BPO) (Meltzer, J. 2019) and back-office functions, analysing medical tests etc. This would cause a shift from labour intensity to AI intensity.
- AI encourages expansion in trade through enhanced trade promotion. It not only backs up international trade, but also enables firms to engage in trade by reducing time, cost and complexity (Marantis, D. 2020)
- Predictive form of AI facilitates risk management and prepares to face any uncertainty or risk element; cargo inspection employing x-ray scanners will also encourage the same.
- AI-powered customs are most definitely an Epoch-Making event in the history of trade. Customs is most definitely an arrangement of immensely muddled patterns which encompasses fluctuations in the price of goods, illicit drug traffic, smuggling and so on. AI's ability to analyse data could be a tool to verify the legitimacy of a trade transaction and allows customs to focus on high-Risk targets. (wco 2020) BACUDA – Band of Customs Data Analysts developed by a collaborative union of exports has paved the way towards a disruptive neural network model known as DATE, which stands for Dual Attentive Tree Aware Embedding. It divulges undervalued imports and estimates the additional revenue arising out of inspection of these imports.

AI and Policy Considerations

The organisation for Economic Cooperation and Development (OECD)’s sacred principles on AI depicts the most consensus view on AI among much major economics. The Chile-New Zealand-Singapore digital economy (DEPA) holds agreements and commitment which facilitates to work jointly on AI governance and AI trade.

IoT- Internet of Things

IoT and Trade is most defiantly a match made in heaven. It is an efficiency booster of trade capable of making arduous procedures simple. IoT depends on sensors that monitor a substantial amount of data in real-time. Data could be leveraged to retrieve enlightening decisions and orchestrates predictable analysis. The supply chain being extremely vital to trade is also equally disruptive, IoT data can mitigate this adverse nature of the supply chain. It is deployed in both B2B model as well as in B2C model.

Tracking assets	Goods administration after receipt
Condition Monitoring	Streamline problematic movement of goods
Security monitoring	Locate goods in storage

Apart from the supply chain IoT has a leading role in customer services, promotion, HR etc. However, the most vital application takes place in the supply chain.

IoT And Policy Consideration

Even if IoT is a boon to the trade industry, it can also be a catastrophe in disguise. In the present scenario, as industries flourish, the dark world of hackers is burgeoning at the same rate. IoT would make way for easy hacking to the company’s network. The root cause of this problem lies in the ignorance of manufacturers along with insufficient user knowledge. IoT has no common standard globally. As global trade necessitates a common medium, language or a standard for effective integration. Many companies are in dire competition to become the standard, such as BLE, Wi-Fi, LoRa.

Robotics and Automation

World Economic Forum says that “autonomous robotics have more than enough capacity to optimise logistics and work processing by amplifying modelling, dynamic planning and autonomous execution. Thereby creating a more stable and transparent supply chain.” However, only 3% of container terminals employ automation.

Policy considerations

The most predicted aftermath of automation is its effect on labour. According to 2018 estimations, 14% of the global workforce – 375 million

5G

5G, the fifth-generation network has been in process since 1980. 5G paves the way towards improved international trade. It is indeed the foundation for the deployment of Trade Tech components. 5G has the potential to unlock new AI - IoT oriented services. The 5g + AI formula has been successfully implemented at the Shanghai Yangshan Port. However, the political tensions continue to obstruct the efficient implementation, especially between The United States and China.

Blockchain

Distributed Ledger Technology, quite affectionately called blockchain, enables the store and security of data in a decentralised and secure manner. Its uses are explored in trade finance, logistics and supply chain traceability, insurance, customs and certification.

Examples of Inclusion of blockchain can be platforms such as the Insurewave of EY, TradeLens of IBM, Skuchain and Vakt as per commercial operations and other platforms emphasising trade finance such as Komgo, Crowdz, Marco Polo and the people's bank of China. These platforms are gaining momentum [10]. It is seen that the TradeTech infusion in the past days has also led to certain commendable trends in various aspects of the trade. However, A significant challenge obstructing the implementation of blockchain would be the Data Privacy concern as well as the blockchain interoperability.

Supply Chain Resilience

The global supply chain had been criticized for its vulnerability to shocks which divulged the clout of visibility and data sharing in supply chain and logistics management. However, [9] TradeTech initiatives such as TradeLens data sharing environment for container ocean shipping or IATA's ONE record in aviation intend to proliferate visibility and data sharing. Similarly, everything and Santrust start-up have developed immutable QR codes to ensure the authenticity of the products. All these and other TradeTech initiatives together build a wall of resilience in the supply chain sector. Amidst COVID-19(Sotelo, J, 2020). 65% have adopted new technologies 65% have included new technologies which divulged reconfigured value chains.

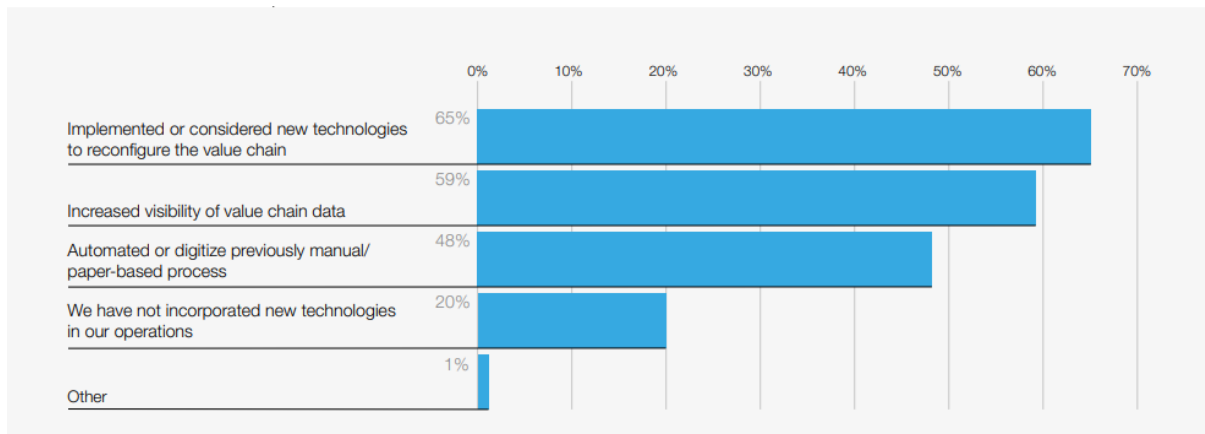


Figure 0.2, Source: Sotelo, J., & Fan, ziyang. (2020). *Trade Tech – A New Age for Trade and Supply Chain Finance*. Mapping TradeTech: Trade in the Fourth Industrial Revolution.

The above chart provides inference regarding the adoption of Trade Tech amid covid under the supply chain realm. The high bar indicates the heavy implementation of new technologies to reconfigure the value followed by the visibility of valued based data and so on. From this chart, the following interpretations could be made,

- The supply chain realm did welcome the Trade Tech deployments.
- Trade Tech has proven to be a supply chain facilitator
- Covid did trigger some employment

The altering phase of Techno-nationalism

Techno-nationalism is a new strain of mercantilist thinking that links technological innovation and capabilities directly to a nation's national security, economic prosperity and social stability (Capri.A 2019)

TradeTech: a path towards greener trade

The coherent infusion of technologies in the supply chain lowers the carbon emissions across the distribution process. Emerging technologies such as AI or Robotics fuel the optimisation of routing and freight capacity. IoT facilitates the tracking of carbon emissions in supply chains. In this time of emerging green consciousness, TradeTech permits the shippers and freight forwarders to compare the environmental performance of carriers. There are instances that depict emerging green trade.

Emerging Tech in finance

TradeTech is characterized to mitigate the risk in financial transactions, especially in such circumstances where the parties (buyer and seller) have limited or narrow visibility of each other. This trend is quite passionately known as “FinTech”.

Asset Distribution Platform

A technology that is not merely focussed on easing buy-sell, but more than that. It is backing up the trade finance market to vanquish a major hurdle to the wider distribution of assets – the problem with credit scoring trading entities. Organisations are coming up with AI – driven technology that overcome this, allowing new sources of liquidity to invest in trade by not engaging in expensive credit analysis.

TRADETEQ

TradeTech is an organisation fuelling the AI-driven solution to the problem.

TradeTeq will become a value-added service provider to the Singapore government’s NTP

“Many of the customers for Tradeteq’s services through NTP will be originating banks or non-banks, with a need to assess the creditworthiness of particular entities,” says Tradeteq’s CEO Christoph Gugelmann. “They need assessments that are rapid and available in a standardised format, which our AI-powered credit-scoring service provides.”

SOURCE:

Patel, D. (2021, February 02). Released: Tradetech 40. Retrieved June 25, 2021, from <https://www.tradefinanceglobal.com/posts/what-is-tradetech/>

Sinclair, J. (2021, February 02). NEWS: Tradeteq CREDIT-SCORING added to Singapore Platform. Retrieved June 25, 2021, from <https://www.tradefinanceglobal.com/posts/tradeteq-and-singapore-networked-trade-platform/>

Increasing reliance on digital platforms

The pandemic accelerated the reliance on digital platforms to a great extent. Digitalisation is what held the global trade from sinking. Business organisations have commenced altering their business models to digitalisation-oriented models. It was vividly seen that the organisations that inculcated digital leadership are those that benefitted the most.

The TradeTech journey is most definitely arduous. Several hurdles are building up a wall to prevent its smooth functioning. According to the world economic forum report, the most pressing challenge while adopting TradeTech is the unfavourable cost and the deficiency in desired human capital or skill. This is followed by other challenges such as the lack of acute TradeTech facilitating ecosystems locally and the impotence to access international providers as a result of regulatory restrictions.

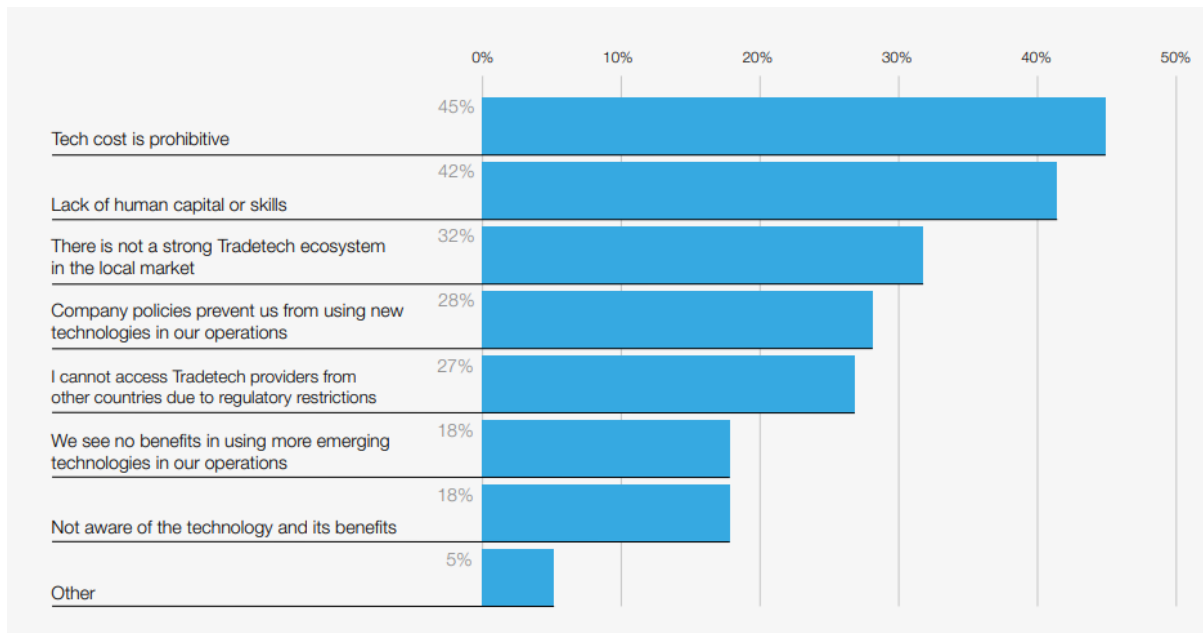


Figure 0.3, Source: Sotelo, J., & Fan, ziyang. (2020). *Trade Tech – A New Age for Trade and Supply Chain Finance*. Mapping TradeTech: Trade in the Fourth Industrial Revolution.

Interpretation

The above chart provides inference regarding the hindrances in TradeTech. The following are then interpretations on analysing the chart,

- Cost is the most acute hindrance in the adoption of Trade Tech, whose mitigation is long down the road.
- Lack of human capital is also an acute hindrance; however, this hindrance may be short-lived due to the fast pace of development of human minds and intellectuality.
- The hindrance revolving around the company policy, unawareness and untrust in the emerging technology cannot be potentially acute as this perspective may cease to exist as Trade Tech reaches its complete form, thereby becoming the paramount factor in Trade.

Apart from the above factors, as Trade Tech takes steps forward, it may lead to many unforeseen challenges

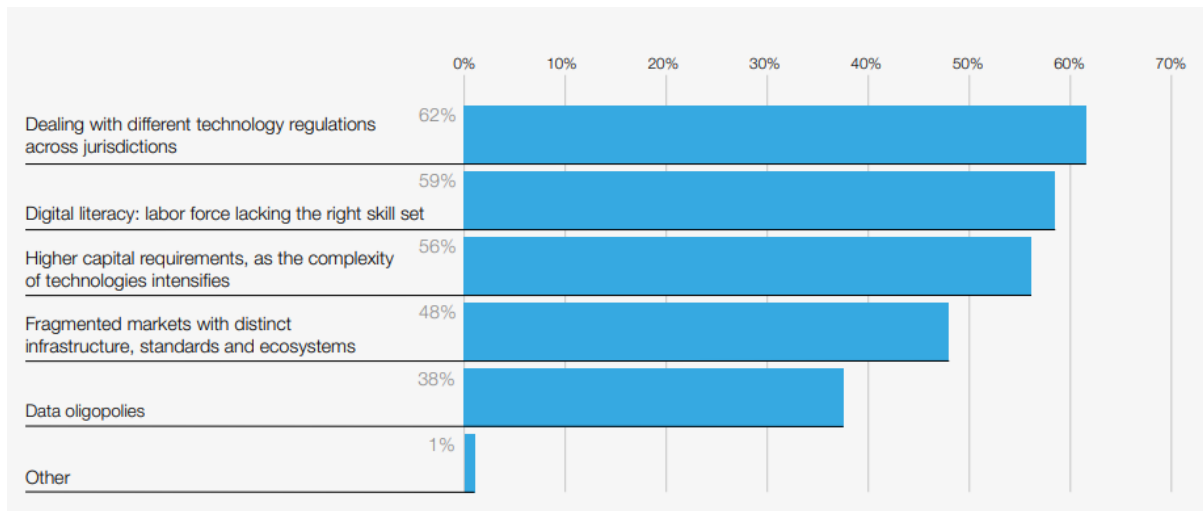


Figure 0.4, Source: Sotelo, J., & Fan, ziyang. (2020). *Trade Tech – A New Age for Trade and Supply Chain Finance*. Mapping TradeTech: Trade in the Fourth Industrial Revolution.

Interpretation

As per the above chart on the unforeseen challenges in the trade tech journey, the following are the interpretations,

- The challenge regarding the diverse technology regulations across jurisdictions is of great concern. Ironing out of this hindrance may turn out to be very challenging. However, the constitution of a single regulatory body can be a potential solution, but its practicality remains a question mark.
- The diverse market ecosystem may be a potential unforeseen challenge, but the chances remain less.
- The unforeseen challenges can be a good Samaritan in disguise as it ensures a perfect trade tech ecosystem and will be able to seal potential loopholes.

Customs systems design and duplication

The simplification of the custom process is indeed one of the celebrated benefits of the infusion of AI in the trade as customs is an arcane process encompassed by complexities, delays and uncertainties. Electronic single windows are amongst the most functional tool of all. However, it is seen that there is a vast variation in the incorporation or say adoption of single windows by the border agencies around the world. Moreover, the poor interoperability by the adopters of single windows leads to duplication of effort.

Tech interoperability and data standardization

Global trade mandates a common language for data standardisation as well as for technology interoperability absence of which will confine the proliferation of high-level technologies. One of the most prominent challenges in this realm is the accumulation of dark data – data that hasn't been analysed yet. According to IBM, close to 90% of the data generated from sensors and the analogue to digital conversion materials are left untouched. Another salient challenge in this discipline is data harmonisation and standardisation. The various operating standards adopted by both private and public sector is often quite incompatible. The scattered national regulation and cybersecurity threat is another hurdle in the deployment of tradetech.

It is quite natural to stick on to the notion that TradeTech is confined to MNC's or any other large-scale projects. But that notion is absolutely wrong. TradeTech is fuelling the MSMEs. It can help them scale up, expand into a new market, save cost and so on. Trade has become more inclusive through SAAS and E-commerce. It is viewed that they are quite agile in the adoption of technology, once they have an easy and affordable option to access it. However, it is not an easy path, they have challenges.

TradeTech is also having a crucial role in developing countries.

Findings:

As of the first objective,

- From the study conducted, it is quite evident that the involvement of TradeTech is a requisite for now and forever. The turbulent and fast-moving environment has necessitated TradeTech so as to tackle this intricacy. TradeTech is indeed a catalyst towards agility, resilience and efficiency. As the pandemic has necessitated, it is also a path towards scenario planning.
- TradeTech plays an extremely pivotal role especially in the logistics realm of trade. Therefore, Logistics being the heart and soul of the modern trade, anything simplifying and facilitating it is most definitely a benediction. It is quite evident that, through tradetech, the most time consuming as well complex tasks of logistics is untangled. It could unravel the present muddled phase of logistics.
- It also facilitates other realms of trade as well, such as say finance, CRM, customs and so on. Finance, passionately known as the blood of trade has been uplifted from its problems.
- The trends put forward by the TradeTech not only encompasses the trade aspect but also includes the environment aspect – a path towards sustainable development. The factor of green consciousness cannot be avoided from the study.

- Its role in customs is indeed one of the biggest highlights, it precisely untangles the Gordian knot of complexities, but once again its full potential is retrieved only by effective implementation – which is doubtful.
- TradeTech elements such as AI, IoT, Robotics and automation. 5G, Blockchain etc have uplifted trade. However, the intricated implementation and involvement of these divulge the fact that a full-fledged new trade is far down the road.
- As of the first objective, the glaring involvement of tradetech is being comprehended, thereby divulging the mandated requisite of TradeTech. By studying the current involvement and its impact, the probable changes and impacts have been realised.

As of the second objective,

- As the study throws light over the challenges of TradeTech, it has been inferred that the fragmented nations are the biggest obstacle, it showcases the unmatched interests and complexities residing between nations.
- However, the unification of certain nations in order to implement this cannot be ignored, but at the end of the day, global trade necessitates a common medium or standard worldwide.
- Other hurdles such as cybersecurity, insufficient user knowledge etc are seen more likely to be resolved than the first.

As per the requisite of the second objective, the unforeseen, as well as the foreseen challenges, has been brought to light. After an in-depth analysis of the challenges, the dire aspect of it is being realised. The implication aspect of them is also comprehended.

As of the third objective,

- It is natural to reside on the notion that TradeTech is an asset of MNCs or any other large-scale projects. However, the fact that it plays a prime role in uplifting MSMEs and developing countries is brightening.
- MSMEs as well as developing countries will have a beaming future through the efficient inclusion of Tradetech.
- As pleasant as it sounds, the complete implementation is a mystery that the future withholds.

Suggestion:

- TradeTech is ought to continue its involvement in trade at a faster pace.

- The major hurdle i.e., fragmented nation views have to be resolved, it is strenuous but not impossible.
- The diligent regional and plurilateral efforts directed towards digital trade paves the way towards international cooperation.
- Regional integration and trade facilitation can be increased through DFTA (The Digital Free Trade Area) programme adopted by the Common Market for Eastern and Southern Africa (COMESA).
- To ensure TradeTech promise, steps have to be taken to increase the trust necessary for supply chain transparency, prepare for reskilling and upskilling training for the workers, lead a trade facilitation agenda around interoperability and encourage cooperation tech regulations.
- The utilisation of tradetech with a sustainable aspect would prevent environmental ill effects.
- From the aspect of MSMEs, Governmental support could be one of the best possible ways to welcome them to the tradetech phase.
- AI, IoT, automation etc are definitely a blessing in disguise, however, its effective implementation is the obstacle.

Conclusion:

TradeTech has the potential to promote and facilitate trade to an unimaginable extend. Major TradeTech gains accumulate among the various actors of the supply chain. However, the impact of tradetech would largely rely on how tech and data interoperability is addressed. In the coming years, TradeTech will definitely evolve; However, the complete implementation depends on solutions employed. As the implementation remains a mystery due to the contrasting nature of the nations, it can only be presumed that it would have a complete implementation. However, the effective employment of the analysed solutions and the suggestions mentioned is not an impossible task nor a mystery that the future withholds.

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ANALYSIS OF STATE BANK OF INDIA AND HDFC BANK WITH RESPECT TO CASH FLOW STATEMENTS OVER A PERIOD OF 5 YEARS

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Abstract:

The Institute of Chartered Accountants of India (ICAI) has made it compulsory for all Indian businesses to report a cash flow statement in their annual reports effective with the financial year 2004-05, and has released (AS-3) Accounting Standard-3 which shall guide the preparation of cash flow statements. With reference to the above stated standards, all the business operations can be categorized into three categories; operating, investing and financing activities.

Cash flow statements have become an important source of information for entities as it displays major sources of cash receipts and major uses of cash payments. It gives essential information about how a business generates cash from operations. It aids in the analysis of cash flow data by investors and other stakeholders. In this paper, the researcher has undertaken a study to compare two banks; first, a public sector bank i.e., State Bank of India and other, a private sector bank i.e., HDFC Bank in relation to their cash flow statements for the year ending Mar'15 to Mar'19. The paper aims to study how State Bank of India and HDFC Bank are performing with respect to all three activities; operating, investing and financing. For the purposes of this study, various statistical tools were used to analyze the cash flow statement using mean, standard deviation & t-Test. Microsoft Excel was used to calculate all the statistical information.

Keyword: bank, finance, cash flow

Introduction:

Every business runs with cash and most of the transactions of every business are based on cash. However, financial statements such as the balance sheet and profit and loss account consider only financial resources and performance, ignoring cash transactions. The concept of a cash flow statement was devised to fill this void. The cash flow statement focuses primarily on cash and cash equivalents. Despite the fact that such a statement does not reflect a company's financial assets, nevertheless is significant to its operation. Each year, this statement needs to be published in accordance with the accounting standards. The income statements shall be able to show the profits generated during the year, but shall lack to show how much cash has been generated throughout the financial year. However, this crucial information about the cash inflow and outflow can be extracted by preparing cash flow statements.

By understanding cash flow statements in depth, it can reveal information about an organization's ability to create cash. It allows users to compare the present valuation of different firms' expected cash flows. It eliminates the consequences of applying different accounting treatments to the same transactions and occurrences over and over again. Historical information about cash flow is used to determine the quantity, timing, and predictability of future cash flows. Moreover, it's essential for double-checking the accuracy of previous forecasts of future cash flows. It also aids the analysis of the relationship between cash flow and profitability, as well as the impact of inflation.

The cash flow statement includes all items that increase or reduce the cash balance, whether they are current or non-current. As a result, changes in current assets and current liabilities can be determined by assessing the cash flow statements. Information on sources and applications of cash which are obtained from cash flow statements are more relevant than fund flow statements because cash is more crucial than working capital in short-term financial planning and is void in the long-term financial planning.

Literature Review:

Today, usage of a cash flow statement is critical on a global scale, to the point that it is overshadowing the information contained in the balance sheet and trading and profit and loss account. Unlike, these statements, which are prepared on an accrual basis, cash flow statements follow cash basis of accounting. By analyzing the balance sheets and trading and profit and loss, only information regarding the cash position at the end of the financial year is presented, whereas cash flow statements present all the information about inflows and outflows of cash, during the period under three heads; operating, investing and financing activities. **(Gulin & Hladika, 2017)**

Cash flow from operating activities includes the company's revenue producing operations, which are the outcome of operations and other events that determine profit or loss. Some examples are; cash sales, cash purchases, received cash from debtors or bills receivables, or paid cash to creditors or bills payables. Cash flow from investing activities include the acquisition or sale of any fixed assets or long-term investments. Some examples are; fixed assets or investments purchased, proceeds from sale of fixed assets or investments, interest or dividend received. Cash flow from financing activities deals with owner's capital and borrowings like proceeds from issue of shares or debentures, payment of loan, interest or dividend paid. **(Maheshwari, 2018)**

(Shri, 2017) in her paper explains the two methods to prepare the cash flow statement; direct and indirect method. The direct method includes all direct income and expenditure. In this approach, the cash flow statement is calculated by subtracting cash sales from cash expenditure. Income statement is converted using cash basis, and each transaction is reported directly in the direct method. After calculating the cash inflow and outflow from operating activities, the net cash flow for an entity's operating activity is added to the "Operating Activity"

column of the cash flow statement. The second method is indirect method, which deals with accrual basis establishment first. First of all, net before taxation and extraordinary items is considered. Further, adjustments are made giving effect to incomes which do not involve cash, then working capital changes are accounted for.

(Varshney & Jain, 2016) in their paper study cash flow statements of Syndicate Bank and Bank of Baroda from FY 2011-12 to FY 2015-16. The paper states cash flow analysis to be an important indicator that can help identify weaknesses in business operation which in future can lead to a state of liquidity crunch. With proper understanding of cash flow statements, an organization can recognize unproductive use of funds, or establish plans for future cash flows.

(Motlagh, 2013) in his paper discusses the applications and significance of cash flow statements. The expected cash flow statements reveal whether there is a cash surplus or deficiency in advance. This facilitates the placement of excess cash as bank deposits or short-term investments in marketable securities. If there is a cash deficit, the arrangement might be made to obtain a loan from bank or sell marketable securities. They are beneficial in assessing debt liquidation, plant and fixed asset replacement, and other actions involving cash outflow, since they give crucial information about the potential of a business to generate cash. When the cash flow statement for a given period is compared to the budget for that period, it shows how closely the actual sources and applications of cash corresponded to the budget. This exercise aids in the future refinement of the planning process. The trend in a firm's liquidity situation in contrast to other firms in the industry is revealed by comparing cash flow statements between firms and over time. If it is discovered that the firm's cash management is ineffective, it can serve as a warning sign, that corrective action is required.

Objective:

This study aims to study how cash flow statement is performing in two banks; first State Bank of India and other, HDFC Bank with respect to all three activities; operating, investing and financing for the period starting Mar'15 to Mar'19.

Research methodology:

Various sources were used to collect secondary data. For the purposes of this study, various statistical tools were used to analyze the cash flow statement using mean, standard deviation & t-Test. Microsoft Excel was used to calculate all the statistical information.

- 1. Sample selection:** The study is undertaken with a public sector bank and a private sector State Bank of India and HDFC Bank respectively.
- 2. Basis for sample selection:** The samples chosen are two banks; State Bank of India and HDFC Bank. These banks have been selected because these are no. 1 banks in public and private sectors respectively. State Bank of India, a public sector bank, is also largest bank in India with a market share of 23% by assets and with a share of 25% in total loan and

deposits market. Whereas, HDFC Bank is India's largest private sector bank by assets and by market capitalization as of April 2021. It is the third largest company by market capitalization on the Indian stock exchanges. These banks are compared against one another to understand how the top banks of each sector i.e., private and public are performing with respect to cash flow statements.

3. **Period of study:** The data has been collected for 5 financial years i.e., Mar'15 to Mar'19.
4. **Collection of Data:** The data has been obtained using secondary sources which are mentioned below;
 - Annually published reports of the banks for the financial years- Mar'15 to Mar'19.
 - Websites of both the companies
 - Other related websites

Hypothesis:

There are six hypotheses being tested in this paper;

Ho1: The trends of operating activities in both banks have no noteworthy variation.

Ha1: The trends of operating activities in both banks have a noteworthy variation.

Ho2: The trends of investing activities in both banks have no noteworthy variation.

Ha2: The trends of investing activities in both banks have a noteworthy variation.

Ho3: The trends of financing activities in both banks have no noteworthy variation.

Ha3: The trends of financing activities in both banks have a noteworthy variation.

Ho4: The means of operating activities in both banks have no noteworthy variation.

Ha4: The means of operating activities in both banks have a noteworthy variation.

Ho5: The means of investing activities in both banks have no noteworthy variation.

Ha5: The means of investing activities in both banks have a noteworthy variation.

Ho6: The means of financing activities in both banks have no noteworthy variation.

Ha6: The means of financing activities in both banks have noteworthy variation.

Analysis:

Various statistical tools were used in order to analyze State Bank of India and HDFC Bank's cash flow statements. The tools used are as follows;

1. Mean/ Average
2. Standard Deviation
3. Co-Variance

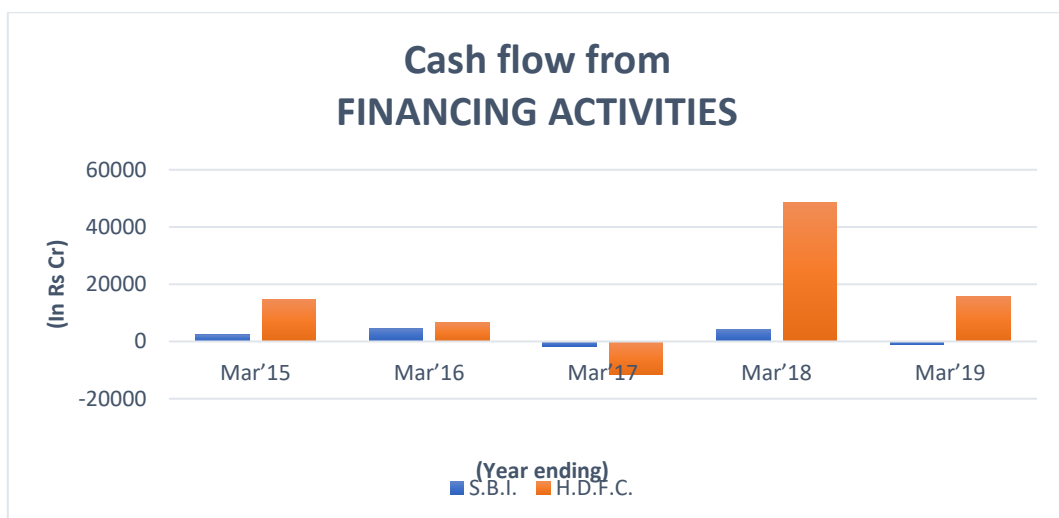
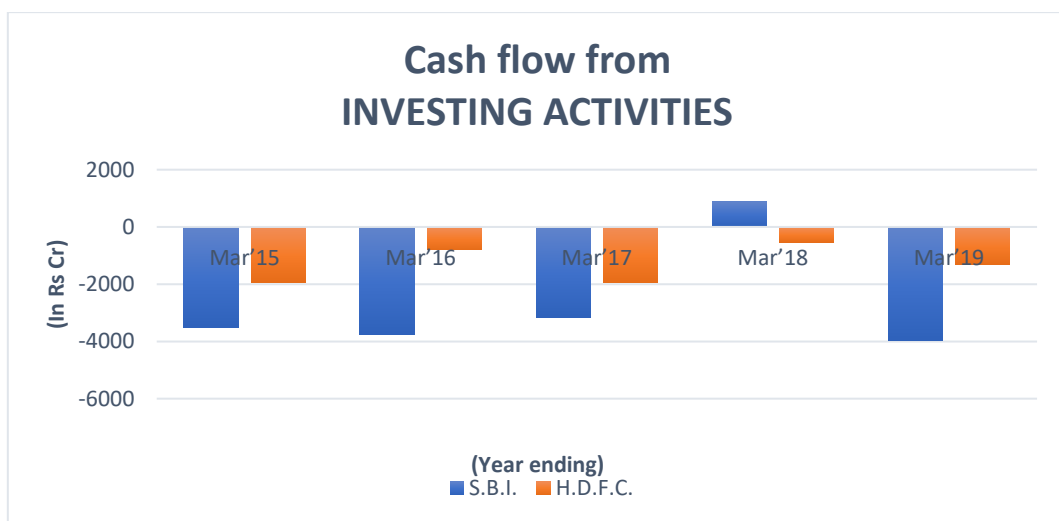
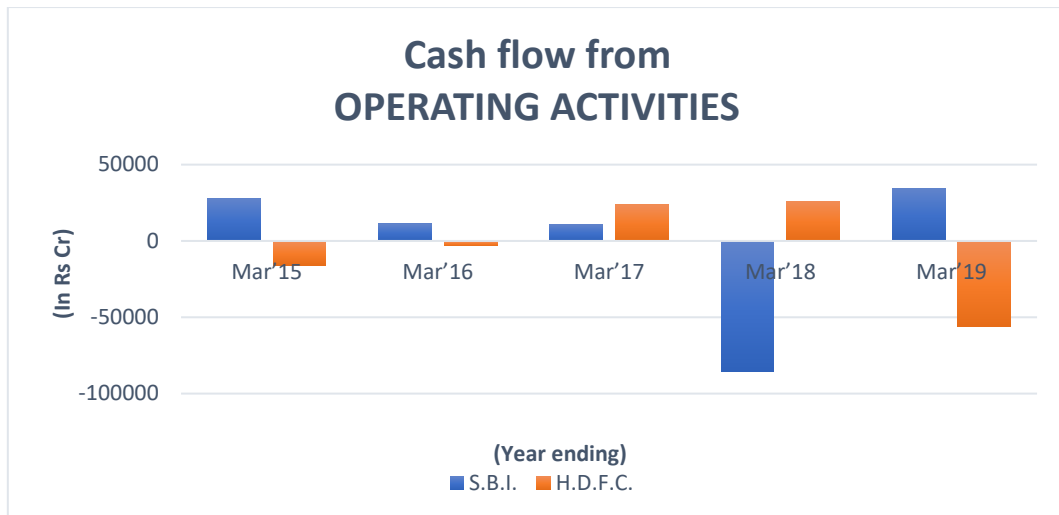
4. T-Test

The entire analysis can be divided into 3 broad categories;

- i. The following table 1A is showing mean, standard deviation and covariance of both the banks, i.e., State Bank of India and HDFC across operating, investing and financing activities.
- ii. Graphical representation of cash flow statements of operating, investing and financing

Table 1 A showing mean, standard deviation and covariance of SBI and HDFC banks in operating, investing and financing activities						
Year ending	Operating Activities		Investing Activities		Financing Activities	
	S.B.I.	H.D.F.C.	S.B.I.	H.D.F.C.	S.B.I.	H.D.F.C.
Mar'15	27,621.03	-15,862.27	-3,528.10	-1,944.27	2,289.12	14,543.44
Mar'16	11,196.55	-3,224.67	-3,748.37	-804.76	4,505.88	6,588.57
Mar'17	11,060.32	23,585.40	-3,148.45	-1,956.25	-1,780.27	-11,567.63
Mar'18	-85,425.25	26,074.07	879.08	-533.1	4,290.92	48,411.43
Mar'19	34,627.51	-56,054.67	-3,958.60	-1,326.12	-1,087.83	15,718.00
TOTAL	-919.84	-25,482.14	-13,504.44	-6,564.50	8,217.82	73,693.81
Mean	-183.968	-5,096.42	-2,700.88	-1,312.9	1,643.65	14,738.76
Rank	1	2	2	1	2	1
S.D.	48,751.880	33,579.742	2,023.6	647.8805	2,949.629	21,756.019
Rank	2	1	2	1	1	2
Covariance	-26,500.196	-658.88884	-74.92371	-49.3473	179.456	147.61092
Rank	1	2	1	2	2	1

- iii. activities across State Bank of India and HDFC.



iv. Tables showing t-Test: Paired two sample for means for operating, investing and financing activities in State Bank of India and HDFC.

(TABLE 2A) t-Test: Paired Two Sample for Means for <i>Operating Activities</i>		
Statistical Tools	S.B.I.	H.D.F.C.
Mean	-183.968	-5,096.42
Variance	2,37,67,45,818	1,12,75,99,116
No. of observations	5	5
Hypothesized Difference	-4,912.46	
df	4	
t Stat	0.291050671	
t Critical two tail	2.77644510519779	

(TABLE 2B) t-Test: Paired Two Sample for Means for <i>Investing Activities</i>		
Statistical Tools	S.B.I.	H.D.F.C.
Mean	-2,700.88	-1,312.9
Variance	40,94,955	4,19,749.1
No. of observations	5	5
Hypothesized Difference	-1,387.988	
df	4	
t Stat	-3.600862055	
t Critical two tail	2.77644510519779	

(TABLE 2C) t-Test: Paired Two Sample for Means for <i>Financing Activities</i>		
Statistical Tools	S.B.I.	H.D.F.C.
Mean	1,643.65	14,738.76
Variance	87,00,310	47,33,24,379
No. of observations	5	5
Hypothesized Difference	13,095.198	
df	4	
t Stat	-2.908309725	
t Critical two tail	2.77644510519779	

Hypothesis Testing:

1. The hypothesis (Ho1) is rejected because the trends of average, standard deviation, and covariance of operating activities for both banks are different.
2. The hypothesis (Ho2) is rejected because the trends of average, standard deviation, and covariance of investing activities for both banks are different.
3. The hypothesis (Ho3) is rejected because the trends of average, standard deviation, and covariance of financing activities for both banks are different.

4. In operating activities, the table value (2.78) is greater than the value computed for t (0.29), indicating acceptability of hypothesis (Ho4). It signifies that means of operating activities of selected banks have no noteworthy variation.
5. In investing activities, the table value (2.78) is greater than the value computed for t (-3.60), indicating acceptability of hypothesis (Ho5). It signifies that means of operating activities of selected banks have no noteworthy variation.
6. In operating activities, the table value (2.78) is greater than the value computed for t (-2.90), indicating acceptability of hypothesis (Ho6). It signifies that means of operating activities of selected banks have no noteworthy variation.

Table 3 A showing overall performance of State Bank of India and HDFC

Level of Performance	Operating Activities	Investing Activities	Financing Activities
Poor	S.B.I.	H.D.F.C.	H.D.F.C.
Best	H.D.F.C.	S.B.I.	S.B.I.

Findings:

1. Table 1A shows that HDFC Bank (-5,096.42) has a lower average of cash flow from operating activities than State Bank of India (-183.97). In theory, the lower the average, the lower the rank, and vice versa. As a result, State Bank of India is ranked first, and HDFC Bank is ranked second. However, the scenario is quite different when it comes to investing and financing activities. HDFC Bank (-1312.9) has a higher average of cash flow from investing activities than State Bank of India (-2,700.88). Similar, is the case for financing activities as well, with HDFC Bank's average being (14,738.76) and State Bank of India's average being (1,643.65). As a consequence, for both investing and financing activities, HDFC Bank is ranked first, and State Bank of India is ranked second.
2. When it comes to Standard Deviation, the higher the value, the lower the rank, and vice versa. In this regard, the Standard Deviation for HDFC bank's operating (33,579.74) and investing (647.88) activities is lower than that of State Bank of India's operating (48,751.88) and investing (2,023.6) activities. As a result, HDFC bank obtained first rank for operating and investing activities, while State Bank of India came in second. However, in financing activities, the scenario is different. Therefore, State Bank of India (2,949.63) is ranked first, whereas HDFC bank (21,756.02) is ranked second.
3. In Co-variance also, higher the value, the lower the rank, and vice versa. In this regard, the Covariance for operating (-26,500.20) and investing (-74.92) activities of the State Bank of India is lower than that of the HDFC bank's operating (-658.88) and investing activities (-49.35). As a result, State Bank of India is ranked first for operating and investing activities,

while HDFC bank ranked second. But the scenario is different for financing activities. Therefore, HDFC bank (147.61) ranked first and State Bank of India (179.46) ranked second.

Limitations of the study:

The research has been conducted using the company's publicly available financial statements and other information obtained from corporate authorities. As a consequence, every analysis is based on this information. Thus, it can be trusted to that level. Other statistical methods and methodologies could not be used because the data was gathered from a limited number of sources. The entire study has been done with regard to two banks, i.e., State Bank of India and HDFC Bank, other banks can also be included to get a broader view in the industry. The time period is only 5 years, a longer period can be considered.

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ROLE OF DIGITAL MARKETING IN THE PHARMACEUTICAL INDUSTRY

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Abstract:

Healthcare trends are being shaped, individuals are gaining more autonomy over their own health, and information about health products and treatments is spreading. The pharmaceutical industry has increased its investment in digital platforms during the last several years. Digital is now elevating it to new heights (ATKearney, 2015). (2015) (ATKearney). Numerous companies struggle with determining if their investment is profitable and whether they are successfully connecting with and attracting the attention of their customers. It was possible to demonstrate a link between the antecedents (informativeness, risk acceptance, and favourable attitudes toward advertising) using a sample size of 186 healthcare customers using a standardised and updated questionnaire (informativeness, risk acceptance and positive attitudes toward advertising). The current study began with models developed by Brackett & Carr (2001) and Ducoffe (1996) and was adjusted to meet the needs of this industry. Multiple linear regression was used to analyse the variables in our study and to build our regression in order to determine the best results. The study's main results encourage marketers to use creative and successful strategies in order to begin changing customer perceptions of digital channels such as email marketing and to undertake more research into digital channels. Additionally, the results emphasise the need of developing long-term relationships with consumers after they have more favourable antecedents for views about digital media.

Keywords: pharmaceutical, healthcare, digital marketing

Introduction:

Background

The communication between people has altered in the age of digital technology. As a result, marketers need to create new advertising channels. The pharmaceutical business has thus begun to utilise the web to communicate messages and to engage with the public. We are well aware that there are a great variety of internet tools which marketers now employ to accomplish their goals: Facebook, Twitter, websites, on-line publications, etc. Companies must choose which tools are appropriate to accomplish their objectives in accordance with their preferences and needs (Fill C., 2011).

Companies are concentrated on social media to improve their profits (e.g., on Facebook, Twitter and Youtube) (Kaplan & Haenlein, 2010). Social media changes behaviours on the pharmaceutical market, enabling bidirectional discussions between customers and pharmaceutical firms, and so converting them into active participants from industry to consumers (Rollins & Perri, 2013). Bolotaeva and Cata (2011) further claim that social media may raise awareness and brand presence while lowering financial demands. Although for pharmaceutical firm's social media appears to provide enormous benefits, it seems that adherence to these platforms is experiencing a number of obstacles. According to Rollins and Perri (2013), in attempting to embrace these platforms pharmaceutical firms have ethical and legal problems. The Shankar and Li (2014) and Aitken, Altmann, and Rosen (2014) studies offered insights into pharmaceutical firms' social media presence in 2011 and 2014 respectively. One of the study aims of these writers is to evaluate the present presence of chosen pharmaceutical firms on social media.

In comparison to other sectors, according to Liu and Fraser (2012) the pharmaceutical business performs badly. It is thus essential that the degree of involvement of every firm is assessed and attempted to determine if they behave similarly or have distinct behaviours, and so evaluate the digital engagement plans of each business. A combination between the pharmaceutical firms' size and their digital performance also appears to exist for Aitken, Altmann, and Rosén (2014). This study attempts to offer insights on this topic via the examination of Facebook, Twitter, and YouTube activity of pharmaceutical firms, in keeping with this line of thinking.

Problem of the statement

The study aims to explore nowadays one of the greatest and most significant pharmaceutical business problems: the lack of compliance with long-term medicinal products. In nearly all instances, long-term medicine is included in therapies for diseases. However, the effects of this medication are not often seen since 50% of people do not follow the treatments prescribed by their physicians. This pharmacotherapy is sufficient and effective for the battle against illnesses (Marie T. Brown, Jennifer K. Bussell, 2011). The non-compliance with therapy affects both society and organisations enormously.

There are several repercussions of non-compliance. Patients are struggling with problems resulting from their medication irregular usage or are not even receiving all the advantages of their therapy. In addition, each year millions of governments and patients are spent on medicines that mitigate the consequences of non-compliance. There are no deliberate and unintentional reasons for non-compliance. In general, techniques such as calendars, alerts, residues etc. are easily resolved without purpose. However, deliberate non-conformity is challenging to deal with since physicians, patients and pharmaceuticals need to be educated (Dr Sabah Al-Lawati, 2014). Forgetfulness is still the main cause for non-compliance. 71% of Irish patients report forgetting their medicine frequently (Dr Sabah Al-Lawati, 2014). The second reason is that 20% of the patients did not have to believe the drug and that the disease was improving and that no more drugs required. This research focuses on youth. Despite the

common notion that elderly individuals are more prone to forget or refuse to take medication, adherence with the age actually increases. The young and the oldest individuals who have been receiving less therapy are more likely to remain with the medicine even if they have been receiving equal care for several years. (Fernandez Almudena, 2014, Treatment Adhesion Observatory, OAT). The labs have used a broad variety of remedies due to the complex obstacles to medication adherence. Companies know that further actions may enhance compliance. Nevertheless, most attempts by companies to create an efficient instrument were very modest. Although pharmaceutical firms have been attempting to create a system which might improve adherence, little progress has been achieved (Jacqueline G Hugtenburg et al, 2013). Both kinds of pharmaceutical marketing are direct marketing to physicians and customer advertising for DTCA directly. The scientist will concentrate on DTCA. The rationale is that although direct customer publicity has shown to be less appropriate than doctor marketing, numerous methods still exist to make this kind of advertising more successful. Moreover, there is a component in this kind of advertising that educates people with knowledge, shows them the danger of non-compliance and makes them visit their physicians more frequently, thereby boosting the market (Hugh Wilson et al, 2011) DTCA for prescription medicines is banned by law in several nations. Because of this, new tactics must be developed and developed. Companies must thus make the greatest effort to promote medication or product usage. The purpose must be to generate the message that patients continue to get sufficient medicine in order to achieve the advantages they are seeking. These messages are available through many media such as the internet, television, etc. (Wilson and others, 2011)

Literature Review:

In the past several years pharmaceutical firms have been very successful, as never before witnessed, the Cambridge Healthtech Institution (2008). The Institute argues, however, that in a market which has been greatly changed in the XXI century, the pharmaceutical industry's development and profitability in the past will never persist. It is obvious that the executives of pharmaceutical businesses must grasp the changes in this industry and develop new methods to achieve good dynamics leading to a successful and effective future management (Cambridge Healthtech Institute, 2008). With the rapid development of internet health-care social networking, healthcare systems have become immensely more complicated (Griffiths et al., 2012). The two largest online social networks – Facebook and Jones (2009) mentioned in Green and Kesselheim (2010) – have approximately 350 million members globally. Some studies have shown that 60% of North Americans use the Internet as their primary source of health information and also utilise these online forums to get assistance for healthcare. Meanwhile, this kind of platform was slowly adopted by the pharmaceutical sector (Green & Kesselheim, 2010). Pharmaceutical marketing is attempting to develop new techniques, along with technological developments such as blogs, social network, etc., as Masood, Ibrahim, Hassali and Ahmed (2009), have shown, and these new approaches are utilised either independently or as support of the conventional marketing. Social networks thus offer a new avenue for drug firms to communicate with consumers and doctors (Webb, 2010). According to this expert, however, many regulatory and legal issues arise from the shift onto the Internet

of contact with physicians and marketing efforts. Webb says, however, that regulatory problems are only one aspect of the worries of internet users. Due to the reach of the Internet, such businesses have to deal with customers as they have a wide range of platforms at their disposal, which gives them a unique ability to communicate: they aren't just message receivers (Webb, 2010).

Current situation of marketing in pharmaceutical industry

For pharmaceutical companies, marketing is regarded one of the most contentious issues. In the real market, the industry is confronted with a challenge. Advertising restrictions and the attitudes of the consumer towards the sector are nowadays two of the major challenges for marketers. The various methods employed by pharmaceutical firms throughout the years need to be clarified. For promotional reasons, companies have combined push and pull tactics. The first concerns the "pressure of a product via the marketing channel" (Parker S., Pettijohn C., 2005). These types of tactics are primarily aimed towards doctors and involve promotional goods and public relations. "Pull tactics" on the other hand, draw the product via marketing channels. This kind is seen as advertising to customers Pettijohn C. (Parker S. 2005). 2005. DTC has been defined as: 'the various types of promotional efforts by pharmaceutical companies to provide the general public with prescription medication information via consumer media, including promotion of prescription medicine not only through lawyers, but also by other emerging and sophisticated media like the website and social media' (Jennifer Ball, Michael Mackert, 2013). There are two major kinds of medicinal products available in pharmaceutical businesses, one that could be delivered without prescription or counter medicinal products, and other prescription medicines (De Mortanges and Rietbrock, 1997) (Buckley J., 2004). According to European legislation, advertising or marketing of prescription medicine is prohibited directly to consumers (Kavanagh C et al., 2014) since patients are unable to decide for themselves. Additionally, non-prescription medicines' marketing methods are somewhat limited and only a few options may be promoted to consumers directly. (Kavanagh C and others, 2014). The DTC advertising laws differ from one country to the next. Companies cannot advertise prescription medicines directly to customers except in the United States and New Zealand. excluding two nations. The efficiency of DTC publicity in any kind of product has been extensively proven, but if the product is a medication, it is essential to increase sales by providing any information about the dangers, side effects and impact. It is a fact that, in a 2013 DTCA prescription medication promotion for cessation of tobacco, varenicline significantly boosted the number of prescriptions (Yoonsang Kim 2015). In the following several months, the FDA's warning information nevertheless significantly decreased sales of this medication. European marketers thus need to bring together DTC advertising, to comply with the current legislation and rules of medicine advertising and information relating to drugs. The major obstacle of the DTC is that consumers are not able to comprehend technical information about medicinal products. Moreover, marketers have to take account of the potential usefulness of advertising as a vehicle for teaching (Michael Mackert and Brand Love 2011). Traditional advertising is lacking in important teaching information, and traditional medication advertising becomes ineffective and instructional material has to be included.

Evolution of pharmaceutical marketing

The pharmaceutical business differs from other industries (Stremersh & Van Dyck, 2009 cited in Ding, Eliashberg & Stremersch, 2014). It is a highly regulated science-based business when compared to other industries. Since medications have a significant effect on people's quality of life, the worldwide system consisting of regulators, health providers (e.g., doctors or pharmaceuticals) and payers (e.g., public authorities, insurance firms) is developed so as to safeguard patient welfare at an acceptable cost (Ding, Eliashberg & Stremersch, 2014). The pharmaceutical business has continuously expanded, at around 4 percent to 7 percent yearly, and is rapidly reaching the value of 1 billion US dollars while confronting difficulties in the field of innovation and marketing, according to Ding, Eliashberg, and Stremersch (2014). These authors declare that an innovation-intensive company will have a low differentiating potential, which will result in lower margins, whereas a marketing-intensive company will not fully leverage the value innovation can provide and therefore potentially will lose trillions of dollars that are needed by its stakeholders and constant innovation. Thus, businesses with a strong innovation and marketing capability have managed their difficulties successfully and will continue to generate value for their stakeholders (Ding, Eliashberg & Stremersch, 2014). The company perceives two contradictory characteristics in medicine, as expressed by Ding, Eliashberg and Stremersch (2014). Not only do they see them as a regular product that responds to certain consumer demands, but they also consider them essential. These writers say that both these characteristics should be recognised by pharmaceutical firms, while drawing on their discoveries.

Pharmaceutical marketing has changed dramatically during the 90s, according to Rollins and Perri (2013). These writers say that the marketing of pharmaceutical goods was virtually centred on experts until the 1990s. They also indicate that pharmaceutical marketing has a prescriber-oriented model of direct sales (e.g., the doctor), which is linked to the large expenditure in product promotion. Various stakeholders now participate in marketing and sales. Payers and pharmacists are included in the distribution route and may play an important role in the choice of the product sent to the patient (Rollins & Perri, 2013). Pharmaceutical firms' sales personnel do not have the same easy access to their previous doctors and promotional materials are more controlled. To reverse this tendency, pharmaceutical firms began by exploring the potential of the Internet, using websites and mobile devices, and spreading information to doctors (Rollins & Perri, 2013). In comparison to other conventional sectors using direct-to-consumers (DTC) marketing, Rollins and Perri (2013) remark that the pharmaceutical sector is far behind. It is obvious to these writers that the industry must alter its marketing strategy by pulling it into a consumer-oriented pull model (e.g., DTC advertising). They also point out that social media (e.g., social networks) now has an important role to play, not only enabling a one-way discussion to take place in dialogue between the consumer and pharmaceutical firms, but also transferring power from the drug companies to the customers. The customer therefore becomes an active participant in his treatment decision and is incorporated into the pharmaceutical marketing environment (Rollins & Perri, 2013).

Customer behaviour towards DTC

Following research in many databases, a large number of articles have been created to evaluate customer behaviour towards DTC. One of the major issues is how direct consumer advertising may be assessed in decision-making (CDM) Abdel-Aziz et al. showed a favourable strong link between DTC and CDM after surveying 484 customers by means of questionnaires in 2013. It is essential to note that incorporating reliable literacy is a benefit, since patients are aware of the danger to their health and information on their side effects, and it has a significant influence on outcomes. Final choices may nevertheless differ according to variables including quality of information, sufficiency, validity, dependability, clarity and pricing for the goods. Drug exposure is one of the most important indicators for behavioural and attitudinal consequences (Mina Lee, 2015). In patients, the effect of DTC is linked to variables like wealth or culture. In addition, health condition, drug participation, health awareness and drug usage are all linked with customer behaviour (Mina Lee, 2015). Moreover, if we compare the behaviour of low-income patients and high-income people, we can see that patients with low-income conditions change more readily when exposed to DTC than those with high-income conditions (Mathew Joseph Deborah F. Spake Zachary Finney, 2008). In addition, the impact of DTC advertising may also be different on patients reared under various cultures. The consumer attitudes of DTC may vary based on the client's exposure to the various channels (Jisu Huh et al., 2014). The situation of Korean Americans residing in America is an excellent illustration. The section of the population is more exposed to television advertising than the media. As a consequence, their choices in the purchase of medicines vary from those of the Hispanic White Americans who have greater media impact (Jisu Huh et al., 2014). In fact, Kotler (2012) brought out the necessity of segmenting people so that a clear objective market can be focused and a successful strategy can be created.

Consumers who feel good about DTC are more likely than those who are sceptical to speak to their physicians. However, even customers with unfavourable views about DTC want to get knowledge to minimise disease and reduce harmful consequences. We may claim to encourage patients to speak with their medical professionals directly to consumers marketing. In addition, DTC increases the chances of finding more information. On the other hand, people prefer to talk with their physicians about the ultimate choice of various medication brands. Finally, the significance of the substance of the message should be emphasised, patients prefer information prevented to advertising (Nithima Sumpradit et al. 2015).

Different models approach

Pharmaceutical marketing is changing, according to Fischer (2014). The author says that in the 90's and early 2000's main strategy was the growth in the sales force, which allowed the dissemination of scientific knowledge to be increased. However, Fischer said that expenditure is reducing over time and pharmaceutical firms now abandon the sales force-based business model and embrace a more sophisticated communication strategy. This new approach, consisting of additional communication channels that communicate with others (e.g. patients, payers and health organisations, professional people), goes far beyond the

almost singular channel of contact with medical stakeholders, as explained by Fischer. The expansion of communication channels and possible communications destinations is seen as a significant trend in pharmaceutical marketing (Fischer, 2014).

a. Physician-oriented model

The money for pharmaceutical marketing is widely spent on communicating with doctors (Manchanda & Honka, 2005; Neslin, 2001; Wittink, 2002 cited in Fischer, 2014). According to Fischer (2014), pharmaceutical firms use personal marketing by detail 1 for medical practitioners, experts and hospital doctors in this communication. (2) the delivery of a certain number of presentations and samples of drugs; (3) food payment; (4) conference issues; (5) the financing of medical educational and scientific initiatives; and (6) the publicity in professional journals. This model can include: (1) a personal marketing with a limited number of products discussed; (Rollins & Perri, 2013; Fischer, 2014). Fischer states that methods such as medical education and pharmaceutical surveillance have been developed to reinforce relationships with doctors, and financial assistance from pharmaceutical companies can sometimes be provided to certain doctors if they are open to reporting their observations about patient trials related to promoted medicine. Other methods such as direct mailing enable pharmaceutical firms to provide doctors with information about treatments or drugs (Fischer, 2014). Fischer (2014) also believes that the Internet and other digital media rise to fire the conventional communications paradigm. The research entitled "Taking the Pulse@ Europe," based on the internet physics behaviour, has shown that doctors use the internet to diversify their impact (Manhattan Research, 2008 cited in Fischer, 2014, p. 559). Fischer pointed out that 95% of doctors in the major EU nations have said that Internet is helpful in their career, and thus pharmaceutical firms appear in the creation of electronic methods to walk sideways with medical practitioners in this issue. According to Masood, Ibrahim, Hassali and Ahmed (2009), the development of technology has allowed marketers to advertise goods online to doctors.

There is a significant increase in the number of doctors who network online, therefore the dissemination of knowledge via on-line networking platforms is a focus of pharmaceutical firms (Ding, Eliashberg & Stremersch, 2014).

b. Patient/consumer-oriented model

According to Fischer (2014), some drug marketing is geared at patients and customers but only a limited number of countries like New Zealand and the United States of America allow such direct engagement (USA). However, in the European Union (EU), when the marketed product is an OTC medication, pharmaceutical firms may directly advertise to consumers² (Buckley, 2004). Fischer (2014) refers to the use of channels like the mainstream media (e.g. print media, TV and radio) and the digital media by DTC publicity. If DTC advertising is not permitted in one nation, businesses use an underlying strategy for influencing the patients/consumers (e.g. public relations campaigns related to illnesses and treatments). However, the branded medication name is generally not advertised in this kind of campaign (Fischer, 2014). However, under this varied international law the global scope of online platforms presents a problem (Ding, Eliashberg & Stremersch, 2014).

c. Model oriented at other stakeholders

Fischer (2014) says not the only stakeholders targeting pharmaceutical marketing are doctors and patients/consumers. This author points out that pharmaceuticals' firms have devised methods for communicating with pharmacists, nurses and managed care providers to target this new audience. Fischer further states that these stakeholders alter their impact as gatekeepers in accordance with the kind of health care and medications. He illustrates that a large portion of the money is given to sales representatives in the diabetes-related health care industry for practitioners, since these doctors typically suggest tools that test blood glucose for individuals with this illness. Pharmaceutical firms also spend part of their money on public relations in companies (Fischer, 2014).

Research Methodology:

This chapter will cover all of the study's methodology, including sample size, questionnaire design, statistical analysis, and the software utilised. It will also include sample characterisation, along with variable analysis. This technique was selected because it is easier and more in line with the available resources and time, even though Marconi & Lakatos (2007) pointed out many benefits and drawbacks of using questionnaires in this kind of study.

Once the poll was posted online via social networks, it drew individuals from all over the globe to participate. All those over the age of 18 who use the internet and are acquainted with email marketing campaigns were eligible to participate in this research. There were 186 people that took part in this research.

Because a student sample is considered to be intriguing for marketing research due to their usually more positive views about marketing and advertising, the majority of responses were gathered in a university setting (Roberts, 2000). Certain components that should be included in a questionnaire have been mentioned by several authors, such as the identification of respondents (e.g. age ranges and nationalities), the request for cooperation from respondents to complete the questionnaire without abandoning it, instructions, or even the respondents' level of knowledge about the topic are all important (Chagas, 2000). Because the questionnaire used to gather the data for this research was private, no one can tell who answered it. In order to describe the sample, demographic data was utilised as a moderating variable. This survey's opening questions were designed to gauge how often people use email marketing campaigns. "A questionnaire ensures the uniformity and comparability of data across interviewers, improves the speed and accuracy of records and simplifies data processing," states Malhotra & Taylor (2005, p. 227).

An assessment was conducted before the pretest to see whether the questionnaire was easy to comprehend by the respondents. This evaluation was conducted by academic and pharmaceutical industry professionals after the questionnaire had been completed and evaluated. In order to make sure that the survey is accurate and does not lead to misconceptions in the responses, a pretest is conducted. According to Lakatos & Marconi (2003), a preliminary test, or a pretest, should be used to verify the assessment tools. Prior to

the commencement of the data collection. Using this kind of validation, any mistakes or queries that the responders don't understand may be found and corrected. Lakatos & Marconi (2003) recommend doing a pretest on 5–10% of the entire sample in order to ensure that the results are valid. A pretest of 20 participants, or about 11% of the total sample, was conducted for this research. A few people mentioned that using negative forms in certain queries may lead to misconceptions after this stage. It was also shown that the questionnaire was straightforward and easy to answer by the respondents with these reformulations. Using SPSS 24.0 Statistical Package for the Social Sciences to evaluate the collected data, a final database for this research could be created. Using the programme, all of the data was examined, the variables were grouped, and questions from certain variables were removed since they were irrelevant to the study's findings. Also, demographic characteristics may be used to evaluate the variables and draw more in-depth findings. To provide the best findings for the current research, all of the data was correlated once the software analysis was complete.

Results and Analysis:

The vast majority of those who took the time to fill out the survey were either students or new employees. As a result, the data set is regarded to be in its infancy. That the poll was disseminated through Facebook and LinkedIn is also a factor. There are 65.5 percent of people in this age bracket (18-24) and 26.9 percent of people in the next-largest representative age bracket (25-34 years) in the whole sample.

The purpose of this chapter is to summarise the findings from the study. In order to arrive at a short conclusion regarding the respondents' perceptions of the variables, the descriptive analysis of the study's variable will be given first. This chapter also reveals the impact of demographics and their interaction with the investigated factors. These influences on the research variables will be discussed in detail as well. The Students t-test was employed to analyse demographic data. Using multiple linear regression analysis, we were able to verify the validity of our model design. Since this approach does not allow for the estimation of simultaneous regressions, the model was divided into multiple sub models. Analyzing model variables will be provided after describing the sample's characteristics and detailing control variables (such as age, gender, and ethnicity). As a preliminary step, make sure that all of the variables are operationalized. This ensures that the data is consistent and the metrics are unidimensional. This is critical if you want to conduct a more thorough investigation and be certain that the metrics you employ are accurate. For each variable, all metrics are assessed to see whether they are assessing the same idea, preserving the study's dependability in this manner. This is what uni-dimensionality is all about. Factor analysis and internal consistency were employed to verify the uni-dimensionality.

Factor analysis, according to Hair (2005), is a statistical technique for identifying the structure of a set of data. That means that by using this method, you may combine information about many variables without losing any of the original details, while also explaining how those data vary across different variables that have been collected throughout

time. This study takes into account all of the relationships among the metrics employed in order to explain a single variable by looking at the most important ones. Before beginning a factor analysis, it's a good idea to run the data through a correlation analysis. These two statistical methods, known as KMO and Bartlett's Test, were employed to evaluate the study's correlation quality. It's called the KMO's Test, and it determines whether or not the data is suitable for factor analysis. A sample adequacy test evaluates the appropriateness of sampling for each variable in the model and for the whole model. When the correlation coefficients are low, the factor analysis may not be feasible. When the correlation coefficients are high, the factor analysis is viable (Pestana & Gageiro, 2014).

The sensitive Bartlett's Test is used to see whether the variances of the samples are the same (Snedecor & Cochran, 1977). As long as the variances are homogenous, the samples have the same variances. Using this statistical test, we were able to determine if variances across groups are equivalent or different in any way.

Analyzing internal consistency is another critical statistical study. This will demonstrate the validity of the various variables' scales (Pestana & Gageiro, 2014).

There are many statistical models that may be used to predict behaviour of a quantitative variable (dependent variable) using one or more quantitative variables, according to Pestana & Gageiro (2014). (Independent variables). When there is only one independent variable, the linear regression model is called a simple linear regression; when there are many independent variables, the linear regression model is called a multiple linear regression. It is necessary to estimate the various coefficients () using the least squares method before doing the multiple linear regression analysis. As a result, the approach's residual mistakes are reduced to a minimum (Pestana & Gageiro, 2014).

When determining the amount of variation that can be predicted based on the independent variable, the Pearson correlation coefficient (R) and coefficient of determination (R²) were used. Using Pearson's correlation coefficient, researchers (Hair, Back, Babin, and Anderson, 2014) can forecast how strongly different variables are correlated. Its values range from -1 to +1 depending on whether the signal indicates a positive or negative relationship. Correlation is nearly perfect when the Pearson correlation coefficient is closer to 1 or +1, whereas zero connection indicates that no correlation exists between the variables. The Pearson correlation coefficient, which ranges from 0 to 1, is used to calculate the coefficient of determination, and a number closer to 1 indicates that the model is well-represented and well-adjusted by the expression. The adjusted coefficient of correlation should be calculated when there is more than one independent variable in the model. This will help to guarantee the model's robustness. Additionally, an analysis of the F-test (ANOVA) was performed to determine whether or not regressions were significant and to test the null hypothesis (H₀). The regression will be more significant if the F value is higher. Once there is no significant connection between the dependent and independent variables, the null hypothesis should be rejected. When the significance of the student t-test is less than 0.05, the null hypothesis is also rejected. If the null hypothesis is rejected, the model's parameters will be shown to be

substantially different from zero. (Maroco, 2003). The t-test with a 95% confidence interval was used for this study, which implies the t-value ranges from -1.96 to +1.96 in this case. The test is statistically significant if the result is less than -1.96 or more than 1.96.

The statistical information about this sub model was produced using the statistical programme and the Stepwise technique, as shown in the table below:

R ²	R ² Adjusted	F	Sig.	B	β		Sig.
					Standardize	t	
0.487	0.479	59.904	0.000	(Constant)	1.112	5.818	0.000
				Informativeness	0.347	5.913	0.000
				Risk	0.155	3.061	0.002
				Attitude towards advertising	0.249	3.357	0.001

Table 1: “Results of the sub model of the Attitudes toward Email Marketing”

This submodel's coefficient of determination was 0.497, and the corrected coefficient of determination was 0.489, according to the statistical study. These results show that the informativeness, risk acceptance (Risk), and favourable attitudes toward email marketing account for 48.9% of the variation in customer attitudes about email marketing.

With a F value of 59.904 and a significance level of 0.05 (0.00), the null hypothesis was rejected and the model was found to be adjusted to the data, proving that it was successful in doing so. Email marketing in the pharmaceutical business that is both educational and entertaining has the potential to influence customer attitudes about email marketing. Statistics show that an increase in informativeness of 1 percent results in an increase in consumer sentiments about email marketing of 0.357 percent. It also shows that this is the most important factor in determining how customers feel about email marketing.

Given that an attitude is defined as a behaviour or inclination toward something, we predicted and confirmed that attitudes about email marketing were linked and affected by attitudes against advertising, as shown in Fishbein & Ajzen's model (1975). When compared to the results of a recent research conducted by Mou Dong-Hee Shin and Jason Cohen (2015), our trust hypothesis differs from their conclusion on how risk acceptability and trust relate to adoption of eservices. In our research we did not discover a connection between the dependent variable, trust, and the attitudes toward email marketing, whereas Mou et al. (2015) showed that this variable somehow affects that acceptance and the attitudes of customers.

We'll examine the relationship between the dependent variables and customer attitudes about email marketing in four sub models in this section. For the first sub model, where the purchase intention (PI) was the dependent variable, the statistical analysis revealed the following independent variables: Perspectives on email marketing It is intended to understand

how these independent variables influence the purchase intention (PI), the following linear regression was constructed.

R²				β				
R²	Adjusted	F	Sig.	B	Standardized	t	Sig.	
0.147	0.142	31.685	0.000	(Constant)	1.375	0.426	4.906	0.000
				consumer attitudes toward email marketing	0.428	0.075	5.628	0.000

Table 2: “Results of the sub model of the Purchase Intention”

The significance of the regression, that was evaluated according to the F-test analysis, was lower than 0.05 (0.00) and the F value was 31.685. There is a favourable connection between customers’ attitudes email marketing and purchase intention.

The informativeness, the risk acceptance and the favourable attitudes towards advertising are the antecedents of the attitudes towards email marketing, after these variables were deemed significant in our statistical analysis. And although if the others factors were not regarded significantly linked with the attitudes toward email marketing, we think that if will be performed future research with more accurate sample (not convenient sample) it will be feasible to validate the omitted variables in this study. Concerning to the consequents of the attitudes towards email marketing, it was feasible to verify all the chosen variables (engagement, buy intention, WOM and loyalty) (engagement, purchase intention, WOM and loyalty). Another major conclusion regarding this academic study is that the pharmaceutical firms must spend more time and effort disseminating their digital innovations and alter the paradigm that was built around the regular email marketing efforts. That is why lot of customers does not really trust into pharmaceutical advertising since usually their views about the advertising are not that hopeful and favourable. According to our research, the average of the credibility and trust metrics is 2.58 and 3.97, respectively, and even if these values are acceptable are not good enough for one sector that is built on trust between the patients and the health workers/ businesses. The main academic contribution of this research was the validation of an attitudinal model for the digital channels in the pharmaceutical business. This is an essential and critical step for future studies concentrate on this sector and on the digital platforms. Additionally, it was feasible to infer that the antecedents of attitudes toward email marketing vary by business sector, since, despite the fact that our model was based on Brackett & Carr (2001) and Ducoffe (1996) models, it was not possible to verify the same variables that they corroborated. The contributions of the business sector were the research's high point, given that, as stated at the outset, very little was known about the digital effect that pharmaceutical firms were having, and since this was a worldwide study including many nationalities and cultures, it was able to provide an overview of the activities that businesses must begin doing. This research indicates that there is still a lot effort to do about the building of strong connections with customers so that they will have higher trust and

credibility responses and therefore they have meliorated the attitudes regarding email marketing. It was also feasible to identify those various cultures had varied attitudes about email marketing, as it can be shown in the sub chapter of the effect of the social factor's metrics.

Conclusion:

The fundamental marketing structure is shifting, and a digital revolution is pounding at its door. Most marketing efforts today are conducted on digital media. It is a fantastic chance for pharmaceutical businesses throughout Saudi Arabia to utilize digital platforms for marketing. The citizens of Saudi Arabia are learning contemporary marketing techniques; Saudi consumers are searching for platforms to purchase medication and medical services online. Any sector that does not embrace digital marketing techniques risks becoming outdated in this digital age. Digital media marketing offers more consumer reach for a decreased cost of marketing. There is tremendous potential for marketers and consumers alike to take advantage of digital marketing techniques for a vital commodity such as medication. The COVID-19 pandemic has taught the pharmaceutical corporations of the globe that it is vital that medication should reach customers under all conditions. This is a critical study that will assist both well-established and developing pharmacies to operate simple, trustful, and financially successful operations. Market behavior varies in every nation owing to many variables that include the literacy rate, economic and political circumstances, infrastructure development, technical progress, and general awareness among the people.

The second restriction concerns the lack of customization and the error margin due to the possible dishonest replies in response to the questionnaire. Digitalization is spreading all over the globe, and with the advent of artificial intelligence, soon, the world will be a different place. This study may assist pharmacies in coping with ever-changing technologies and sets down a basis for future research in the area.

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KEY FACTORS AFFECTING THE CONSUMER ATTITUDE AND PURCHASE DECISION OF ELECTRIC VEHICLES (E.V.S) IN INDIA

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Abstract:

Pollution of the environment is presently a worldwide issue. One of the major air pollutants is toxic emissions from internal combustion engines. Electric vehicles (E.V.s) are being vigorously marketed worldwide to reduce the impacts of fossil fuel emissions and solve environmental concerns (ECS). Various governments are incentivizing the transition to E.V.s to encourage individuals to make the changeover. Previous research has found that the expensive cost of an electric car, the lack of charging infrastructure, and time and range anxiety all serve as barriers to customer adoption.

The Government of India has issued a demand for 'only Electric Vehicles' to be used on Indian roads by 2030. This article is current and investigates the many elements that influence a consumer's adoption of an E.V. The study's respondents are actual automobile owners in India. Structured Equation Modelling was used to analyze the data (SEM). Attitude (ATT) emerged as a potent mediator in the adoption of electric vehicles.

Keywords: Electric Vehicle, Attitude, Economic Benefit, Environmental Concern, Social Influence, Self-image, Behavioural Intention

Introduction:

Background

Electric cars have now been created as an efficient alternative for fossil fuels and environmental problems, particularly carbon dioxide emissions (CO₂). There have been a growing number of environmental challenges arising from conventional transport. Another example is the United States, which had the biggest share (28%) of the U.S.'s total greenhouse gas emissions in 2016. (EPA,2019). As a result, many governments have adopted positive policies to decrease environmental concerns, including encouraging people to use electric cars, considering the significance of actions to address climatic change (Brady and O'Mahony 2011). In the last years, the developed nations have been more active and have progressed much in marketing electric cars. Registered electric cars in Europe grew by 41% to 126,885 units in the first quarter of 2019. (Henk Bekker, 2019). Many European nations have established more specific development strategies for long-term electric vehicles. For example, France's goal by 2020 is to maintain 2 million cumulative, while Germany is planning to maintain 1 million cumulative

power cars by 2020. (Tan et al., 2014). The U.S. now has one of the biggest electric car market shares. Over 22,000 loaders, including 350 rapid charge-loaders, were used in the early years of 2014. (Tan et al., 2014). Total U.S. sales of electric cars reached 361,307 units in 2018, increasing 70% compared with 2017. (InsideEvs, 2019). These examples show that the commercial prospects for electric cars in industrialized nations are rather positive.

Since China is the global biggest emitter of carbon dioxide (Tan et al. 2014), the Government has begun to develop positive strategies to reduce carbon dioxide emissions. China established the Electric Vehicle Subsidy System (EVS) in 2009, followed by an upgrade in 2013, to meet this goal (Hao et al., 2014). China has also introduced several additional policies to encourage electric vehicles, including macroscopic demonstration policy, technical assistance and infrastructure charging. In the last ten years, China has remained the second biggest manufacturer globally, accounting for 20.5% of the total production of vehicles in 2018. (ACEA, 2019). It thus provided the groundwork for the growth of China's new electric car industry. China, which has seen sales rise by over 500,000 units to 1.2 million, representing 56 per cent of the total sales of electric vehicles, was the most significant growing region in 2018 for global energy sales (Gasgoo, 2019).

A prominent example was the indigenous brand of China, BYD, which sold over 250,000 electric cars in 2018. Nevertheless, the leading car manufacturers in China show considerable interest in electric vehicle development (Zheng et al., 2018). China is now the world's second-largest carmaker market. Since the Government of China has significant political backing for electric cars, the electric vehicles industry has been increasingly expanded and expanding by conventional vehicles makers.

The transport industry is India's third-biggest emitter of CO₂, with about 11% of the total CO₂ emissions in 2016. (Janssens-Maenhout et al., 2017). The steady rise in fossil-fuel sales due to family incomes and increasing urbanization presents a problematic scenario in India with escalating CO₂ emissions. NITI Aayog, a think tank for the Indian Government, estimates that by 2030, CO₂ emissions from the car industry may treble (NITI Aayog and Rocky Mountain Institute, 2017a). Electric cars (E.V.) have arisen as a possible alternative option in the past decade to internal fuel consumption (ICEVs) (Abouee-Mehrzi et al., 2020). In particular, electric vehicles (E.V.s). There are still numerous obstacles to the use of E.V.s by consumers, including high upfront cost, a shorter range of drives and a lack of confidence in E.V. technology. These difficulties are further accentuated by lesser consumer availability, inadequate charging facilities and the lack of knowledge of E.V. technology in developing markets like India (Government of India, 2019a; Government of India, 2019b; Vidhi and Shrivastava, 2018). The diffusion of new technologies such as E.V.s is more complicated since it becomes a chicken-and-egg issue to balance the gap between supply and demand. For example, the availability of charge infrastructures and the range of electricity supplied relies heavily upon customer demand. In contrast, those expenditures on the supply side are likely to be driven by consumer demand. To tackle this issue, the Indian Government intends to tackle supply-side problems in electric carriage distribution via various programmes, including the National Mission Plan for Electric Mobility (NEMMP) and rapid adoption and electric vehicle

manufacturing (FAME). NEMMP emphasizes the goal of the Indian Government to speed up consumer adoption and E.V. production (IEA, 2020). The purpose of the FAME programme is also to increase electrical demand by increasing charging and subsidies infrastructure. In April 2019, the Indian Government started Phase 2 in April 2019 to build an environment-friendly and resilient E.V. system with a significant expenditure of 100 billion INR (~1.36 billion USD) (Government of India, 2019a). Despite the many interventions on the supply side, Indian automobile consumers reject the purchase of electric vehicles. Only 3400 electric cars were sold in India in 2019-2020 (Venkat, 2020).

Problem statement

A growing number of academics, recognizing the rapid growth of electric cars, have been studying the adoption of electric vehicles by customers. In this study area, the desire to acquire electric vehicles and their influencing variables is a significant and widespread problem for individuals (Hidrue et al. 2011; Peters and Dütschke 2014; Lieven et al. 2011; Turrentine and Kurani 2007; Thomas 2009; Egnér and Trosvik 2018). However, most of the research in Western nations is examined (Egnér and Trosvik, 2018; Hidrue et al., 2011; Turrentine and Kurani, 2007; Lieven et al., 2013; Thomas, 2009; Peters and Dütschke, 2014). Due to the exhausting energy and environmental issues, emerging nations, particularly in India, have started to push electric cars forcefully in recent years. With recent developments in developing countries for electric cars, few researchers like India have investigated electric automobiles (Wang and Liu, 2015; Zhang et al., 2011). However, research into electric vehicles is relatively early on in India, which results in less information. In general, most prior research focused on consumer-intensive variables such as efficient performance (Burgess et al., 2013), costs (Burgess et al., 2013), charge infrastructures (Jensen et al., 2013), government policy, and other factors that influence customer purchases of electric cars (Wang and Liu, 2015). Little study has investigated the issues from a cultural or social viewpoint (Moons and De Pelsmacker, 2012). Indeed, electric car research is inadequate to grasp the crucial elements for the desire of India to buy electric automobiles. In this context, this research builds on the idea of rational choices utilized in many studies on electric car usage (Carley et al., 2013; Jensen et al., 2013; Lieven et al., 2011).

This research primarily examined the factor influencing the desire of the Indians to buy electric cars from three aspects: utility, restrictions and belief, following the theory of rational choice. This research examines the utility aspects, limitations and ideas for investigating variables such as electric motor vehicle range, charging infrastructure, purchasing costs, government financial incentive, environmental awareness and social impact observed. This research aims to investigate what variables may influence the desire of Indian customers to buy electric cars positively/negatively and to understand Indian consumers' attitudes regarding electric vehicles.

Literature review:

Consumer awareness

Various investigations have shown that electric cars are generally unaware and aware of them. For example, a particular plugs manufacturer and model (Singer, 2015). Less than 35% of families in California know about incentives for the purchase of electric cars (Kurani & Tal, 2014). About two-thirds of respondents in a study of 21 U.S. cities (Krause, 2013) had misapprehended the fundamental features of plug-in electric cars, and about 95% had not known what incentives were offered. Similarly, an IBM consumer study (Gyimesi & Viswanathan, 2011) showed that 45% of the drivers questioned did not comprehend electric cars at all. Up to \$7,500 per electric car are federal incentives in the United States, and usually, more than \$2,000 is additional State incentives. The aim is to overcome a significant cost barrier in electric cars, as are many stimuli worldwide (see Yang et al. 2016). The U.S.-based research by Kurani et al. (2016) showed that California's new-car purchasers only knew about the federal incentive, with California's state incentive just about 33 per cent known. Only 44% of individuals throughout the nation were aware of the tax incentive from the Federal Government. Ninety-five per cent of customers able to correctly identify a plug-in model, showing that they were unaware of the variety of available models, could only call the Nissan Leaf or Tesla S models. Customers exposed to electric cars are more inclined to appreciate them and see them as an option for future purchases (Kurani et al., 2016; Larson, 2014; Gyimesi & Viswanathan, 2011). A Customer Federation of the United States study (CFA 2015) showed a correlation between increased consumer awareness about electric cars and the desire to buy them. However, only 21% of respondents indicated that they knew "good quantities" of electric vehicles and that much less have reported being aware of "a great lot." Reiner & Haas (2015) notes in an article on e-mobility in Stuttgart that since individuals have more extraordinary expertise in the field of e-mobility, their views towards e-mobility are more favourable. European research by Kannstatter & Meerschiff (2015) showed 71 per cent of participants were interested in an immediate buyout of an electric car after a test drive. In further research (Bunce et al., 2014), following exposure to the U.K. Ultra Low Carbon Campaign, the number of drivers ready to pay a premium for an environmentally-friendly car increased from 51 to 74%. Another study links electric car customer knowledge in their assessment of automobiles and the likelihood of being considered an alternative to buying (e.g., Kurani et al., 2016; Gyimesi & Viswanathan, 2011; CFA, 2015). Other studies evaluate consumers' impressions before and after a test drive (Kannstatter & Meerschiff, 2015; Bunce, 2013). Overall, these studies show that general awareness of electric vehicles amongst consumers is relatively low, including a lack of familiarity with new technology, understanding the available incentives and models, and a sense of potential fuel and maintenance cost savings. Consumers with a better deal or experience are often more inclined to increase their appreciation of electric cars, consider electric vehicles a possibility for future purchase and pay for the technology's premium.

Consumer outreach and awareness activities

A broad range of initiatives helps to minimize consumer obstacles relating to electric cars' knowledge and awareness. Table 2 contains a collection of research that emphasizes different elements, the infrastructure and activities of electric vehicles to improve consumer awareness. National governments and municipal governments have implemented a range of consumer communication activities and other stakeholder groups. Initiatives by non-profits, town and state authorities, manufacturers and charge providers create public-private partnerships and ride-and-drive events, including electrical car outreach activities. As a consequence of local context and goals for each activity, the emphasis of various outreach and awareness efforts tends to vary between markets. For example, Empire Clean Cities in New York has created a focused programme targeting local commercial vehicle fleets (NASEO, 2013). They all have quick delivery, an extensive fleet, and aim for Manhattan Beer distributors, Coca-Cola and Walmart. Such focused initiatives may enhance sales and public awareness while also giving drivers practical experience they otherwise may not have had previous exposure to the technology or knowledge. Various public awareness-raising initiatives offer both customers and municipal utility advantages. In Japan, for example, initiatives have encouraged technology for electric vehicles via the provision of incentives for those participating in D.R. programmes. In Kyoto, an electric car charging facility initiative employs emails and navigation systems to convey notifications from D.R. to electric vehicle drivers (IEA, 2014). We offer more data on methods to compare electric vehicles cost to discover variations between information materials in areas. Most areas provide information or tools for easy pricing comparison to assist customers to comprehend the possible cost savings. Some compare initial prices, while others include operational expenditures like gasoline, maintenance and insurance. Some statistics are presented in tables (Go Ultra Low, 2016); others are interactive and enable users to enter their own choices, such as car type and trip data (Drive Clean, 2016). One of the most advanced implementations is the interactive online overall ownership costs calculator (Schaufenster electromobility, 2016a), displaying various real-time outcomes in tables and diagrams. The location of and availability of public charging infrastructure is another critical piece of customer information. Many downloadable charging maps and associated mobile apps are available for extra conveniences in Norway, the Netherlands, the United States and France. The most important characteristics of mobile apps are to guarantee a continuous network update and give real-time information about the availability of certain charging stations.

Studies on E.V. Preferences

The primary objective of this research is to estimate WTP to enhance different E.V. products and services (e.g., driving range and charging infrastructure). The fact that most research use specified preferential (S.P.) data should be noted. This is because the decision that a customer makes in revealed preferences (R.P.) data is not being seen, and there are inferential difficulties to multicollinearity across characteristics (Axsen et al., 2009; Brownstone et al., 2000; Grisolia & Willis, 2016; Hiderue et al., 2011). Furthermore, R.P. data (Ghasri et al., 2019), which are essential for increased market planets for E.V., may be used to evaluate the efficacy of different policy levers. The review indicates that academics have also examined the effect of various

privilege rules on customer choices on electricity products. The regulations include the provision of specialized lanes (bus or high occupancy vehicle lane) to relaxation charges for public charges, parking and congestion prices for electric vehicles (Abotalebi et al. 2019; Ferguson et al., 2018; Langbroek et al., 2016; Ma et al., 2019; Wang et al., 2017). In Norway, policies like access to specialized E.V. driving lanes have been introduced (Figenbaum, 2017). Given Chinese modulating automobile sales by using a lottery drive policy and Chinese cities also control traffic, limiting cars based on licence plate number plates may encourage car purchasers to acquire E.V.s by easing these purchases and traffic limits for E.V. owners (Ma et al., 2019; Qian et al., 2019; Wang et al., 2017). Many studies also suggest that behavioural variables influence customer choices as well. These latent attitudes include risk-averse decisions (Huang et al., 2018; Orlov et al., 2019; Costa et al., 2019; Nazari et al., 2019), confidence in the technologies (Axsen et al., 2016; Ghasri etc., 2019; Kormos et al., 2019; Gong et al., 2020; Lin and Tan, 2017), hedonic and symbolic values (Schuitema et al., 2013; Skippon and Garww, 2013; Skippon and Garw and the E.V.s) (Barth et al. 2016; Rasouli and Timmermans, 2016; White and Sintov, 2017).

The literature on E.V. elicitation is scarce and restricted in the Indian setting. Most research has utilized either structural equation (SEM) modelling, regression/correlation analysis or qualitative testing. SEM is used by Digalwar and Giridhar (2015) to detect E.V. adoption obstacles. The authors propose that improved battery technology, more knowledge and economic feasibility may improve E.V. use. Among the latter studies, the attitudes in E.V. adoption are Khurana et al. (2020) and Navalagund et al. (2020). Khurana et al. (2020) are collecting survey responses from 384 respondents in Pune to evaluate the effect of the self-image, the financial advantages perceived, knowledge of electronic transmission products and environmental issues on consumer preferences on E.V.s, based on samples of 214 respondents from Delhi, Mumbai, Pune and Navalagund et al. (2020). Bhalla et al. (2018) use correlation analysis to investigate variables affecting customer attitude towards E.V.s using the survey data of 233 respondents. They found environmental concerns and technological confidence to be critical variables influencing the adoption of E.V.s by customers. To analyze Indian customers' preferences, Motwani and Patil (2019) utilize a regression model. According to survey answers from 345 car owners, the most prominent drivers of customer preferences for E.V.s are mobility and charging. Bansal and Kockelman (2017) are conducting a qualitative study of experts. The main barriers to E-V adoption in India are inadequate charging infrastructures, a lack of public knowledge of the advantages and higher early cost. Vidhi and Shrivastava (2018) analyze shared electric mobility services and advise several favoured policies that encourage automotive owners to quit their vehicles and take shared services.

Some researchers have focused on supply-side measures in India to enhance E.V. adoption. To develop the charging infrastructure in Allahabad, India, Awasthi et al. (2017) utilize genetic algorithms and particulate swarm optimization. Kumar et al. (2015) propose that the vehicle-to-home programme may improve the adoption of electric vehicles in India by shortening the payback time for electric car owners. Their central concept is to use the parked electricity systems to store electricity. This approach would increase the peak of the Indian power system and transfer the cost advantages to E.V. owners.

As regards modelling methods to estimating the WTP, the bulk of research depends upon the MNL and its expansions as random utility-based theory (Costa et al., 2019; Orlov and Kallbekken, 2019). Researchers have used nested logits (Huang and Qian, 2018; Nazari et al., 2019) and multinomial probit models (Higgins et al., 2017). A common practice for capturing observed and unreported variability in vehicle buyer choice is to be Mixed-MNL (Choi et al., 2018; Cirillo et al., 2017) and Latent class MNL (LC-MNL) (Ardeshiri and Rashidi, 2020; Axsen et al., 2016; Ferguson et al., 2018; Kormos et al., 2019). In the policy study, LC-MNL is used rather than Mixed-MNL because it gives better interpretive views on the heterogeneity sources. The LC-MNL defines consumer segments based on their social-demographic attitudes and traits and estimates segment and segmental proportions (Ardeshiri and Rashidi, 2020; Hidrue et al., 2011). For example, Ferguson et al. (2018) utilize LC-MNL to establish four groups based on the Canadian home's thinking. LC-MNL may thus include market segmentation attitudinal features. However, ICLV may solve three main constraints. However, the prediction of ICLV does not need attitude indicators by attitudinal mapping indicators, latent variables and socio-demographics in the component SEM (Kamargianni et al., 2015). This argument naturally centres on the attitudes' temporal stability. In the absence of severe situations between data collection and prediction, we may assume that attitudes are temporarily constant (Sheeran and Abraham, 2003). Secondly, the LC-MNL may be empirically unstable (i.e., lack of interpretability and numerical problems in the estimate), owing to the multicollinearity and the explosion in space parameter, containing too many indicators to reflect actual customer behaviour (Bhat and Dubey, 2014). Including answers to nine items on the five-Likert scale, for example, leads to 36 strongly linked explaining factors. ICLV can face this issue by translating latent variables to a lower-dimensional space (Ben-Akiva et al., 2002). Third, because attitudinal responses are a proxy for the attitudes and measurement errors are observable, they may lead to partial estimates directly explaining factors (Ashok et al., 2002). The iCLV architecture offers a smooth method for measuring and correcting the underlying attitudes concurrently.

Ghastri et al. (2019) used ICLV in New South Wales, Australia, to evaluate the perceived benefits of E.V.s. They contain three SEM attitude variables that capture consumer awareness of the environmental impact of E.V.s, E.V. design and E.V. safety advantages. Jensen et al. (2013) estimate an ICLV model that integrates the ecological, technological, and auto-service concerns of customers into their preferences while examining how consumers' experiences with driving an E.V. affect their choices. Kim et al. (2014) is developing an ICLV-driven buying-intention model, where vehicle characteristics, the latent attitude of environment, battery and innovation are concurrently assessed, and social influences on E.V. choices are evaluated. SEM and the nested logit models are sequences estimated by Nazari et al. (2019). While SEM defines latent structures linked to green travel patterns, the layered logit model predicts preferences of fuel type.

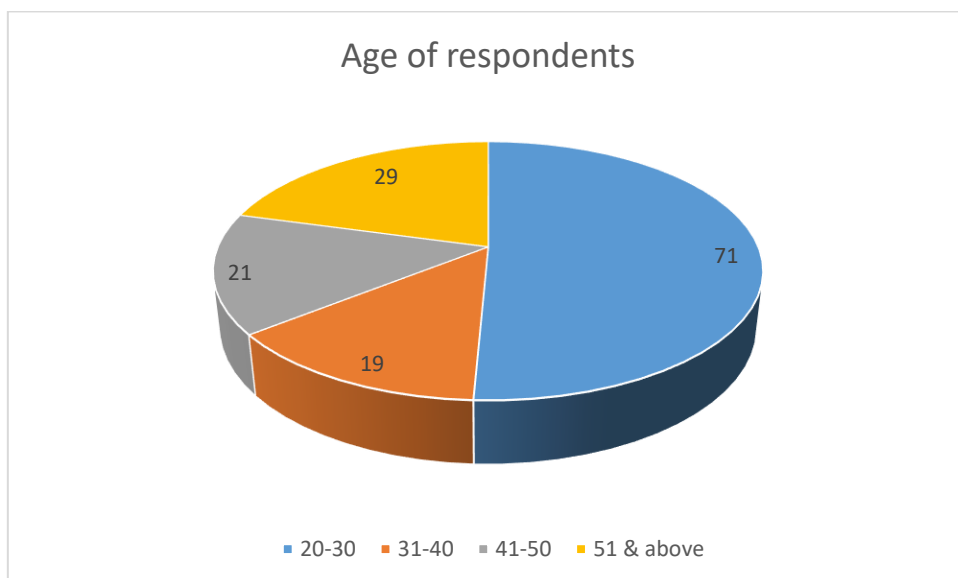
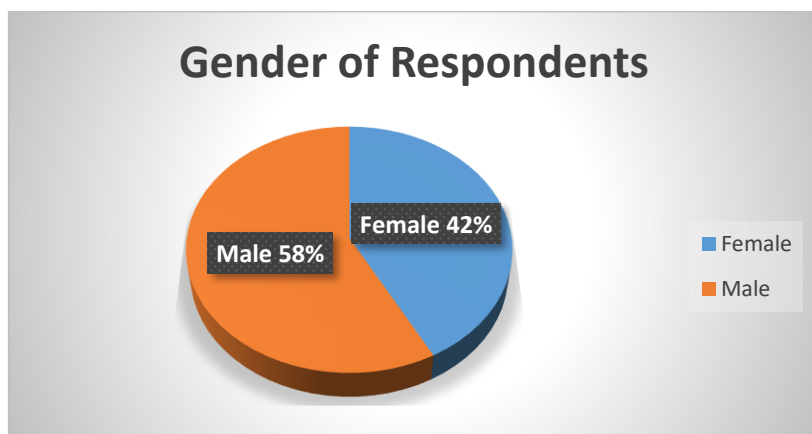
Research Methodology:

In India, electric vehicles are few on the road and in the market. Potential E.V. adopters/users may have never seen, driven, or charged an electric car before.

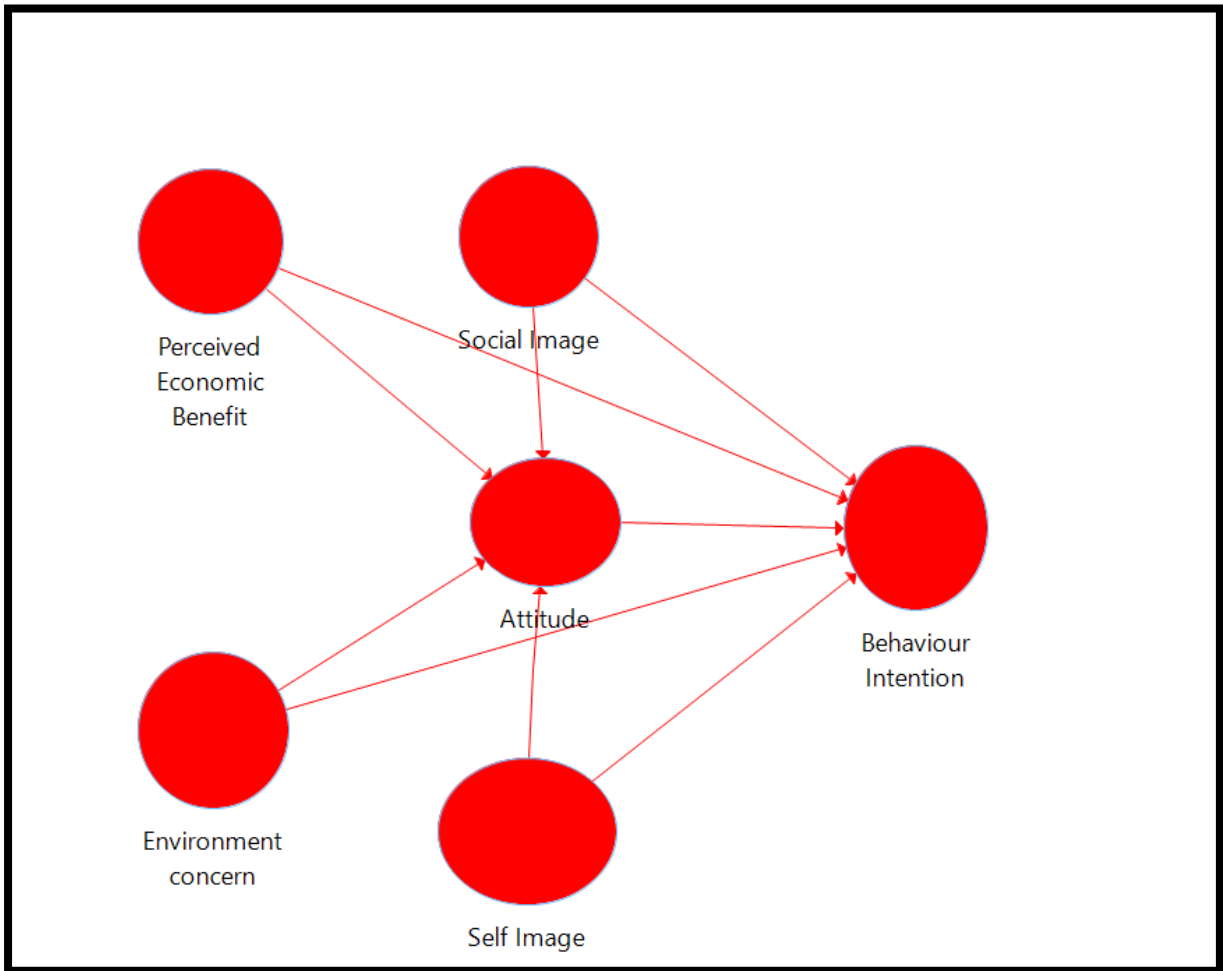
The characteristics of these vehicles are unfamiliar to most people. A systematic questionnaire was used to collect information. The instrument that was created contained data about constructions and their components. The questionnaire was divided into two sections. The first section focused on the respondents' demographic features, such as gender, age, education, household income, and the number of automobiles in the family. The model variables are measured in the second section of the questionnaire.

Sample Size

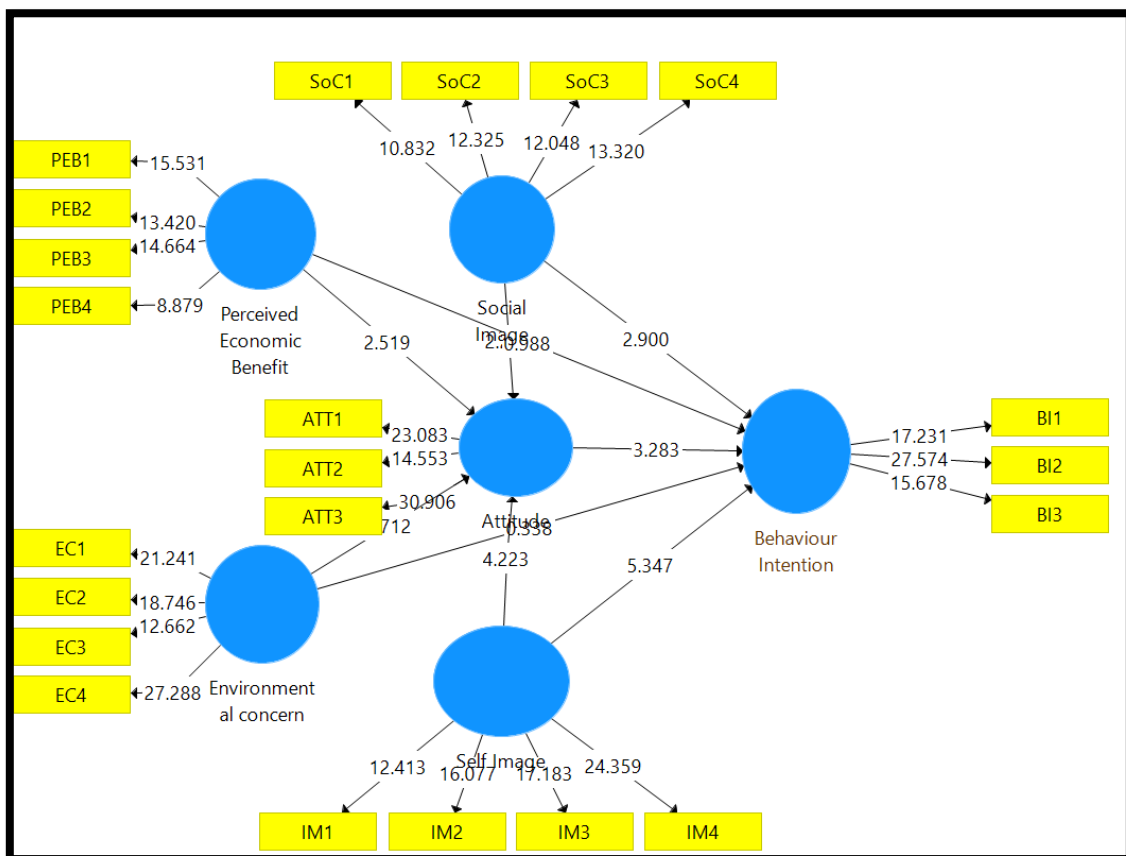
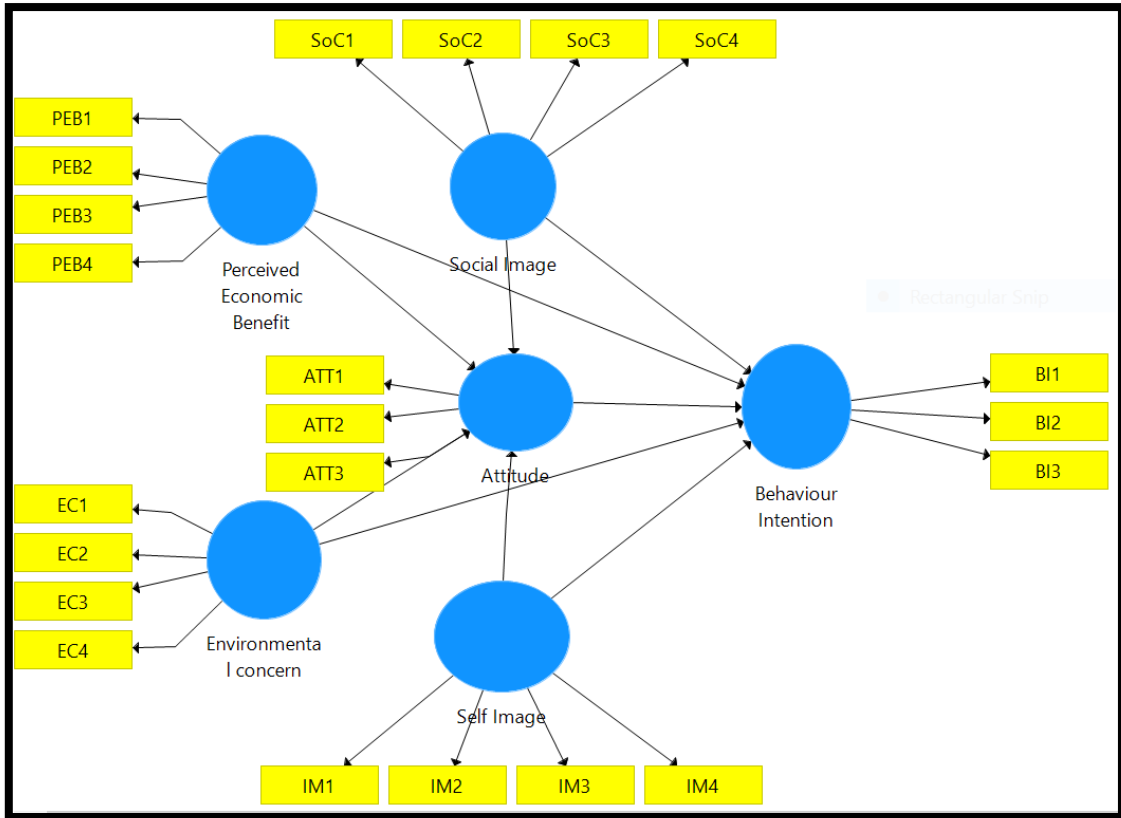
There are 140 valid replies in this article. The respondents that were chosen were current automobile owners. They lived in the National Capital Region (NCR). Delhi, Mumbai, and Pune are the three largest cities in India. There were no missing data points, and the replies were correct.



Proposed Model for EV Adoption in India



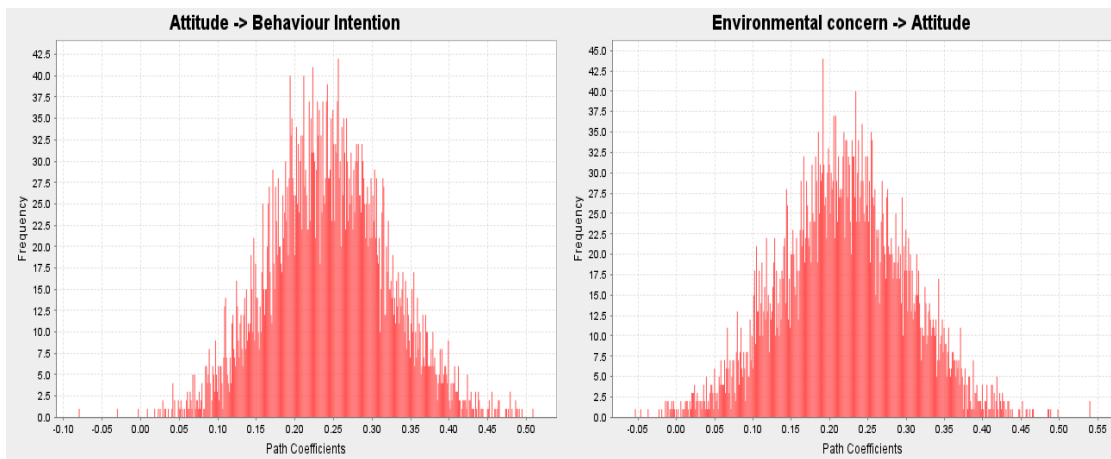
Note: PEB: Perceived economic benefit; EC: environmental concern; IM: self-image; SoC: social influence; ATT: attitude; BI: behavioural intention.

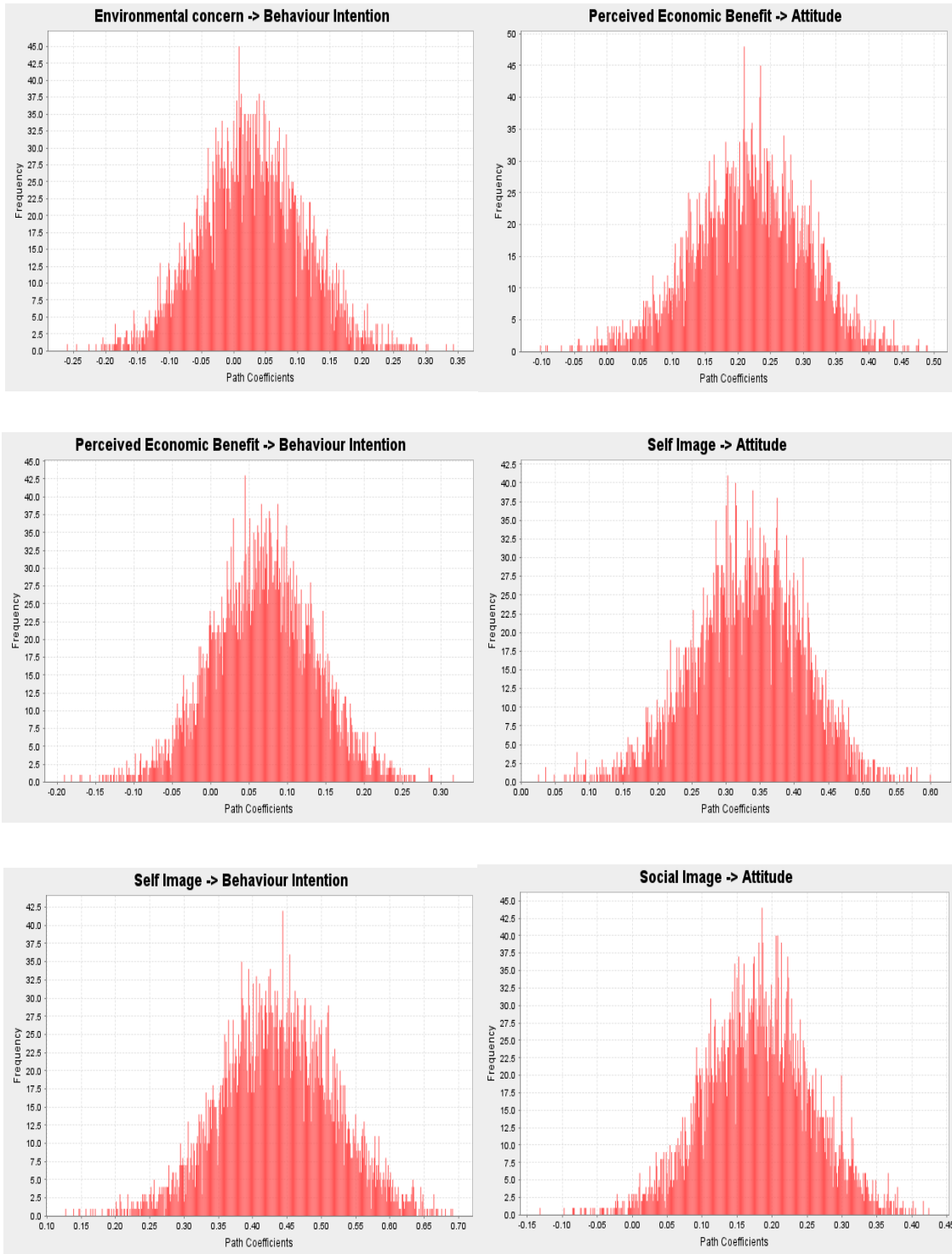


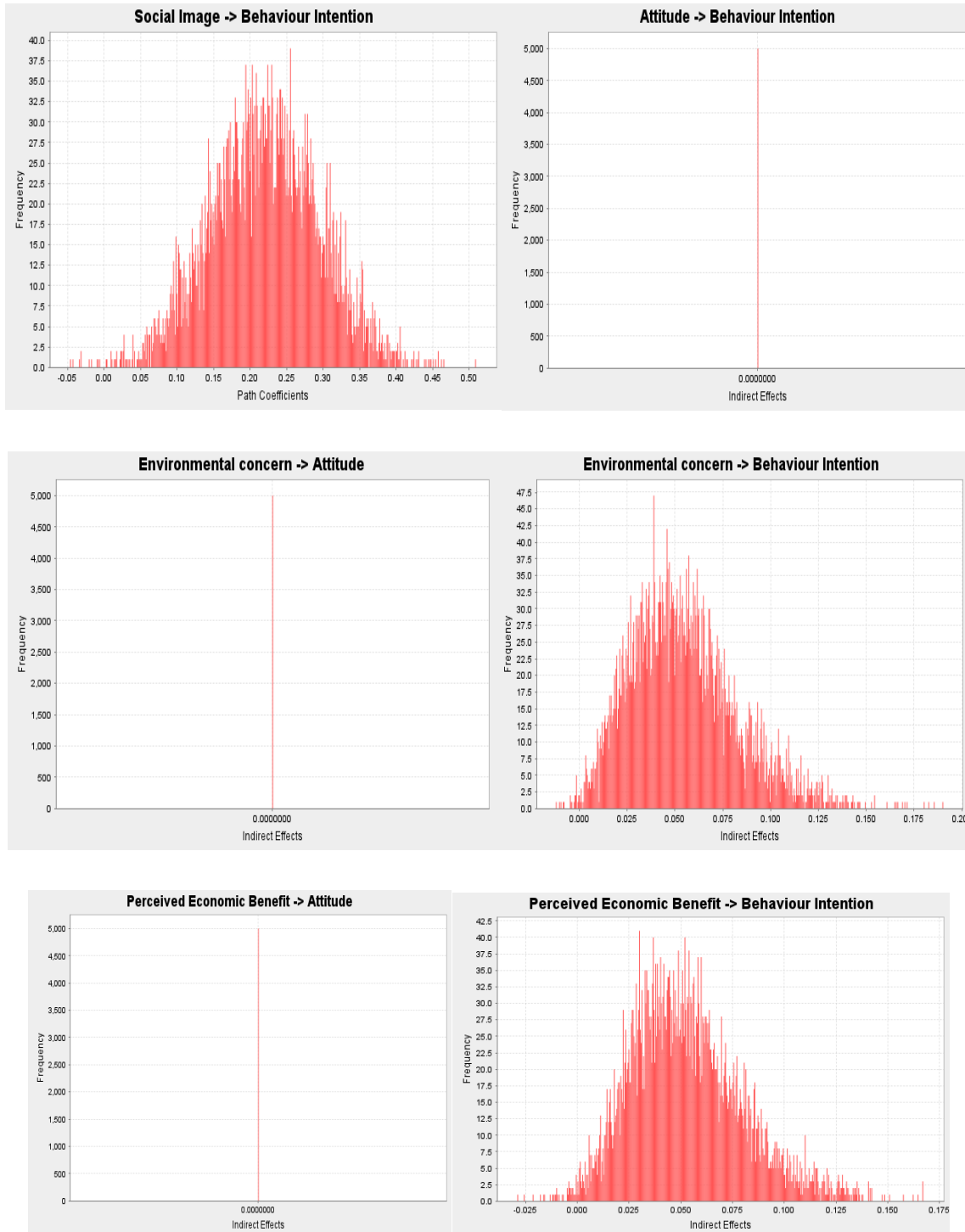
	Original ...	Sample ...	Standard ...	T Statistic...	P Values
Attitude -> Behaviour Intention	0.249	0.244	0.076	3.283	0.001
Environmental concern -> Attitude	0.221	0.219	0.082	2.712	0.007
Environmental concern -> Behaviour Intention	0.027	0.028	0.080	0.338	0.735
Perceived Economic Benefit -> Attitude	0.216	0.218	0.086	2.519	0.012
Perceived Economic Benefit -> Behaviour Intention	0.066	0.069	0.066	0.988	0.323
Self Image -> Attitude	0.337	0.332	0.080	4.223	0.000
Self Image -> Behaviour Intention	0.440	0.436	0.082	5.347	0.000
Social Image -> Attitude	0.172	0.180	0.076	2.267	0.023
Social Image -> Behaviour Intention	0.216	0.220	0.075	2.900	0.004

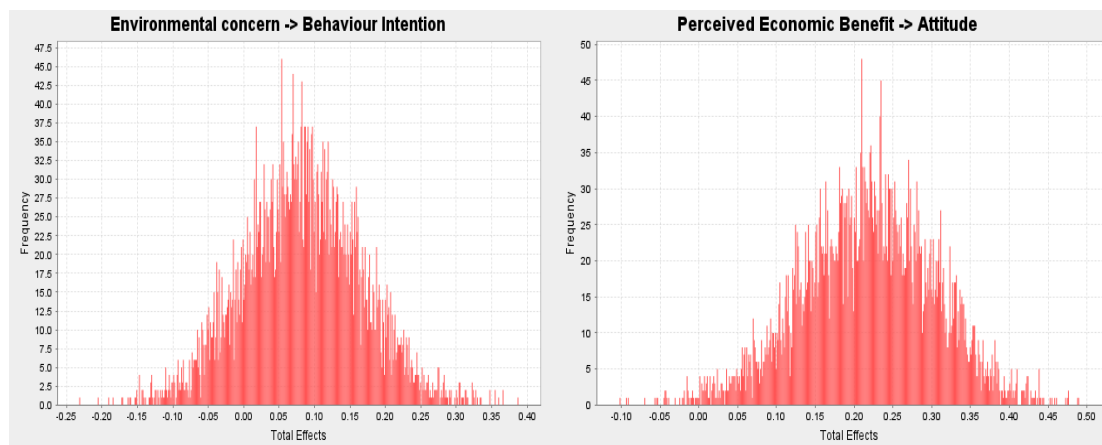
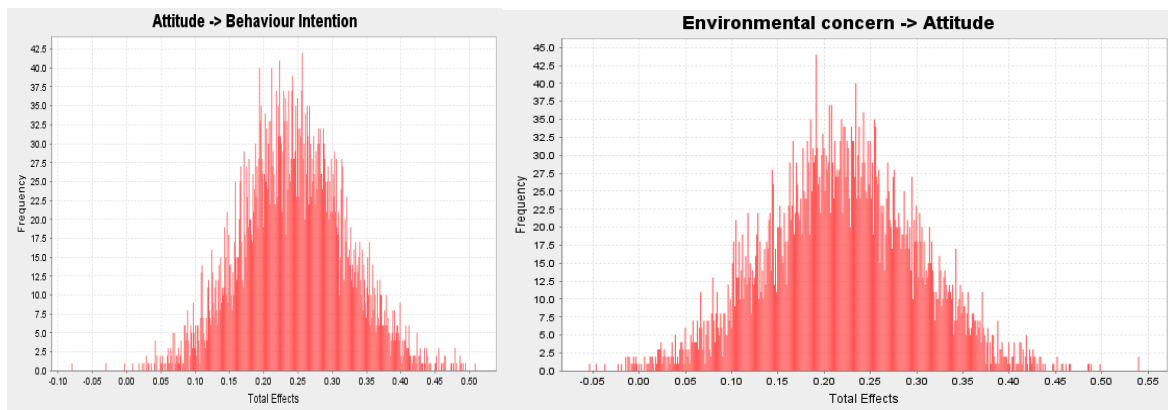
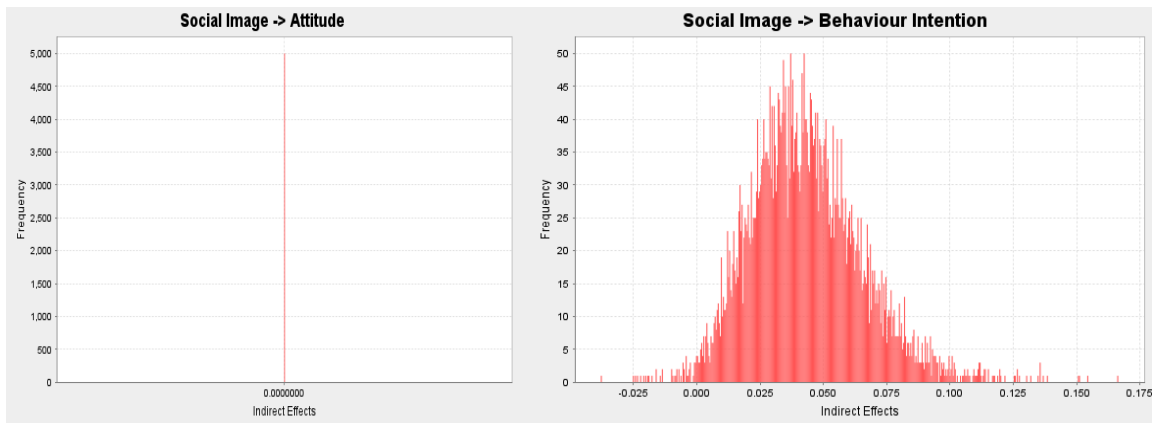
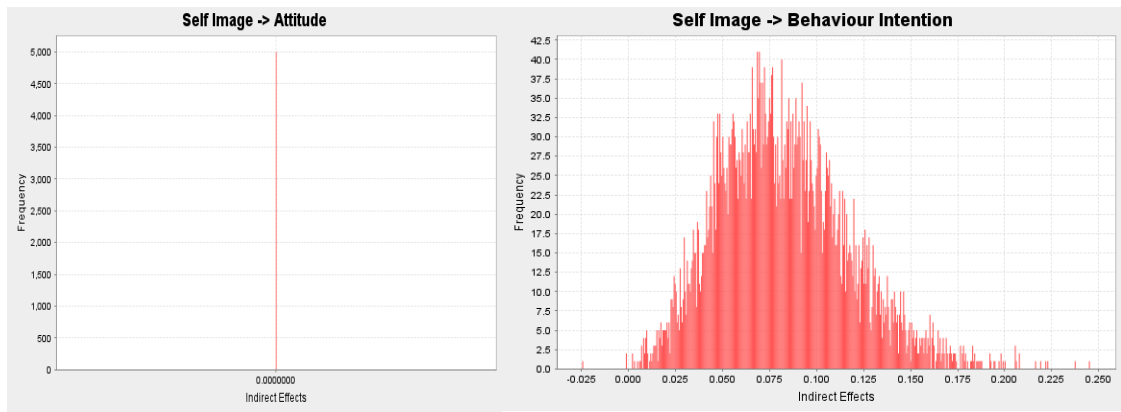
	Original Sample (O)	Sample Mean (M)	2.5%	97.5%
Attitude -> Behaviour Intention	0.249	0.244	0.097	0.396
Environmental concern -> Attitude	0.221	0.219	0.058	0.375
Environmental concern -> Behaviour Intention	0.027	0.028	-0.124	0.185
Perceived Economic Benefit -> Attitude	0.216	0.218	0.043	0.379
Perceived Economic Benefit -> Behaviour Intention	0.066	0.069	-0.061	0.200
Self Image -> Attitude	0.337	0.332	0.167	0.479
Self Image -> Behaviour Intention	0.440	0.436	0.273	0.597
Social Image -> Attitude	0.172	0.180	0.029	0.328
Social Image -> Behaviour Intention	0.216	0.220	0.075	0.366

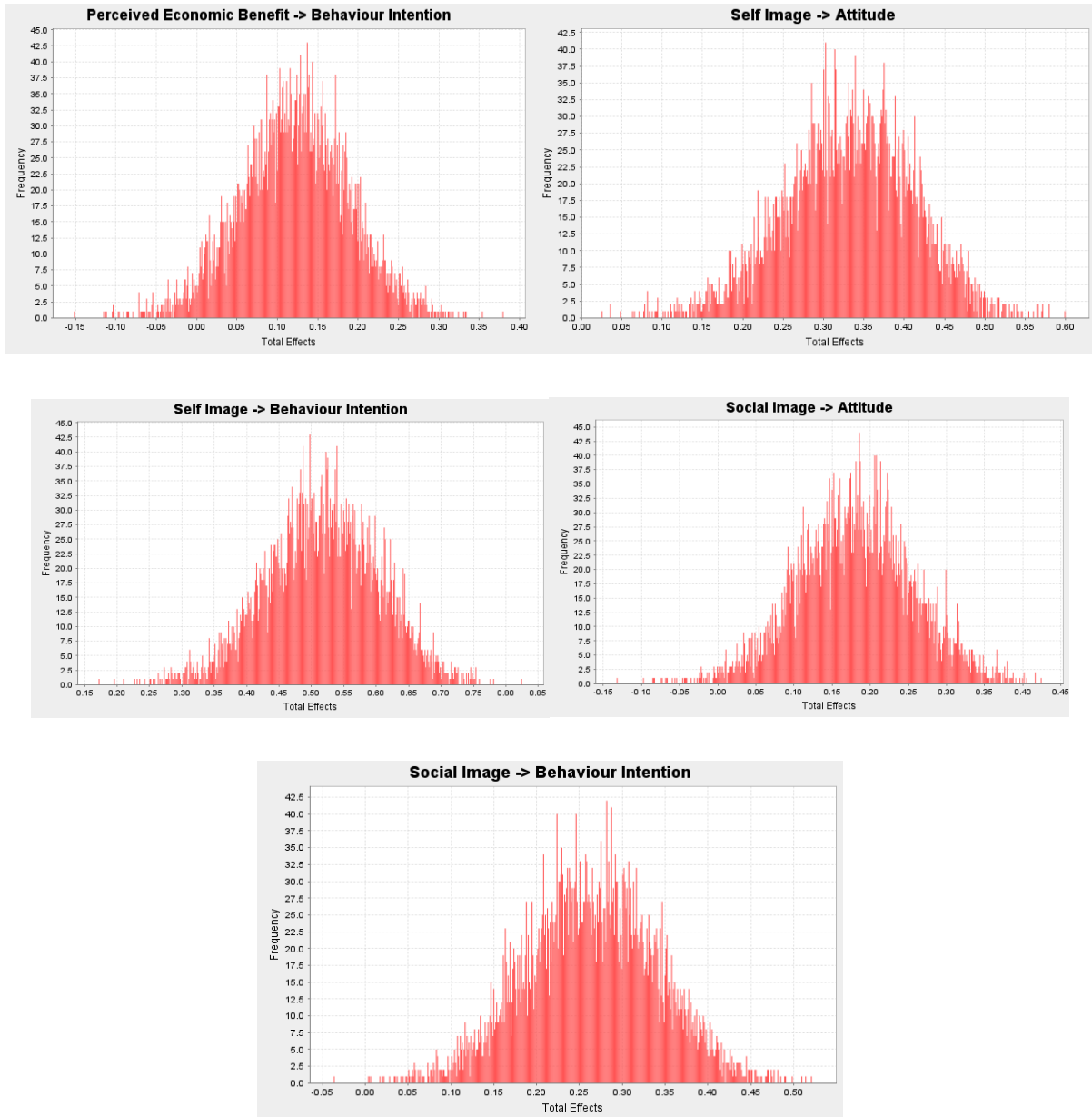
	Original Sample (O)	Sample Mean (M)	Bias	2.5%	97.5%
Attitude -> Behaviour Intention	0.249	0.244	-0.005	0.109	0.407
Environmental concern -> Attitude	0.221	0.219	-0.002	0.063	0.381
Environmental concern -> Behaviour Intention	0.027	0.028	0.001	-0.122	0.186
Perceived Economic Benefit -> Attitude	0.216	0.218	0.002	0.034	0.371
Perceived Economic Benefit -> Behaviour Intention	0.066	0.069	0.003	-0.070	0.191
Self Image -> Attitude	0.337	0.332	-0.006	0.178	0.484
Self Image -> Behaviour Intention	0.440	0.436	-0.004	0.283	0.604
Social Image -> Attitude	0.172	0.180	0.008	0.011	0.314
Social Image -> Behaviour Intention	0.216	0.220	0.004	0.069	0.356











Discussion:

The goal of the study was to look at the elements that may impact E.V. adoption. Technical issues, financial incentives, infrastructure, and E.C.s were the subject of the previous research. Perceived Economic Benefit, E.C., SoC. In, and I.M. were all independent variables in the study's model. To test B.I., the ATT was used as a mediation variable. The PEB is unrelated to the B.I. to embrace E.V.s, according to the study. Instead, it has a significant beneficial impact on ATT. The EC and the SoC are just partial predictors of the B.I., but they significantly impact the ATT. E.C. was found to be a partial predictor of B.I. As a result, all stakeholders must collaborate for E.V. to become more widely adopted.

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THE NEW CONSUMER BEHAVIOUR PARADIGM IN GROCERY SHOPPING AMID COVID-19: PERPETUAL OR TRANSIENT?

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Abstract:

The COVID-19 epidemic, which began in the year 2020, shook the planet to its core. This has resulted in panic purchasing, bare shop shelves, low stock levels, and a significant rise in internet sales. Adapting to customers' changing purchasing habits in the food industry has been a challenge for supermarkets, manufacturers, marketers, and other companies in recent years. Previous studies showed that value and quality are the two essential variables in the consumer decision-making process and that customers in crisis circumstances are more price sensitive and concerned about the perceived quality of food items. By looking at price sensitivity and perceived quality within two particular food categories (meat and fruits and vegetables), this study went beyond panic purchasing behaviours to find out whether consumer buying behaviour has altered during COVID-19 pandemic. Determining how India's residence affected results was also examined. Consumers in New Delhi, India, were polled through an online questionnaire using a quantitative approach. 120 customer responses were reviewed. Because to COVID-19, it seems that consumers' purchasing habits related to price and quality of goods like meat, fruit, and vegetable have changed. There was no evidence that residence had a moderating impact. As a result of its exploratory character, the study provides numerous indications for future research in a unique crisis scenario that has never been examined previously.

Keywords: consumer behavior, COVID-19, grocery shopping

Introduction:

Background

The news of a new virus began in late 2019. In Wuhan, the Chinese authorities announced multiple instances of unexplained pneumonic illness to the World Health Organization. Most of infected individuals were working on the "wet market." A wet market is comparable to that of farmers, where local farmers offer perzzy food and animal products such as rats, and multiple reptiles. Wetness in these markets is a result of sellers washing the fish and veggies and making the floor damp and moist (Westcott & Wang, 2020). This novel illness, coupled with a virus, was identified as coronavirus disease by World Health Organization (COVID-19) as Severe Acute Coronavirus Syndrome 2 (SARS-CoV-2); (World Health Organization, 2020b). The WHO stated on 11 March 2020, "COVID-19 may be described as a pandemic,"

as case COVID-19 grew 13-times outside of China within two weeks (World Health Organization, 2020). The globe has surmounted similar occurrences, in which illnesses crosses species barrier and infects humans. But this time, situation is unlike since humans transmit the illness more readily with each other, and more than previously, people are more closely related and thus the virus moves across the world more quickly. Diseases are extremely rapidly occurring in individuals and leading to a worldwide pandemic from one city to another via travel (Garthwaite, 2020). In several countries, schools and colleges have been closed, events have been cancelled, retailers that did not sell necessary goods had to shut and supermarkets stayed open in order to prevent the spread of Coronavirus. However, governments around the world have taken various measures including but not limited to quarantine laws, lockdowns, curfews, and even closing borders, around the world very rapid and dramatic changes have taken place (GrahamHarrison, 2020). As the Nielsen study showed, the pandemic and its effects have led to changes in the consumer behaviour (Nielsen, 2020a). The study proposed a model with six main levels of consumer conduct which indicated early and shifting patterns of purchasing essentials like food and health supplies. Every level of criterion corresponds to various degrees of consumption. First level explains the proactive health purchase term, in which customers are increasingly concerned with purchasing goods which support their total health care and well-being maintenance, moving towards the second level of reactive health management. The government is launching health and safety initiatives at this level. Stage 3, which is termed a cupboard ready, is the following level. The behaviour of customers changes at this moment because of the minor limitation in the manner in which storing food is steady. The fourth stage of Nielsen's quarantined living preparedness involves a rise in online purchasing activity and in-store scenarios. In Level 5, the constrained life, consumers are beginning to worry about price since, for certain instances, price effects are limited and their purchasing visits are being decreased by consumers. According to Nielsen model, the final obstruction is a new standard. Everyone is now going back to their new daily routines, but the difference is now there is more awareness regarding health how important healthy lifestyle is, this is bound to be famous with e-commerce sector. When COVID19 quarantines rise above the worst hotspots in the nation, the last level of model is achieved and life begins to resume as it was before (Nielsen, 2020a).

Problem of the statement

Many individuals have been affected by the new coronavirus illness (COVID-19). Individuals have changed the way and quantity of manufacturing (and consumption) to control the spread of COVID-19. Data on households' usage in the United States indicate that, during the early stages of the COVID-19 epidemic, expenditures for air travel, food supply, public transport and other categories have significantly altered from week to week [1]. The food sector is perhaps the most influenced by the epidemic alongside the health industry [2]. The government has temporarily ordered to close multiple dining places in US, this affected almost everyone as 54% of US food intake consists of takeaways and not home, under normal conditions (US Department of Agriculture and Economic research Service). But foodstuffs are still fundamental human needs even during the epidemic. In fact, in all types of foodstuffs consumer spending is increasing [3]. Online merchants have seen by far the greatest rise in customer

spending on food. The normal market share among internet merchants in the United States is about 3-4%, but during the COVID-19 epidemic it rose to 10-15% [4]. Although suppliers of foodstuffs have also seen a rise in demand [5], mismatches in supply and demand offer difficulties for the industry [6]. In view of the above, we carried out an internet purchasing experiment during the COVID-19 epidemic. We vary in knowledge about the COVID-19 epidemic to investigate dynamic consumer behavior, close to Everett et al. [7] and Lunn et al. [8]. Our goal is to draw out preferences for four food shopping characteristics (e.g. techniques, time frames, basic requirements on order and charges), under different scenarios of the COVID-19 pandemic, using a sample of 900 grocery shops in the US. The following research question is to be answered: Do the customer choice for foodstuffs change significantly whether the number of new instances of COVID-19 is growing, stable or decreasing? The increase in the numbers of new COVID-19 cases may impact consumer behaviour, since contamination is likely in the event of physical closeness to others. Consumers may utilise new COVID-19 cases information to assist decision-making. Our research deals with the online purchasing literature from the late 1990s and the beginning of the 2000s (e.g., [9]). Recent studies have examined the impact of online grocery stores on buying behaviour, including shipping prices [10-12], shipping delays [13-15] and minimum purchase thresholds [16]. However, no studies have been conducted simultaneously using the four food purchasing characteristics. Moreover, our information is restricted to two publications, one on the Middle East Air Respiratory Syndrome (MERS) in South Korea [17] and the other, COVID-19 [18], concerning the effect of the outbreak on grocery shopping preferences. Although the two epidemics had a substantial effect on consumer behaviour, neither research took into account the role of buying methods, time frames, minimum order requirements and costs. Therefore, we add to the limited literature, which demonstrates the consumers' preferences under different COVID-19 scenarios for these food purchasing characteristics. During COVID-19, our new results explain several suggestions to academics, practitioners and policy-makers.

At the moment, we are all in a pandemic condition. Many lost their jobs and livelihood, and others lost their loved ones as well. Although many lost their livelihoods, the present circumstances also helped other people acquire corporate and consumer support. The present social distance standards and fear of contagion make personal shopping for food and other products almost difficult. Many major companies who were already in the retail industry have begun to offer food online to take advantage of the current scenario. In India, physical purchasing and internet shopping in every area have been significantly changing. In this article, we will attempt to comprehend and analyse the effect of the pandemic on physical purchasing and shopping online for customers. The purpose of this study is to gather and analyse the variables that customer considers significant during online buying, and above all to continue online shopping. After analysing the variables, we will look at areas that require development if businesses expect customers, even after the end of the epidemic, to continue buying online. The study has revealed that, due to several reasons, the number of customers purchasing food online has grown in two ways. It is, however, unclear whether or not such a tendency will persist after the epidemic. Through this article, we attempt to anticipate patterns in online grocery shopping after the epidemic has ended. In a hopeful way, we want to assess how the online market is impacted, so that the pandemic crisis is finished soon.

Research Question:

The Research paper focuses on the following Research Question:

“The New Consumer Behaviour Paradigm in Grocery Shopping amid COVID-19: Perpetual or Transient?”

Literature Review:

Buying Behaviour

Consumers and their behaviour have been scientifically and practically studied for many years. Research on consumer behaviour extends well beyond the marketing sector. In the late 1960s, research in this field began. Comprehension of customer behaviour in marketing is the basis for development of marketing strategies. Solomon (2017) states that a consumer is a person who recognises a want or a need, buys a product or service and passes the consuming process via three phases. However, a person's function is shifting in various situations, for instance, when parents shop for their kids, they are the buyers, while kids remain consumers. Consumer should be used as a word for the person consuming a service or product; the person making the transaction shall be the buyer (Solomon, 2017). The act of buying occurs purposefully, and it might not be deliberate. Most customers seek to fulfil the requirements with an acquisition, which results in the choice of high-priced goods with the abolition of desires. Nevertheless, during an economic depression, one must not purchase products with irrelevant prices. It must be noted here that in the last 25 years consumer behaviour has changed considerably and changes in the generations are being reflected (Solomon, 2017). Kar's (2010) research showed that customers have searched for more economic, responsible, and demanding new landmarks after the global economic crisis. Crises indeed have a social and economic effect on consumer behaviour (Kar, 2010). Purchase models have contributed to the description and forecast of consuming habits. They discuss how the wants and requirements of individuals have an influence on happiness, not only economically but also incorporating cultural norms, values and emotions (Chisnall, 1995). The Engel, Blackwell and Miniard (1995), and Theory of Planned Conduct are two of the most recognised models in the literature (1985).

Behavioural attitudes explain how individuals feel about a specific behaviour, and how they are affected by the intensity of the behavioural beliefs and the assessment of the possible results. Compartmental convictions enable people to comprehend the reason behind the possible repercussions of their behaviour. Subjective standards relate to how views of others may influence behavioural performance. It is possible to establish normative views that accept conduct or not, and the individual will then decide if the person will conform with the beliefs and opinions of the social circle. Perceived behavioural control defines the desire of the person to do particular behaviour, however subjective and objective factors such as beliefs interfere with the conduct (Ajzen, 1985). The TPB model was critiqued for the often-weakened connection between intention and behaviour, owing to behaviour control. Moreover, the

approach typically only seems helpful if positive behaviour attitudes and norms exist (Kothe & Mullan, 2015). Researchers also advocate for adapting and developing models for new versions to take into account the huge changes in society (Xia & Sudharshan, 2002). Although criticism has been received, the model given has already been utilised for explaining eating, e.g. the EKB model was used to describe eating behaviour across the world, because the food crisis impacts the whole supply chain throughout the food chain (Breitenbach, Rodrigues & Brandão 2018). On several occasions, the TPB model was utilised to predict behaviour of the food consumer, particularly in MFVs, connected to various age groups (Brug, et al., 2006). (Blanchard, Kupperman, Sparling, Nehl, Rhodes, Courneya, & Baker, 2009). These models will be used as motivation for building a custom version of altered purchasing conduct in the COVID-19 epidemic by studying what changes buying behaviour.

Factors affecting consumer behaviour

Many diverse variables impact purchasing behaviours, from wide-ranging cultural and societal effects to people's motives, ideas and views (Kotler & Armstrong, 2018). In general, it may be distinguished between internal and external variables which affect consumer behaviour (Hoyer et al., 2008). The internal elements may further be split into four groups or sections: cultural group, social group, personal group, and psychological group. Influences that act on the behaviour of large groups of consumers include cultural factors. Reference groups including family, social role, and consumer status can be stated as social influence variables. Age group, occupation, revenue, lifestyle and the personality or self-image of the consumer are personal variables which influence the purchasing behaviour. The motivation, conduct, perception and personal learning behaviour of each customer are psychological variables (Kotler & Armstrong, 2018).

However, the distinction is that Kotler & Armstrong (2018) take a general outtake and state that aforementioned variables impact the behaviour of consumers, whereas EBM Model dictates such aspects affect the purchasing decision process. The EBM model does not consider the above. Some of the psychological variables in Kotler and Armstrong's model include the individual variations in the EBM model (1995). (2018). Motivation, as an example, explains why individuals show a particular action and consists of various motivations, as can be seen in TPB, which are influenced by distinct human requirements. The motive thus helps to meet needs. Maslow's hierarchical model is based on the many urgencies of individual needs and therefore show how high needs only work in the behaviour of consumer if the subordinate is to some degree pleased. The higher the need in hierarchy, the more inessential it is for the individual's pure existence and thus more readily postponed (relative priority principle) (Kenrick, Griskevicius, Neuberg & Schaller, 2010). Physiological requirements form the foundation of this pyramid. These requirements include oxygen, food, drinking water, and cleaning (to prevent disease), relaxation, discomfort and warmth. The next level of requirements, safety, can only be fulfilled if the least of these fundamental needs is provided (Kenrick et al., 2010). For instance, workers must cope with uncertainty at work amid an economic crisis. Job instability leads to the loss of position, advantages or communication with colleagues who are fundamental requirements of people (Carrigan, 2010).

In addition, the consumers' mindset has a major influence on the purchasing behaviour. The behaviour is related to the individual's expectations and inner attitude towards a product, a person or any other thing. In addition, depending upon participation, attitude can be predicted. Low-involvement products have a less chance than large-scale acquisitions to be anticipated. In addition, confidence in attitude tends to be greater if more information is provided (Hoyer et al., 2008). However, for this study it is important to determine the impact on predictive behaviour of the degree of participation. As this study investigates the purchasing behaviour in a low participation purchase, it's hard to anticipate the behaviour. Factors linked to the scenario include the social environment and physical surroundings, the objective of purchase, the time of day or the season in which purchase took place, the urgency (if any) and buyer's status during the purchase. A clean distinction between the influencing variables associated with situations and the primary stimulus cannot always be made. However, it may be presumed that an event that causes a purchase decision might be addressed as an attraction. An event that affects just an already started procurement decision may instead be regarded as an influencing element (Hoyer et al., 2008). Hence, it must be correctly and precisely assessed, while investigating the consumer buying behaviour of MFV, that coronavirus epidemic changes the buying behaviour.

Price and Quality

"The amount of money charged by the Kotler & Armstrong 2018 product or service" is defined as the price. More generally, the price is the total of all values that clients give up in order to obtain the advantages of having or utilising a service" (p. 308). Price has historically influenced the purchasing behaviour. In the purchase selection process, non-price variables in recent decades have nonetheless become extremely significant (Kotler & Armstrong, 2018). Consumers take their money to the businesses where the products are fairly priced (Daskalopoulou & Petrou, 2006). Nonetheless, it has been shown that the price is €9,99 less than €10 since the perceived price is different for customers. That is why most of the food shop pricing finish with a 9 (Manoj & Morwitz, 2005). The goods should never be under-priced for the customer, though, else they think that the quality is too poor (Monroe, 1976). Furthermore, the degree of price sensitivity varies with the customer; some may be impacted more than others by price fluctuations. But price-intensive customers have no objection of buying the product at any cost (Hoyer et al., 2008). Consumers more sensitive to price influences buying choices mainly on absolute price thresholds. These consumers previously set a specific price range that they are prepared to spend in respect of a contemplated item. The purchasing habit won't change if the price of the product is within this range. Attributes like quality change the purchasing propensity, while the price is over the price range (Vastani & Monroe, 2019). Price data at food shops may differentiate between men and women, with men being charged higher than women (Vastani & Monroe, 2019). Shopping frequency influences the benchmark price, with higher shopping frequency, price sensitivity is lowered on the part of consumers. Furthermore, a greater frequency leads to cheaper costs being preferred for customers (Jensen & Grunert, 2014). Customer sometimes associate the quality of product with its price. That is because they promised them a particular quality and vice-versa due to the experienced purchasing a certain goods at this price. When prices are employed as a quality indication,

price-quality ratios are overestimated (Hoyer et al., 2008). Although these two influencing variables may be merged since one is an indication for the other, they are taken into account and evaluated independently in this research.

Since the emergence of COVID-19, customers believe that they would pay extra for Quality Assurance and confirmed safety requirements. Consumers purchased goods of cleanliness, durable prepackages and canned food for the sake that they were guaranteed safety and therefore quality. Moreover, customers care about the origin of goods, since the local items feel safer, particularly as regards food, because this ensures that product did not come in contact with COVID-19 (Nielsen, 2020b). The term quality can be generalised as supremacy. Extensions may describe recognised (or perceived) quality as a customer assessment superiority and excellence of product. Perceived quality is different from objective quality. According to objective quality, technological excellence that is quantifiable. Some experts say, however, there is no objective quality, and thus it mainly covers perceived quality (Zeithaml, 1988). Perceived food quality mostly relies on the product. Moreover, a summary that includes all characteristics of the product is necessary to evaluate quality of the product (Steenkamp, 1997). Aforementioned concept has many characteristics that define a whole range of criteria for the overall quality that customers perceive. This multi-dimensional impression of the quality is created in a single dimension, which strengthens certain characteristics and completes the meal decision (Grunert, 1997). The perceived quality of foodstuffs starts with product's physical appearance and communication (price tag). Randall and Sanjur (1981) states physical features (consistency, size, shape, colour) to affect meal choices too. The relationship connecting the food and the customer, the setting and the time also influences the perceived quality (Issanchou, 1996). Grunert (2005) classifies under search, experience, and believability the characteristics of perceived quality for food. It's also proven that the meat or colour level of fat is the first pre-purchase assessment indication. The experience has 2 major attributes texture and flavour, which is a major section of the after-sales consuming experience. Customers will seek the quality of substitution indicators. The last characteristics, the credibility, are always unclear for the customer since it's hard for customers to verify, if the product has any promise such as safety, health naturalness, and no animal cruelty associated with it. Sometimes these qualities can only be differentiated, which is why intrinsic and foreign characteristics are also distinguished.

Buying behaviour and crisis

Ang et al. (2000). States, consumers have studied the Asian financial crisis and decreased consumption and waste in the time of crisis by looking for information about the products before deciding to go for the purchase. Consumers also focused on needs over pleasures, changing into inexpensive goods, purchasing local brands instead of international ones. The changes in purchasing behaviour may vary based on individual's income and how financially sound consumer was prior to the financial crisis (Ang et al, 2000). The merchants had to react to the changing purchasing behaviour in 2008 during the global financial crisis by reconsidering the structure of their marketing mix, prices, products, placements, promotional and human resources owing to an instable environment. In addition, the provided goods did

more than simply meet a need and but established an emotional connection to build consumer loyalty since the merchants were eager for their recipients (Mansoor & Jalal, 2011). In the current epidemic, COVID 19 showing that Unilever has chosen to halt and reorganise its ads to save money on outdoor marketing, similar behaviours between businesses and consumers are shown. Unilever began to seek for cheaper alternatives and was preparing for long-term shifts in customer behaviour. Unilever anticipated to see a rise in consumer expenditure on domestic cooking and cleaning with household products as customers were likely to remain at home longer following a pandemic (Marketing Week, 2020).

In science, price changes in purchasing behaviour in a recession have been greatly influenced because of employment insecurity and an unstable economic environment (Hampson & McGoldrick, 2013). In the Asian financial crises, pricing had a significant effect on altered purchasing patterns as customers concentrated on lower costs and expressed more worry about the value for money (Ang et al., 2000). In recession customers have been made more vulnerable to pricing and discounts. Hampson and McGoldrick (2013) suggest. The altered purchasing behaviour indicates a higher price awareness, as customers only concentrate on cheap costs. The price grows increasingly worrisome in most recessions as disposable income falls. Recessions also tend to be social, so even those consumers, not impacted by the recession, are more aware of the price (Hampson & McGoldrick, 2013). Furthermore, in recessions, consumers had less shopping excursions in Hampson and McGoldrick (2013). In addition, less disposable revenue reduced the quantity of purchases and customers shopping with shopping lists and more pre-planned buy-ups (Hampson & McGoldrick, 2013). In contrast, the shopping frequency of McKenzie, Schargrotsky and Cruces (2011) rose during crises and consumers purchased goods in lower quantities instead. Kosicka-Gebaska and Gebaski (2013) found that in 2008, as consumers purchased a smaller portion of meat during the crisis due to declining capital, the global Financial Crisis increased the consumer sensitivity, but changed purchasing behaviour even long after the crisis and the consumer had more capital. Chamorro, Miranda, Rubio, and Valero (2012) suggest that prices may play a greater influence in consumer choice making than perceived quality in prior Grunert (2006) financial crisis scenarios, but little information on fruit and vegetables in a financial crisis is given. Vlontzos, Duquenne, Haas, and Pardalos (2017) argued that fruits and vegetables have differed across ages and gender in past financial crisis circumstances, e.g., the priority for children's and pregnant women's health advantages was given to fruit and vegetables, thus price is not taken into account. Arechavala et al. (2016) stated, adolescent females ate higher quantity of vegetables and fruits in comparison with boys amid the financial crisis in Barcelona.

Depending on the nature and size of the crisis, perceived quality may have different impacts on the different purchasing behaviour. Prices may play a dominating role in altered purchasing behaviour in a financial crisis, as stated before. But customers may give priority to quality above cost during a health pandemic (Sans et al., 2008). During the BSE crisis, consumers avoided certain items that were considered potential health risks, like fresh beef (Sans et al., 2008; Arnade et al., 2009). Furthermore, Consumers put a huge emphasis on quality, and negated other characteristics including price and certainly the sale of fresh beef went down, until more control was done (Grunert, 2005). The BSE crisis saw the nation of origin as

essential in the quality assurance process, leading to the establishment, during the crisis, of a fresh beef quality badge in France for promotion of French local beef. In previous crisis situations little has been found about fruit and vegetables, but Arnade et al. (2009) found that consumers are avoiding certain products in fruit and vegetable crises as well as crises involving meat, as was the case with the E. coli outbreak in 2006 where consumers avoided fresh spinach while overall consumption of the leaves remained high.

Research Methodology:

Research approach and Data collection

A paradigm is a worldview or a set of linked beliefs about the universe that underpins every scientific study (Kuhn, 1962; in Slevich, 2011). Ontological and epidemiological factors make up the study paradigm (Bell, Bryman & Harley, 2018). It is important to distinguish between ontological and epistemological concerns when considering the nature of reality (Bell et al., 2018). At its core, it is concerned with social entities and their existence as well as whether or not they may be thought of as objective or just social constructs. To begin with, objectivism holds that social phenomena exist independently of social actors, whereas constructivism holds that social phenomena and meanings emerge through interaction with others, and that they are always being re-evaluated (Bell et al., 2018). Three types of epistemological positions exist: Positive epistemology is the application of scientific techniques to the study of social reality. To qualify as knowledge, only anything which is perceivable by the human senses must be available to us. It is necessary to develop hypotheses that allow for the evaluation of explanations of laws. This research needs to be done objectively, and knowledge is acquired via facts that form the basis for legislation. As a result of realism, the scientific and social sciences should gather data in the same manner, and there is an external reality. In the natural sciences, it is essential to distinguish between people and things, thus the researcher must also understand the subjective meaning of activity (Bell et al., 2018).

Methods for carrying out empirical research are determined based on questions to be answered and the existing level of research in a particular subject area. There is a difference between two approaches: It's a method of showing how research and theory are intertwined. Researchers create one or more hypotheses that are experimentally tested based on prior research, whereas (2) inductive research makes a general assertion based on an individual instance or empirical results. An incident is observed, and a study is conducted to provide broad implications for the wider audience (Bell et al., 2018). As a result of earlier research on purchasing behaviour and how it changes in times of crisis, this dissertation builds on those findings. These studies will be experimentally evaluated based on COVID-19's unique crises. Because of this, this work is a positivist attempt to portray the reality of today's world. Positivism is based on the deductive premise (Bell et al., 2018). It is feasible to connect purchasing behaviour of MFV and perceived quality and price sensitivity during corona virus pandemic by using a logical method. As the researchers gather data, the hypotheses are validated and re-tested. In addition, this study is based on exploratory research since little is known about the present situation and previous theories and research cannot be applied to it. If you are looking for knowledge about a specific

issue, you should do exploratory research (Kotler & Armstrong, 2018). That's why we're calling this study "special".

In Bell et al(2018) .'s work, they distinguish between quantitative and qualitative research methods. However, there are differences between them, including epistemological and ontological issues. Deductive and positivist methods will be utilised to explain changes in the purchasing behaviour of MFV linked both to price and quality in the COVID-19 epidemic, as described in Chapter 3.2. In the future, a cross-sectional study will assist researchers understand how people behave during a pandemic in order to collect information. There is a chance to investigate connections between specified variables, since this is quantitative research. Because it is widely used in the field of consumer behaviour, this technique was selected to generalise findings (Chrysochou, 2017). Quasi-quantitative research uses surveys, which are also often employed in cross-sectional research to collect data (Bell et al., 2018). Using an online questionnaire, this study was performed. The researchers also chose this method since it is impossible to interview individuals face-to-face during a worldwide epidemic. Another advantage of using an online questionnaire is that it protects both researchers and responders from the virus. The researchers were geographically separated throughout the study procedure, which made it simpler to utilise this technique with this instrument. When it comes to exploratory research, Kotler and Armstrong (2018) believe that a questionnaire is a good instrument for gathering data. In addition, the online questionnaire is excellent for obtaining the appropriate data to confirm or deny hypotheses and to answer the research topic.

This thesis builds a theoretical framework using data from peer-reviewed papers and books, statistics from internet sources, and pertinent newspaper stories. Hypotheses were constructed using the gathered information from the sources to demonstrate the relationship between variables. When it came time for data collection, a questionnaire had to be developed. Before being used in a larger study, it underwent a pilot study with the researcher's friends and family, who are also part of his or her research sample.

Thereafter, items were modified to guarantee that what needed measuring was really measured (validity). Where instructions were missing, they were inserted to the questionnaire. A pilot test, according to Saunders et al. (2016), ensures the validity and reliability of the data collected. Since it is simple to use and can be customised to a variety of devices, the questionnaire was developed in Google Forms for the purpose of data collecting. In addition, the questionnaire was created and sent out in English, because the researchers believe that an English questionnaire is reasonable for both Sweden and Austria to respond to. People over the age of 50 were concerned that this might be a problem. On-line accessibility allows for a wide range of devices to complete the questionnaire, but this does not ensure that the questionnaire is completed by a specific person. Starting on May 11th, a self-completion questionnaire will be available online through May 16th. In order to reach age groups or socioeconomic classes outside of the researchers' network, the questionnaire was distributed via a network of researchers, and important individuals were chosen to transmit it to their own networks. It was distributed through LinkedIn, Facebook, and WhatsApp messaging to raise awareness of the

survey's availability. It was found that a total of 120 individuals answered to the COVID-19 buyer's survey.

As a first step, a Cronbach's Alpha test was performed on the dependent and independent variables to determine the internal consistency or reliability of the items. The results ranged from 0.799 to 0.836 (> 0.600). In addition, a factor analysis was performed for each individual variable, resulting in the Cronbach's Alpha test being accepted and trusted. As second stage, the Kolmogorov-Smirnov test was used to determine whether the calculated variables had a normal distribution. The Spearman rank correlation test was used since the bulk of the variables did not have a normal distribution. You may accept or reject H1-H4 by using the Spearman Correlation Matrix, among other things. We used multiple linear regression, however, in order to place greater emphasis on finding answers. Our study was able to identify the direct impact of the independent and dependent variables on each other, along with a potential moderating effect.

Hypothesis

H1: “There is a positive relationship between the price sensitivity of meat on changed buying behaviour of meat.”

H2: “There is a positive relationship between the price sensitivity of fruits and vegetables on changed buying behaviour of fruit and vegetables.”

H3: “There is a positive relationship between the perceived quality of meat on changed buying behaviour of meat”.

H4: “There is a positive relationship between the perceived quality of fruits and vegetables on changed buying behaviour of fruits and vegetables”.

H5: “Indian residents will weaken the positive relationship between price sensitivity of meat on the changing buying behaviour (*H1*) and the price of fruit and vegetables on the changing buying behaviour (*H2*)”.

Results and Analysis

Ethical concerns are frequently tied to the treatment of study participants, according to Bell et al (2018). There are four ethical issues that should be taken into account while doing research: potential damage to participants; insufficient or uninformed consent; invasion of privacy; and whether or not deceit is involved (Bell et al., 2018). The data was collected via a self-completed questionnaire. There was no identifying information requested in the questionnaire, other than the respondent's name and age and gender and whether or not he or she ate meat. We were able to protect the respondents' privacy by just asking for these demographics and without asking for any other information. In addition, the poll was delivered online rather than through email, which ensured anonymity. The introduction of the study informed the respondents that the

collected data would only be utilised for analysis in our dissertation and nowhere else, ensuring anonymity. When respondents are anonymous, they are more likely to answer honestly, which improves survey reliability and validity, as Bell et al (2018) explain.

A summary of the empirical data was provided by the descriptive statistics. Research on human subjects requires a careful examination of the statistical values used in the study to ensure they are consistent with the findings (Pallant, 2016). According to Table 1, dependent and independent variables, as well as the desired moderating variable and control variables are included in the descriptive statistics. There were a total of 222 respondents to the poll. Three-hundred and thirty-three respondents said they didn't consume meat, and twenty respondents said they lived somewhere other than India. For this reason, we excluded them from the data set. The final number of legitimate respondents was fixed at n= 120. An absolute change in meat purchasing behaviour was indicated by a score of 7 for the dependent variable, Changed Buying Behavior of Meat (CBB M), which averaged 2.77 on a 7-point scale. There has been little change in meat purchasing habits among the respondents to this survey, as shown by this finding. There is an average of 2.91 for the second dependent variable, Changed Buying Behavior of Fruits and Vegetables (CBB FV). MFV's general purchasing behaviour did not alter much as a result of the COVID-10 epidemic, according to our research.

	N	Min.	Max.	Mean	Std. Deviation	Cronbach's Alpha	Kolmogorov-Smirnov	Distribution
Changed Buying Behavior of Meat	120	1	6.46	2.87	1.25	0.823	0.071	Not normal
Changed Buying Behavior of Fruits & Vegetables	120	1	6.46	2.81	1.10	0.824	0.042	Not Normal
Price Sensitivity of Meat	120	1	7	3.80	1.46	0.810	0.023	Normal
Price Sensitivity of Fruits & Vegetables	120	1	7	4.25	1.25	0.779	0.043	Not Normal
Perceived Quality	120	1.83	7	5.70	1.24	0.844	0.000	Not Normal

Table 1: "Descriptive statistics"

Determined by their influence on the dependent variable, independent variables may help you determine whether or not your hypothesis is correct. Meat, fruits, and vegetables (MFV) price sensitivity and perceived quality (Q MFV) were specified as independent variables in this research. For example, the average price sensitivity for meat (P M) was 3.90 on a Likert scale of 7, meaning that respondents had a price sensitivity that is somewhat above medium. A greater price sensitivity for fruits and vegetables (4.15), indicates that respondents are more

sensitive to price fluctuations when they purchase fruits and vegetables than when they buy meat. Meat (Q M) and fruits and vegetables (Q FV) both had average perceived quality values over 5 on a 7-point Likert scale, indicating that respondents worry more about good quality when purchasing these product categories in COVID19. The standard deviation for the independent variables ranged from 1.14 to 1.36, depending on the number of independent variables used. In addition, the Cronbach's Alpha test showed that all dependent and independent variables had a high level of reliability. For example, Q FV has an internal consistency of 0.836%, whereas P FV has an internal consistency of 0.799%. Of the 169 people who took part in the poll, 50.9 percent were from Sweden and 49.1 percent were from Austria, according to the results. 46.7 percent of the respondents were female, while 53.3 percent of the respondents were male, resulting in a balanced proportion for the Gender variable. It's possible that the questionnaire was in English, and because English is not the first language of Austrians and Swedes it was essential to have the appropriate language abilities in order to participate in this study. None of the respondents had a degree lower than a high school diploma. In addition to a bachelor's degree (45.6%), a master's degree (28.1%), and a high school diploma or equivalent were among the respondents (23.7 percent). In the research, only a small percentage of participants had a PhD. (2.4 percent). Average age was 32 years old, while standard deviation was 13.61 years old. According to the research, the oldest and youngest participants were both 79 years old. In the Income control variable, there were a total of six income categories that could be selected from the dropdown menu. Each group had approximately 15 percent of responses, but the largest proportion was in the income range of \$1,000 to \$1,500 with 18.9 percent of respondents. Derived from Kolmogorov-Smirnov test, the descriptive statistics included included the results of the test. To determine if a particular variable has a normal distribution within itself, the Kolmogorov-Smirnov test is used (Drezner & Turel, 2011). As long as the significance value is less than or equal to 0.05, the variable is not regularly distributed. Spearman's rank correlation coefficient was selected since most of the variables do not have normal distributions (see Table 1). (Pallant, 2016).

Describing the data using descriptive statistics was the first stage, but now it's time to dig deeper into the data using statistical analysis. "Statistical reasoning" is utilised to give an interpretation of the data by analysing various variables and components (Ben-Zvi & Garfield, 2004). As a non-parametric correlation coefficient, the Spearman correlation may be compared to Pearson's distribution test of normal distributions in terms of determining the nature of the distribution being examined (Pallant, 2016). To analyse a correlation between two variables, this test calculates an r-value for the correlation within the range of 1 and -1. Accordingly, if the value falls between 0 and 1, we may anticipate more of the dependent variable based on how much the independent variable increases. As a result, the more of the independent variable we have, the less we may anticipate from its dependent counterpart (Xiao, Ye, Esteves & Rong, 2015). Weak or strong correlation relies on the study's sample size, significance levels, and what constitutes a small, medium, or high correlation. For example, $r=0.1-0.3$ is a modest correlation, $r=0.3-0.5$ is medium correlation, and $r=0.5-1$ is an extremely high correlation according to the rule of thumb (Hemphill, 2003). Spearman's correlation test and multiple regression analysis (which will be conducted next) have different significance levels. There is a debate in the literature over what the least acceptable significance level (p) of a correlation

and multiple regression analysis should be (Westfall & Young, 1993). In Zar's (2009) view, 0.05 is not an inviolable or holy number, but may be changed based on the sample size and the conditions of a research, even though it is the most widely recognised significance threshold. A p 0.10 significance threshold is deemed acceptable by the researchers since our work should be seen more as an exploratory study due to the current state of research and the fact that a pandemic in contemporary times has never been studied before. There is also the very strong significance level (***), strong significance level (**), weak significance level (*), and the very weak significance level of () for p0.001 (***). Table 2 shows the significance level for each connection. There is a modest positive and weakly significant correlation between CBB M and P M (.179*) because the value is below correlation is below 0.3, is positive, and the significance threshold is below 0.05 but also greater than 0.01 (Hemphill, 2003). In addition, there was a modest and positive connection between CBB M and Q M, although the level of significance was low (.146). In this case, though, the significance level was 0.053, which is near to the 0.05 threshold. This means that meat as a dependent variable has a strong connection with price sensitivities as well as perceived quality. Essentially, this implies that consumers' meat-buying behaviour is more likely to alter during COVID-19 the more price-sensitive they are believed to be. Ang et al. (2000) found that amid the financial crisis, customers were more concerned with lower costs and value for money. Hampson & McGoldrick (2013) also showed that customers are more price sensitive during a crisis because they are more conscious of pricing and price increases. Therefore, the hypothesis H1: There is a connection between perceived sensitive pricing of meat and altered purchasing behaviour may be accepted. Although the correlation indicates a weak connection (.179*), it should be emphasised that the significance threshold is quite low (Hemphill, 2003).

	1	2	3	4	5
1 Changed buying behavior of Meat	.932**				
2 Changed buying behavior of Fruits & Vegetables.	.169*	.187*			
3 Price Sensitivity Meat	.136†	.123†	.002		
4 Price Sensitivity Fruits & Vegetables	.189**	.233**	.824***	.011	
5 Perceived Quality	.227**	.224**	-.027	.850***	.022

Note: p < 0.001***; p < 0.01**; 0.05*: p < 0.10†

Table 2: "Spearman rank coefficient correlation"

Additionally, according to the findings of this research, consumers' meat-buying behaviour is more likely to alter during a pandemic the more worried they are about the quality of the meat.

Also, during the BSE crisis, customers paid greater attention to the quality of their food and thus purchased less meat than they would have otherwise (Arnade et al., 2009). H3: There is a positive connection between perceived meat quality and changes in meat purchasing behaviour may be accepted, again with a tiny correlation and extremely weak significance (.146), however the significant level was 0.053 which made it nearly weak and thus the hypothesis was accepted. It's important to note that the connection isn't very strong, but it's still substantial enough to impact changes in meat purchasing behaviour during a crisis. Les résultats de l'étude indicate that the dependent variable CBB FV has a high significant correlation (.213**), as does the dependent variable CBB FV's correlation with the independent variable Q (.214**). H2: The perceived price sensitivity of fruits and vegetables has a favourable effect on changing purchasing behaviour is thus acceptable, as does H4: The quality of fruits and vegetables has an impact on purchasing behaviour for fruits and vegetables. The more price-sensitive customers are, the more likely their purchasing habits for fruits and vegetables would alter in the event of a pandemic, according to the study. Consumers who care more about quality have a higher likelihood of changing their purchasing habits while buying fruits or vegetables in COVID-19. Fruit and vegetable independent variables exhibited a somewhat higher association with their dependent variable and also higher significance levels than meat independent variables did. If we look at both CBB M and the age control variable, we find a positive and weakly significant relationship (.179*), whereas we see a robust relationship (.221**) with the gender control variable. According to CBB FV and Gender findings, there's also a substantial positive connection (.212**). Control factors have an impact on dependent variables, which will be investigated further in the multiple regression analysis (MRA). The Spearman correlation also shows a high and positive significant connection between age and Q FV (.201**). The independent variables Q M (.239**) and Q FV (.201**) have a significant positive association with gender. According to our findings there is a weak negative relationship between respondents' education and their P M (-.155*), and the same is true for income and P M (-.168*).

As a result, individuals with a higher level of education tend to be less price sensitive than those with a lower income, which may explain why. There was a connection between age and education of .200**, as well as a correlation between age and income of .450*, and lastly between education and income of .293*** in the research. Although these connections are not significant in this research, other investigations have shown them to be significant. Age-related improvements in earnings were seen, as was the correlation between a higher education level and a greater income (Gerdtham & Johannesson, 2000). There's little doubt that these three control variables are interconnected. There's also no need to worry about Table 2's high correlations between the independent variables of price sensitivity and perceived quality since they're the identical items on a 7-point Likert scale (.825*** and 0.860***). Last but not least, the desired moderating variable shows a very strong significant negative association with the dependent variable CCB M (-.371***) and the dependent variable CBB FV (-.378***).

The chapter began with a description of the descriptive statistics of the variables utilised in the study, including dependent, independent, moderating, and control variables. Further exploration of connections between these variables was place using Spearman's correlation test.

However, the degree of support for the hypotheses H1-H4 differs depending on the significance levels for the correlations in the Spearman's correlation test as well as the multiple linear regression test, as shown by these studies. As a last step, we looked at whether residence in India had any moderating effects on the connection between the dependent and independent variables, but we didn't find any. That's why we're rejecting Hypothesis H5. In spite of this, the planned moderating factors had an unanticipated impact on the dependent variable.

Conclusion:

There are a number of consequences for practitioners and policymakers based on our results. First, customers place a high value on the time frame characteristic after the price and buying method attributes. The firm's competitiveness may be affected by its capacity (or inability) to reduce pick-up and delivery window times. It is possible for food merchants and delivery services to increase their capacity to deal with temporary oversupply by investing in capital and human resources (e.g., personnel and machinery). Aside from that, food merchants and delivery services may inversely link the cost to the time frame, based on the negative relationship between time and price. For the food merchants and distributors, the substantial variations in grocery shopping choices of customers who confront increment and decrement in new cases of corona virus, suggest possibilities for both sides. The number of new COVID-19 cases fluctuates dramatically from day to day throughout the India with a declining incidence may reverse in uncertain future. Customers' preferences for curb side pickup, delivery at home, and in-store purchases vary substantially between situations. In reaction to the dynamic nature of the COVID-19 epidemic, food merchants and distributors must be prepared to make the necessary strategic changes. Third, if limiting and reducing the spread of the coronavirus is the goal, authorities may consider encouraging curb side pick-up or delivery at home to promote a favourable shift in customer's behaviour. However, despite the fact that the number of new COVID-19 instances is on the rise, many customers still choose to buy in-store. Despite the fact that food shopping is a necessary activity, the in-store buying technique should be avoided in order to promote physical separation from one another. Snail-biting pandemics like as the Ebola pandemic are forcing policymakers to rethink how they might respond to the pandemic's rapid shifts while still ensuring the safety of vulnerable populations' food. On a purely academic level, we've shown the value of effect coding in terms of facilitating the understanding of reference levels and intercepts. There are benefits and drawbacks to both types of coding when it comes to analysis of choice experiment data (e.g., reference levels and intercepts) (i.e., unconventional interpretation of coefficients). When it comes to grocery shopping behaviour, much more study is feasible and required as the epidemic continues to impact the worldwide population, even with effect coding. Many methods to assessing or estimating the COVID-19 pandemic effect have been used in our research. A continuous variable may be used instead of a binary one in our study since our data is restricted to binary conceptualizations (i.e., the number of new corona virus instances is growing, constant, or falling). It is also possible that consumers may react to the proportionate rise or reduction of new incidents of COVID-19. In the same trend, our study's approach of attributing the fluctuation in supermarket consumers' choices to an external influencing element has limitations. As a result of the COVID-19 epidemic, however, grocery shopping preferences may vary according on a variety of

demographic (age group, income class) and behavioural factors (e.g., awareness regarding health and risk aversion). It is our hope that further study will integrate such concepts and enhance our knowledge of consumer behaviour during times of crisis.

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SKILLING OF THE INDIAN WORKFORCE

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Abstract:

The author has mentioned about skilling, reskilling, and upskilling. How it will affect the economy and its potential as well. The author has mentioned possible pathways for the need for skilling reskilling and upskilling. The author has reviewed secondary data in the literature review. Key points were upskilling in the adjacent area of skill is essential in this pandemic to survive in the job market. Basic soft skills should be starting for the reskilling.

An estimate of \$24,000 and 10,000 hours should be enough for reskilling. As the 4th industrial revolution is about to undergo it is better to be prepared for the new types of jobs. Competitive advantage can be kept among companies if the workforce is reskilled. Even by changing an existing job for a tougher one you can take it as a challenge and be upskilled. Employees over 40 are potentially at higher need to get reskilled. A mind-boggling amount of \$1500 billion can be potentially added to our economy just by reskilling our existing workforce. Almost 5.3 million new job opportunities can potentially open in India after reskilling.

The objectives of this research paper were to the impact of skilling, reskilling and upskilling on Indian workforce. To know the different pathways adopted by different nations for reskilling and upskilling of their work force. To know the employability status of students after graduation. To compare the efficiency between reskilling existing employees and hiring fresh graduates. Need of reskilling is mentioned by the author. Results and potential that reskilling will unlock are mentioned. Condition of colleges the skill embedding organization is stated. The research was done in the descriptive method in which primary and secondary data were used. 380 Responses were collected of which 30 were recruiters 100 were teachers and 250 were students. Two hypotheses were taken for study. The first null hypothesis was 'graduates are not ready for the corporate world.' The second null hypothesis was 'Reskilling of existing employees is less efficient than hiring new skilled workers.' The data was responses were collected by questionnaire and it was analysed.

The hypothesis was tested by the chi-square test. On megastat software.

Keywords: Skilling, reskilling, upskilling, workforce, re-education

Introduction:

Skilling means, training a person to better do their job by educating and embedding skills in them about the job. Reskilling means, training your employees with new capabilities to equip them for different position in the organisation. Upskilling means, to prepare employees for major upcoming change in their current position.

Darwin gave us the concept of survival of the fittest. Soon after wealth became a factor of being fittest, empires rose and gave birth to conflict then the innovative one or skilled empire won. Time passed and then the business empires rose, competition among businesses led them to find the most creative ways to survive in the market. To survive in the market, they have to be more efficient. This leads to giving preference to high skilled workers.

Human life drastically hanged with the rise of the scientific age. The introduction of new tools and technology affected our way of living, but now the frequency of newer needs and automation of jobs rose the problem of outdated skilled workers. To stay employed and be part of the economy reskilling of aged employees began. The employees who can still work but lacks skills, and are willing to learn are reskilled.

“It is not the most intellectual of species that survives; it is not the strongest that survives, but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself.”

- Leon C. Megginson

The corporate environment rose cutthroat attitude among workers as well as the greed of money and promotion started competition among themselves. Promotion is given to the one with a higher level is skills & the race to have higher skills begins here. Upskilling is the process in which an employee broadens his skill set mainly similar or related to his actual skill set. Upskilling can ensure the higher security of the job. E.g.: an accountant can do a management course and can become a manager.

Indian job market mostly consists of agriculture-based but in recent decades a rapid change can be seen as IT, manufacturing and construction have widened their presence. Having the potential to be the largest workforce on the planet it needs to be close to perfect, or else India will pay opportunity cost. Upskilling and reskilling are the after challenges, India needs to pay greater attention towards proper skilling of its current workforce.

The workforce is the backbone of any country. The stronger the workforce higher the chances of that country being a superpower. The economy flourishes if a strong workforce is added every year. Economic growth leads to higher living standards and a higher human development index. The strength of any workforce depends on the education system of that country. Higher HDI leads to better education and better education leads to a stronger workforce.

Review of Literature:

1. Sapana Agrawal, Aaron De Smet, Sebastien Lacroix, and Angelika Reich, 'To emerge stronger from the COVID-19 crises, companies should start reskilling their workforce now':- The author mention almost 14% of the global workforce will need reskilling by 2030 in this article. The author further explained critical and non-critical skills, the importance of flexibility in the work environment after pandemic **upskilling in the adjacent skill area**. They suggested the new skill set required for distant economies primarily to work remotely without physical interaction will be required. The important point of imbalance in demand and supply of talented professionals was raised. They concluded by mentioning 6 ways of reskilling.

2. Anand Chopra-McGowan, Shrinivas B. Reddy, 'What would it take to reskill entire industries?':- The author mentioned post-pandemic effects of deglobalization and digitalization have changed our way of operating in this article. Adaptability, communication, collaboration, and creativity will be enhanced by reskilling. The authors further explained the meaning of reskilling. He suggested that government, companies, workers organizations need to join hands for reskilling. Per person cost for reskilling is estimated to be \$24,800 And the time needed for reskilling is approximately 10,000 hours. He concluded by suggesting establishing councils for reskilling, support small businesses, and widespread the accessibility of reskilling.

3. Freddy Mgiba, 'Merger, Upskilling, and Reskilling of the Sales - Marketing Personnel in the Fourth Industrial Revolution Environment': A Conceptual Paper: - The author mentions the fourth industrial revolution in this research paper. The author further explained the need for the merger of sales and marketing divisions. He concluded by saying to maintain competitive advantage upskilling and reskilling of workers are essential.

4. Sally-Anne Barnes, Jenny Bimrose, and Alan Brown, 'Older workers' careers: upskilling, reskilling and transitions': - The authors mention different approaches to upskilling and reskilling in this research paper. Work-based upskilling was given more preference, make upskilling normal and fusing it in daily activity is mentioned. The authors further explained upskilling by switching to a more challenging job. They suggested if possible then redirect career with self-directed learning. They concluded by saying identify appropriate learning strategies, 6 months career break to employees. They found that employees over 40 may find it difficult to keep up with the upskilling process.

5. Robert E. Moritz, Saadia Zahidi, 'Upskilling for Shared Prosperity: - Authors have estimated that we can increase GDP by \$1500 Billion. India has 3rd highest potential to uplift GDP after China & the USA according to the authors. Upskilling can also weed out inequality in the job market. Business services and the manufacturing sector have the highest potential to make additional progress after reskilling the workforce. It also has huge potential to create new 5.3 million jobs by 2030. India has 2nd highest potential to create new jobs after the USA. According to the authors, 40% of workers will need reskilling for 6 months.

Objectives:

1. To know the impact of skilling, re-skilling, and upskilling on the Indian workforce.
2. To know the pathways adopted by different nations for skilling, re-skilling, and upskilling of their workforce.
3. To know the employability status of students after graduation.
4. To compare the efficiency between reskilling existing employees and hiring fresh graduates.

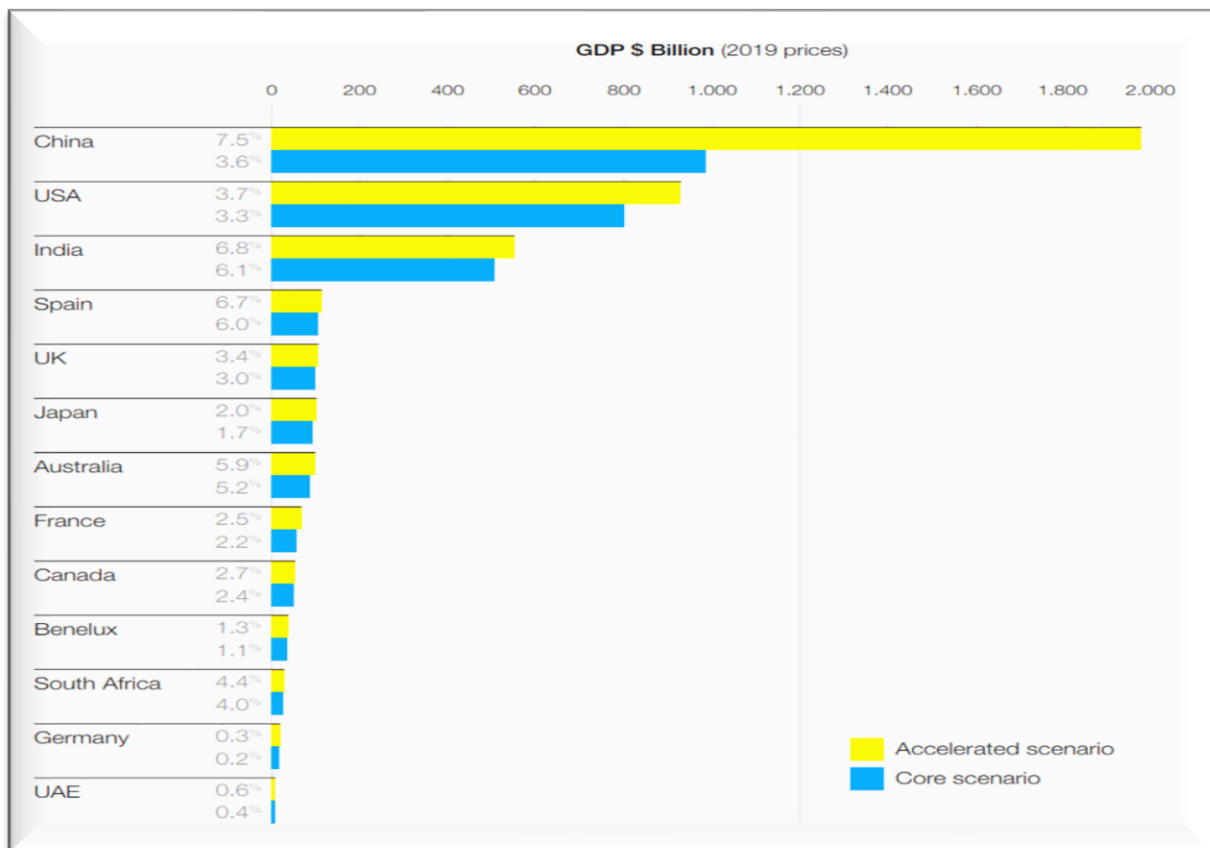
Why do we need re-skilling?

- ❖ Change in requirements: Dynamic nature of the world has increased its frequency of being dynamic. Jobs that no one imagined a few hundred years ago are now the backbone of many economies similarly jobs common in past are disappearing.
- ❖ Higher job security: Reduced worry for the job in the future is a boon for employees these days. Finding a future-proof job can be tough so reskilling is the only option for outdated skilled workers.
- ❖ Competitive advantage: New and efficient technology is emerging day by day if employees of a certain firm can take advantage of advanced technology then they get leverage over their competition.
- ❖ Transformed workforce: Start-ups mostly consist of young and updated skilled workers and innovation it that firm is at its peak if an employee has to survive this competition then he must reskill himself.
- ❖ 4th Industrial Revolution: History tells us that the industrial revolution mows down existing jobs and introduces new jobs. Since we are almost at another industrial revolution it is better if we are prepared for it.
- ❖ Availability of new jobs: High requirements of the new form of jobs are available, but lack of high skilled workers creates a void and acts as resistance in development. Void inflates wages of that jobs which if not managed invites unnecessary high supply of workers with those skills. (Engineer is the best example for this scenario).
- ❖ Experienced employees: No skill can replace experience completely; we still need workers with experience and loyalty. So, to make them employable they need to reskill themselves.
- ❖ Pandemic: This pandemic has presented the perfect opportunity for the workers to upgrade and polish their skills. An ample amount of time is in our hands to make and keep a person employable.

How can we do re-skilling?

1. Map out what your organization might need in future and what is needed get there.
Evaluate how well your employees are prepared to get there.
2. Find out and polish secondary and tertiary skillset of your employees.
3. Look for skills your employees already have which are similar to required skills.
4. Combine reskilling methods
 - ❖ On job training.
 - ❖ Online learning.
 - ❖ Blended learning.
 - ❖ Job shadowing.
5. Focus on digital skills, it is critical for an organization to remodel itself to upcoming technology.
6. Measure the success rate of reskilling by using Kirkpatrick’s 4-level evaluation model
 - ❖ Reaction of reskilled employees.
 - ❖ Knowledge and skills obtained.
 - ❖ Behavioral change.
 - ❖ Business impact.

Results & potential of reskilling:



(Source: W.E.F Upskilling for shared prosperity Jan2021)

- ❖ According to a report of the world economic forum India has 3rd highest potential to boost the economy if we reskilled out workers.
- ❖ India could have 2nd highest potential to create new jobs after reskilling.
- ❖ Reskilling can be a rebound of a trustworthy but skilled workforce.
- ❖ Reskilling increases employee's value by making them ready for alternative job role

Condition of skilled labour producing organization:

- ❖ Colleges in rural areas especially skill embedders are missing the point that they have to make students job-ready. Students rarely worry about emerging problems in society and try to solve them.
- ❖ Lack of awareness of the need of the market. Even in the age of the digital revolution little to no attention is paid toward the digital literacy of students.
- ❖ Lag in updating syllabus. Students are taught skills that no longer are practiced for getting work done. This creates a skilled but outdated workforce.
- ❖ Incorrect way to select the stream of education. Students in rural and semi-urban areas mainly choose the stream of study based on marks he/she scored.
- ❖ Lack of vision. A visionary should be able to see what jobs of the future will require and should accordingly modify the education system but ambiguity in the vision of decision-makers is costing a lot.
- ❖ Less support for business. Stable life definition is imposed in the mind of young once and getting a good job is your goal is imposed on them. Increased population and automation have drastically reduced the chance of stable life for outdated skilled workers.
- ❖ Skilled professors are given less preference while recruiting. The ones who can offer high cash donations to college are preferred.

Win-Win Situation for:

- I. Organization
 - ❖ Increased employee loyalty.
 - ❖ Strengthening of team.
 - ❖ Higher grasp on company's
- II. Employees
 - ❖ Makes more productive line employees.
 - ❖ Can embed new skills.
 - ❖ Opportunity to change position or job roles.

Research Methodology

Research Method:

For the research descriptive method is used. As the area of the research is large so it is hard to collect the data so survey method is adopted for the study.

Sampling Method:

Census of all population is not possible as well as it is time consuming. The process of sampling is selecting units from a set of peoples who are interested in studying the sample. We may fairly generalize the result back to the population from the area that have been chosen.

Data is collected from recruiters, teachers and students (pass out) in Maharashtra. For collecting data simple random sampling method is used. An online questionnaire was used to co collect data.

All the guidelines (COVID-19) were followed while collecting the data.

Data collection technique:

This research was carried out through primary and secondary method of data collection.

Primary data:

Primary data is fresh and newly collected data. Primary data is purposefully collected from related group of respondents, in this case Recruiters, teachers and students. In this study primary data is collected from 380 respondents and observation as well as questionnaire was used.

Secondary data:

Secondary data is that data which is already available in the form of magazines, research journals and books etc. For this research work secondary data is collected from internet, articles and research papers.

Sample size:

Respondents	Frequency	Percentage
Recruiters	30	7.89%
Teachers	100	26.36%
Students	250	65.75%
Total	380	100%

Hypothesis:

H₀: Graduates are not ready for corporate world.

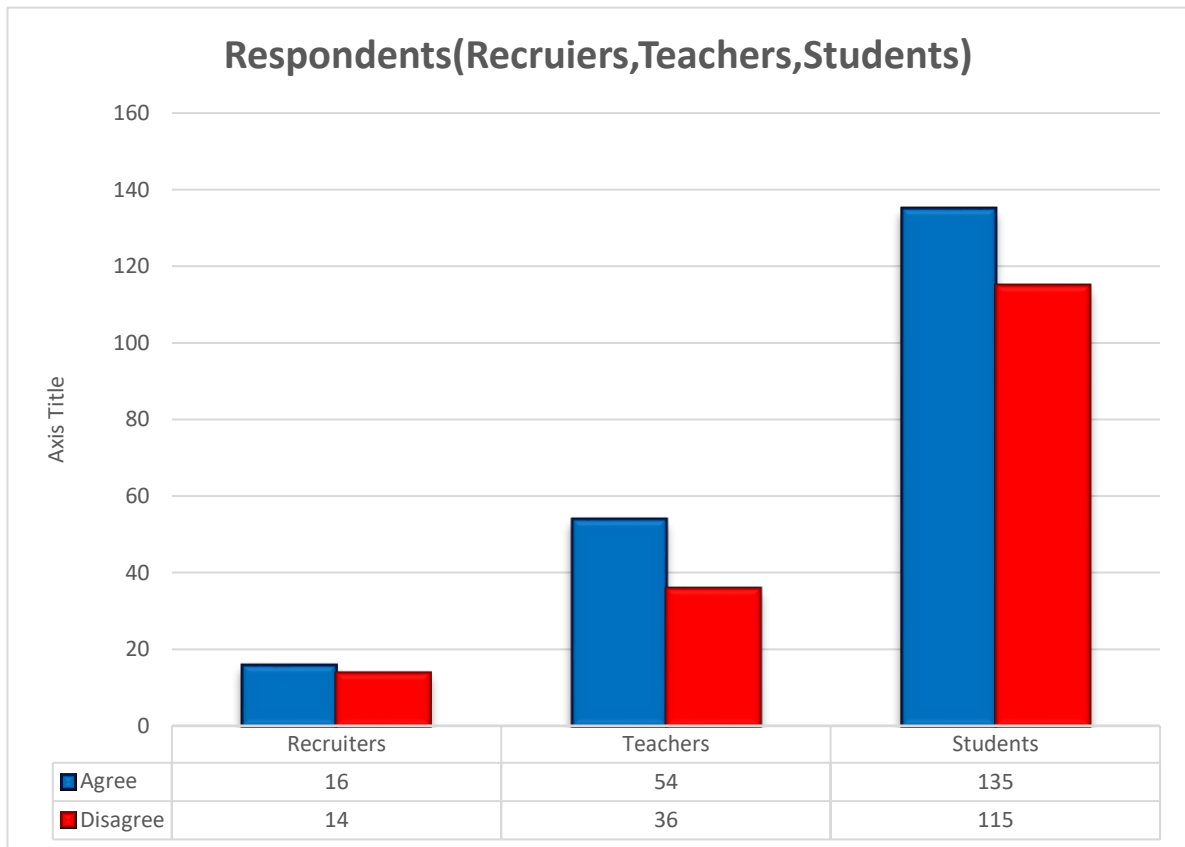
H₁: Graduates are ready for corporate world.

H₀₁: Reskilling of existing employees is less efficient than hiring new skilled workers.

H₁₁: Reskilling of existing employees is more efficient than hiring new skilled workers.

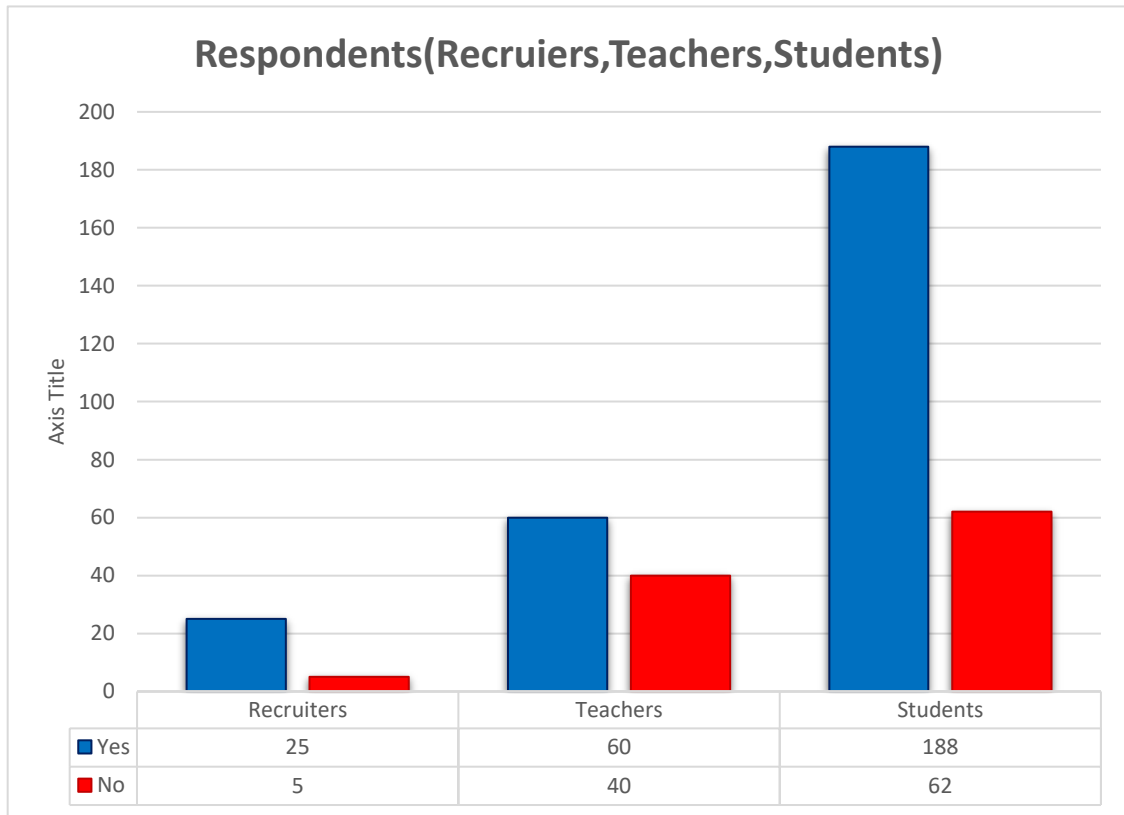
Data Analysis:

Q1) Do you think that graduates are ready for corporate world?



Analysis: Among 380 respondents 30 were recruiters, 100 were teachers and 250 were students. Among 30 recruiters 16 agree but 14 disagree. Among 100 teachers 54 agree that however 36 disagree. Among 250 students 135 agree that but 115 disagree.

Q2) Do you think that reskilling of existing employees is more efficient than hiring new skilled workers?



Analysis: Among 380 respondents 30 were recruiters, 100 were teachers and 250 were students. Among 30 recruiters 25 agree but 5 disagree. Among 100 teachers 60 agree that however 40 disagree. Among 250 students 188 agree that but 62 disagree.

Hypothesis testing:

Chi-square Contingency Table Test for Independence

	Agree	Disagree	Total
Recruiters	16	14	30
Teachers	54	36	90
Students	135	115	250
Total	205	165	370

1.02 chi-square
 2 df
 .6002 p-value

Chi-Square	DF	P Value	C Value
1.02	2	0.600	5.99

p- value is greater than 0.05(alpha), **fail to reject null** hypothesis.

Chi-square Contingency Table Test for Independence

	Yes	No	Total
Recruiters	25	5	30
Teachers	60	40	100
Students	188	62	250
Total	273	107	380

10.28 chi-square

2 df

.0058 p-value

Chi-Sq	DF	P Value	C value
10.28	2	.0058	5.99

p- value is less than 0.05(alpha), **rejected null hypothesis****Accepted hypothesis:**H₀: Graduates are not ready for corporate world.H₁₁: Reskilling of existing employees is more efficient than hiring new skilled workers.**Limitations:**

1. Secondary data might have some errors due to timeline mismatch.
2. Though Questionnaire was collected from different cities most response came from Amravati.
3. This research is conducted by considering Maharashtra as full-scale model.
4. This study is completed in short period.

Findings:

- ❖ Change is not in the future it is happening now, so act now to stay future relevant.
- ❖ Recruiters don't have enough faith in current graduates (rural, semi-rural areas).
- ❖ Teachers and students themselves are not sure about the skilled work force that they are becoming.
- ❖ Recruiters have shown overwhelming interest in reskilling existing employees rather than recruiting new one.
- ❖ Teachers and students also know the importance of experience special in the time of rebooting economy.
- ❖ Reskilling should be prioritised for the employees who are self-starters & who have good time management skills.
- ❖ Hypothesis testing says that graduates are not ready to face corporate environment.
- ❖ Hypothesis testing says that reskilling of existing employees is more efficient than hiring new employees.

Conclusion:

India is a vibrant nation with potential of becoming super power. Golden days of India (before invasions) were golden and stayed golden because of a highly skilled work force. Business was done almost in every home. Jobs were not given much preference. Due to interdictory nature of jobs skills were preserved and modified at stable rate. After rebooting economy special preference should be given to business and manufacturing sector. A skill enhancer program should be added with addition to skill India program for higher skills. India needs to imply new education policy as soon as possible.

Lack of visionary leadership have already costed us a lot, but the damage is not irreversible. Fortunately, we are one of the youngest nations and drastic changes are possible. Skill India can be supported and modified for reskilling and upskilling by firms for the creation of stronger work force.

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AUGMENTATION IN TOURISM SECTOR

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Abstract:

Augmented reality is defined as the digital technology which is responsible for making the changes towards the perception of people regarding their physical surroundings when they view it with any of the specific device. The technology is very similar to the virtual reality, but augmented reality is not replacing the environment of real world, but it is augmenting that environment with the help of overlapping the digital components. Today, perhaps this paper is specifically focused on the interference of augmented reality in the tourism sector. Questionnaire method was used for finding out the perspective of people towards the augmented reality in the tourism sector and various tourist were chosen for answering the questions. The perspective of the people was analyzed with the help of SPSS software which was used for analyzing the data collected with the help of questionnaire. It was found that augmented reality is also experiencing some of the aspects regarding attention from the people and it is possible that we can experience augmented reality on our smartphones. Findings have been concluding that augmented reality is still very helpful concept for providing people with good aspects on their tourism.

Keywords: augmented reality, tourism sector, tourism industry, virtual reality, etc.

Introduction:

Augmented reality is defined as the digital technology which is responsible for making the changes towards the perception of people regarding their physical surroundings when they view it with any of the specific device. The technology is very similar to the virtual reality, but augmented reality is not replacing the environment of real world, but it is augmenting that environment with the help of overlapping the digital components. In today's time, the most notable example of the application which is related to augmented reality is Pokémon go. However, this particular technology is being extending beyond the world of gaming and entering into the world of marketing. Here are some of the marketers are making use of augmented reality for adding up the graphics and useful information towards the environment through the aspects of compatible devices. It is also being discussed that in majority of the cases, augmented reality has also been working hand-in-hand with other type of mobile technologies with an inclusion of cameras and tracking of GPS.

The importance of augmented reality for tourism industry

If you talk about recent times, augmented reality is considered to be becoming very popular in the industry of tourism. This has been primarily because it is providing the permission to all the hotels and other kinds of businesses for the operation in this particular field for enhancing the environment of the consumers physically and they are actually trying for encouraging the customers for visiting, with an inclusion of local sights and hotel rooms. In further to this, augmented reality is that particular adaptation in the tourism industry which is basically been the general changes in the lifestyle of the consumer over some of the decades. In modern consumers, it is already a habit of using their smartphones for a longer period of time for so many purposes and even if they are travelling to some of the places, stepping forward with the usage of augmented reality applications on to their own phones is not a big deal for them.

Examples of Augmented Reality

The usage of the documented reality and its related technologies inside the travel industry is still considered to be relatively very recent development and as a result, it is very new for the users however, some of the most important and effective innovative usage of augmented reality so far are being explaining in the greater detail.

Literature review:

(Azuma, 2017) stated that the most common usage of augmented reality within the tourism industry is considered to be its introduction in a more interactive elements into the hotel and improvement of the complete experiences. Essentially, this particular has been giving the hotels, resorts as well as other kinds of similar businesses regarding the abilities for the purpose of providing the consumers with more info on their demand.

(Babbie, 2010) stated that in the tourism industry, unlike other types of purchases, travel is tending towards being heavily resourced as customers are having a requirement of so much information before they will be arriving to any places. Additionally, this particular need regarding the information will not be stopping when any of the customer will be arriving. Augmented reality will be responsible for serving and towards ensuring that much information is available for all.

(Biseria, 2016) stated that and further to this, the mean adaptation of augmented reality in the travel industry has been the general change regarding the lifestyles of the consumer over the past few decades. The usage of augmented reality in the travel industry is still considered to be very recent development and is providing so many benefits to the people.

(Chung, 2015) stated that this particular aspect has been very much beneficial for those who are operating any businesses in the travel industry. As it is very common for selling the experiences of the physical environment which air can be enhancing. In this particular article,

you will be getting a closer look regarding the impact of augmented reality in terms of having it on the travel industry.

Methodology:

Significance of the study

The main significance of the study was that in the end of the study we will be having each and every aspect of augmented reality involved in the tourism industry.

Objectives of the study

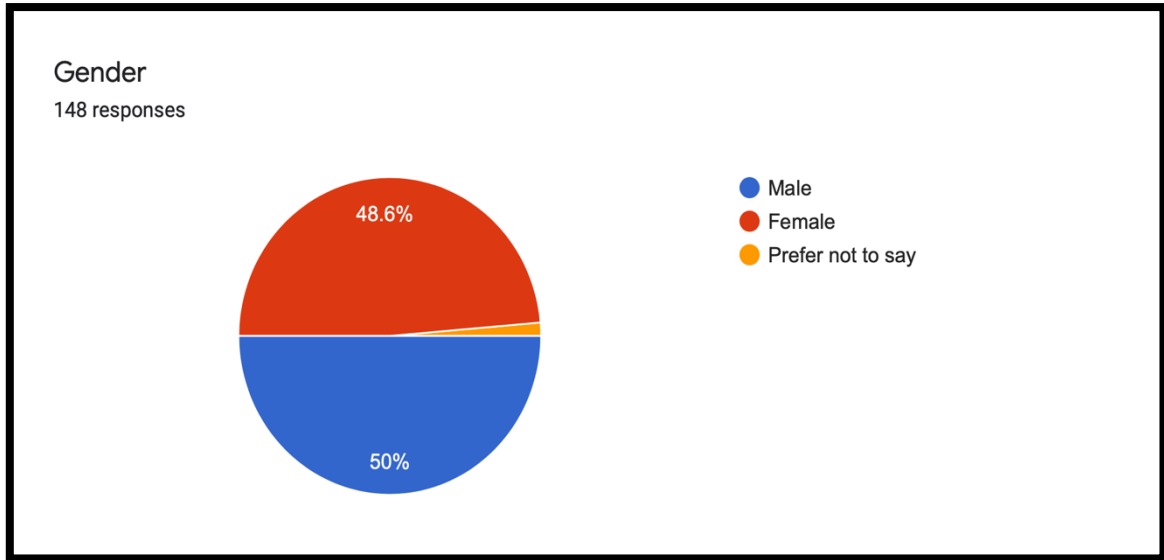
- To know about the aspects of augmented reality in detail and each subdomain included in it.
- To know about the involvement of augmented reality in tourism sector.
- To know about how tourism sector is getting benefited with the involvement of augmented reality

Research Methodology

Questionnaire method was taken into consideration for finding out the perspective of people regarding their experience on how augmented reality is involved in the tourism sector. Pre-Structured questionnaire was distributed among the people with the help of internet and added them for filling their honest perspective. After the collection of the responses SPSS software was used for analyzing the data and half of the statistical analysis, interpretation was formed and in accordance with the interpretation and other details mention, Conclusion was framed.

Data analysis:

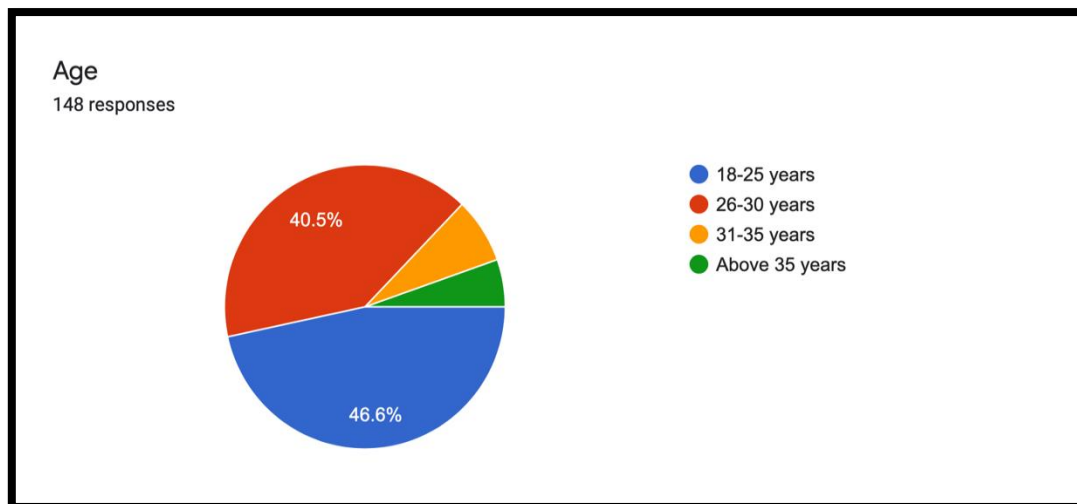
Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	74	50.0	50.0	50.0
	Female	72	48.6	48.6	98.6
	Prefer not to say	2	1.4	1.4	100.0
	Total	148	100.0	100.0	



Interpretation

Out of the total respondents, 74 people were male and 72 people were female and two people preferred not to state their gender.

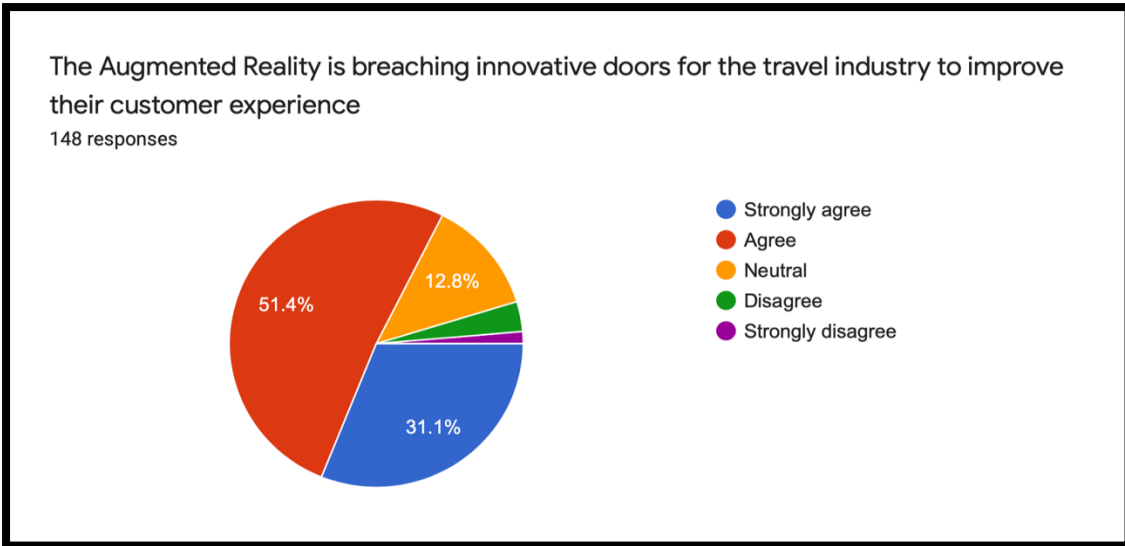
Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	69	46.6	46.6	46.6
	26-30 years	60	40.5	40.5	87.2
	31-35 years	11	7.4	7.4	94.6
	Above 35 years	8	5.4	5.4	100.0
	Total	148	100.0	100.0	



Interpretation

Out of the total respondents, 69 people belong to the age group of 18–25 years, 60 people were in the group of 26–30 years, “11 people were in the group of 31–35 years and 8 people were more than 35 years.

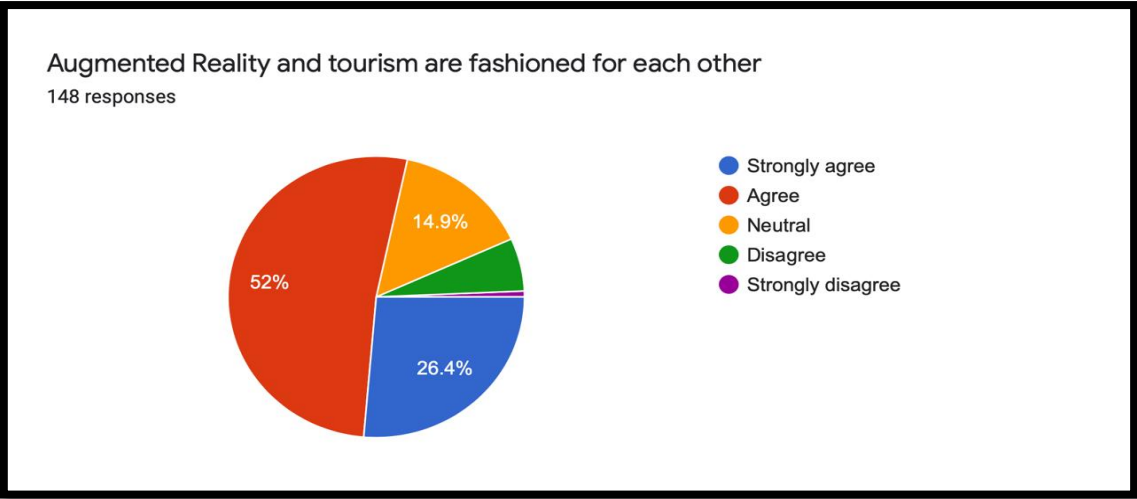
The Augmented Reality considered to be reaching out the innovative doors for the tourism industry towards improving direct experience of the consumers.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	46	31.1	31.1	31.1
	Agree	76	51.4	51.4	82.4
	Neutral	19	12.8	12.8	95.3
	Disagree	5	3.4	3.4	98.6
	Strongly disagree	2	1.4	1.4	100.0
	Total	148	100.0	100.0	



Interpretation

Out of the total respondents, 46 people strongly agreed to the fact that augmented reality is considered to be reaching out towards innovative doors for the tourism industry, 76 people agreed to the fact, 19 people were neutral, 5 people disagreed to the fact and 2 people strongly disagree.

Augmented Reality and tourism are fashioned for each other					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	39	26.4	26.4	26.4
	Agree	77	52.0	52.0	78.4
	Neutral	22	14.9	14.9	93.2
	Disagree	9	6.1	6.1	99.3
	Strongly disagree	1	0.7	0.7	100.0
	Total	148	100.0	100.0	



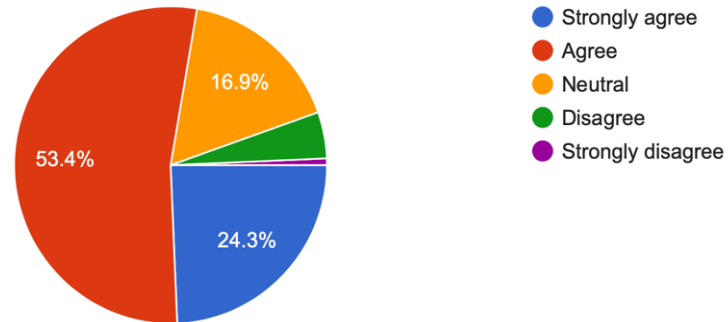
Interpretation

Out of the total respondents, 39 people strongly agree to the fact that augmented reality and tourism or fashion for each other, 77 people agreed to the fact, 22 people were neutral, nine people disagreed to the fact and in 1strongly disagreed.

The travel industry is all about generating exclusive experiences, and AR has the prospective to back this business sector					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	36	24.3	24.3	24.3
	Agree	79	53.4	53.4	77.7
	Neutral	25	16.9	16.9	94.6
	Disagree	7	4.7	4.7	99.3
	Strongly disagree	1	0.7	0.7	100.0
	Total	148	100.0	100.0	

The travel industry is all about generating exclusive experiences, and AR has the prospective to back this business sector

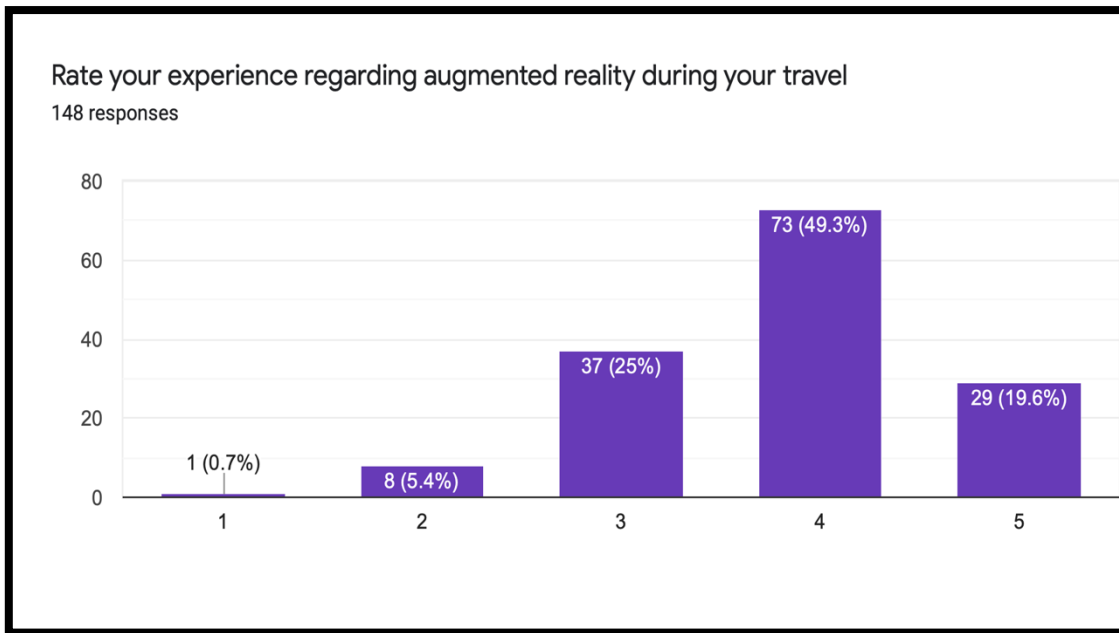
148 responses



Interpretation

Out of the total respondents, 36 people strongly agree to the fact that travel industry is all about the generation of exclusive experiences as well as augmented reality has the property for backing it in the business sector.”

Rate your experience regarding augmented reality during your travel					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	0.7	0.7	0.7
	2	8	5.4	5.4	6.1
	3	37	25.0	25.0	31.1
	4	73	49.3	49.3	80.4
	5	29	19.6	19.6	100.0
	Total	148	100.0	100.0	



Interpretation

Out of the total respondents, 29 people rated 85 on the scale of five regarding their experience, 73 people rated 84 on the scale of five, 37 people rated three on the scale of five, 8 people rated 2 the scale of 5 and 1 rated it 1 on the scale of 5.

Hypothesis:

- H1: There is a significance level between age and Augmented Reality and tourism are fashioned for each other.
- H2: There is a significance level between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry.

Chi-Square Test of Analysis

Age * Augmented Reality and tourism are fashioned for each other Crosstabulation							
Count							
		Augmented Reality and tourism are fashioned for each other					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Age	18-25 years	17	42	6	4	0	69
	26-30 years	17	28	12	3	0	60
	31-35 years	1	4	4	2	0	11

	Above 35 years	4	3	0	0	1	8
Total		39	77	22	9	1	148
Chi-Square Tests							
		Value	df		Asymptotic Significance (2-sided)		
Pearson Chi-Square		33.520 ^a	12		.001		
Likelihood Ratio		21.945	12		.038		
Linear-by-Linear Association		1.158	1		.282		
N of Valid Cases		148					
a. 13 cells (65.0%) have expected count less than 5. The minimum expected count is .05.							

The value for Chi-square of analysis for age and Augmented Reality and tourism are fashioned for each other at 0.01 level, ($\chi^2 = 33.52$, $p = 0.001$).

- H_0 : There is no significance level between age and Augmented Reality and tourism are fashioned for each other.
- H_1 : There is a significance level between age and Augmented Reality and tourism are fashioned for each other.

From the above table, it is clear that the null hypothesis is rejected and the alternate hypothesis is accepted.

Correlation Test of Analysis

Correlations			
		Gender	The travel industry is all about generating exclusive experiences, and AR has the prospective to back this business sector
Gender	Pearson Correlation	1	.204*
	Sig. (2-tailed)		.013
	N	148	148
The travel industry is all about generating exclusive experiences, and AR has the prospective to back this business sector	Pearson Correlation	.204*	1
	Sig. (2-tailed)	.013	
	N	148	148
*. Correlation is significant at the 0.05 level (2-tailed).			

The correlational value for the Correlation between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry are highly correlated at 0.05 level, the value being ($r= 0.204$, $p=0.01$). This states a positive high correlation between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry.

- H_0 : There is no significance level between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry
- H_1 : There is a significance level between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry

Through the correlation table, we can depict the significance value of the variables and know if there is any relationship between them and therefore, we reject the null hypothesis.”

Findings:

- Out of the total respondents, 74 people were male and 72 people were female and two people preferred not to state their gender.
- Out of the total respondents, 69 people belong to the age group of 18–25 years, 60 people were in the group of 26–30 years, 11 people were in the group of 31–35 years and 8 people were more than 35 years.
- Out of the total respondents, 46 people strongly agreed to the fact that augmented reality is considered to be reaching out towards innovative doors for the tourism industry, 76 people agreed to the fact, 19 people were neutral, 5 people disagreed to the fact and 2 people strongly disagree.
- Out of the total respondents, 39 people strongly agree to the fact that augmented reality and tourism or fashion for each other, 77 people agreed to the fact, 22 people were neutral, nine people disagreed to the fact and in 1strongly disagreed.
- Out of the total respondents, 36 people strongly agree to the fact that travel industry is all about the generation of exclusive experiences as well as augmented reality has the property for backing it in the business sector.
- Out of the total respondents, 29 people rated 85 on the scale of five regarding their experience, 73 people rated 84 on the scale of five, 37 people rated three on the scale of five, 8 people rated 2 the scale of 5 and 1rated it 1 on the scale of 5.

Conclusion:

In the conclusion part, it can be clearly stated that augmented reality has been changing the perspective of the people towards tourism industry as it provides so many benefits to the tourists. The technology is very similar to the virtual reality, but augmented reality is not replacing the environment of real world, but it is augmenting that environment with the help of overlapping the digital components. In today's time, the most notable example of the application which is related to augmented reality is Pokémon go. In modern consumers, it is already a habit of using their smartphones for a longer period of time for so many purposes and even if they are travelling to some of the places, stepping forward with the usage of augmented reality applications on to their own phones is not a big deal for them. The usage of augmented reality in the travel industry is still considered to be very recent development and is providing so many benefits to the people. This states a positive high correlation between gender and the travel industry thrives on creating unique experiences and AR has the potential to support this industry.

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IMPACT OF ARTIFICIAL INTELLIGENCE AND VIRTUAL REALITY ON CONSUMER BUYING BEHAVIOUR

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Abstract:

Extensive Reality (XR) technologies, including as VR, AR and MR, are attracting the attention of marketing academics and practitioners as highly promising technical tools for creating satisfying customer experiences that match those experienced in physical shops. There is a lack of methodology in most of the research that have been published thus far when it comes to characterising XR technologies and consumer experiences, which makes it difficult to extrapolate from them. A new generation of companies has been transformed by the introduction and use of technology. Technical advances in e-commerce seek to influence consumer behaviour in favour of certain goods and brands. Personalization and customization of goods using artificial intelligence (AI) are becoming more important. Despite AI's contribution to e-commerce, this study shows that its ethical soundness remains a controversial topic, particularly when it comes to the notion of explain ability. A robust methodological framework for the use of XRs in marketing is needed, we suggest. A literature overview on XRs in marketing is presented in this article, along with a conceptual framework to help organise the diverse research.

Keywords: artificial intelligence, consumer buying behavior, virtual reality

Introduction:

It is becoming more common for businesses to manage massive amounts of data in real time, thanks to artificial intelligence technology. Generally speaking, artificial intelligence is a technology or computer capable of doing a task that would need human intellect if performed by a person (McCarthy, Minsky, Rochester, & Shannon, 1955). AI gives marketers a range of options and creates interest in practitioners' implementations (Fagella, 2018). So, marketing academics may do more research in this area (e.g., Kumar, Dixit, Javalgi, & Dass, 2016; Van Doorn et al., 2017). Marketing processes are enhanced by artificial intelligence-enabled data processing technologies. It enables social media user segmentation and improves sales and the selling process via artificial intelligence (Culotta, Kumar, and Cutler 2015). According to (Syam and Sharma, 2018), Whereas most consumer responses to artificial intelligence are centred on marketing interest in this area, the outcomes of the fourth industrial revolution are still open to numerous possibilities." According to (Syam and Sharma, 2018), Artificial Intelligence (AI) is used in this article to imagine new ways to enhance online customer engagement utilising AI technologies A wider debate on actor participation is shown

(Starbacka, Brodie, Bohmann Maglio, and Nenonen, 2016). This page was last modified on 15 December 2018, at 16:18 (UTC). "Value is always co-created cooperatively and reciprocally, through integration of resources and application of talents in interaction with providers and receivers," according to these research (Vargo, Maglio, & Akaka, 2008: 146). 'Participation of the actor' means both the actor's willingness to participate as well as his engagement in these important, interactive, cocreating activities for resource integration, this includes individuals, businesses, suppliers and recipients, but is not limited to them (Starbacka et al., 2016). Consumers and companies may rely on value-co-creation machinery or other human-made technologies, engage in online platform technology, and interact with each other based on the actor participation idea described above. Particular actors, such as customers, may be targeted during the actor interaction. Online interactions between customers and companies have resulted in an increase in the number and kind of engagement (s). A business or brand's focus on motivational elements may lead customers to show their loyalty to the company or brand via their behaviour in an online environment (see van Doorn et al., 2010). However, digital technologies have also made it feasible for companies to automate their interaction with their customers. It is suggested by Kunz and colleagues that client participation may be initiated by the client or by the company, collaborative, or passive. Kunz et al. (2017) think that gathering and analysing huge amounts of data from these four types of interactions may provide companies a competitive edge by simultaneously increasing the value of their enterprises and their customers. To the contrary, they do not distinguish between requested and unwanted interaction data from social networking sites, for instance. In addition, the grounds for desired and unwelcome involvement are different (Beckers, van Doorn, & Verhoef, 2018). Furthermore, Kunz et al. (2017) did not explain how big data is assessed by the company, despite highlighting the relationship between customer engagement behaviour and huge data. - It's hard to know how to analyse and evaluate data as it becomes more readily available, but it's essential to do so in order to get valuable insights. As a result of artificial intelligence technology, service providers are now able to manage and react to enormous quantities of data in real time, as well as automate service interactions. As a result, consumers may be able to enjoy a more personalised experience (Lemon & Verhoef, 2016).

VR allows us to do things like having a day at the amusement park looping roller coaster in our living room (VR). Virtual reality (VR) involves immersing the user in a virtual 3D environment that resembles an actual place (Lanier & Biocca, 1992). The advent of personal virtual reality (Kauffman, 2013; Lanier & Biocca, 1992) enables individuals to access these computer-generated virtual worlds, without requiring them to wear virtual reality headsets. To begin with, VR was costly to produce and use, and therefore only a small number of highly skilled projects adopted it. On the other hand, consumer-grade VR projects were almost nonexistent in the early days of VR. There are many more professional uses for VR, including helping with social capacity training, anxiety, and other mental disorders (Karl et al., 2019). (Howard, 2017). For the VR technology to improve, the variety of applications has grown, making them simpler and less expensive to use. VR technology is constantly developing, and users may more easily access virtual worlds that seem realistic and less expensive with each passing year. Notably, VR's accessibility has been broadened thanks to the advent of head-mounted displays, removing it from the domain of specialists. Due to these advancements, the

potential utilisation of VR in various scientific areas and applications is also expanding. As VR applications in research, especially consumer research, have proliferated in the last few years, social science researchers have been experimenting with the applications. Using three different methods, researchers have utilised VR to incorporate it into social science research (Fox et al., 2009). In conclusion, such research reveals the potential to use VR for virtual reality studies that may be implemented in the actual world while also exploring the comparative, reproducibility, and/or objectivity of VR applications. For an in-depth understanding of consumer decision-making, VR was used to get a better understanding of consumer behaviour and behaviour which is heavily influenced by contextual factors at very cheap cost.

In the future, VR may enable consumer testing that aren't possible due of context or financial constraints because of the perceived realism of the virtual environment. When it comes to product presentation or content modifications, VR provides the chance to study how these changes may affect the likelihood of consumers purchasing a product (Goedegebure, van Herpen, & van Trijp, 2020). VR may be used to depict a possible natural catastrophe area in an effort to boost contribution behaviour (e.g., places that have occurred when a tsunami or hurricane occurred or refugee camps provide shelter for those who have lost their homes as a result of a disaster). Researchers are searching for consumer-based behavioural treatments that can't be tested in the lab or in the real world. New research methods like this are only feasible because of VR such as utilising VR for tourism in order to let consumers sample vacation destinations before they buy a trip. VR allows for experiments that would previously be impossible or only viable in a controlled laboratory setting to now be accessible, thus it may lead to advances in other fields as well. The biggest problem is that it's difficult to control, and out-of-control variables that aren't within the researchers' control may potentially have an impact on the results. Consider for example, goods that have been evaluated in a laboratory may have a reduced real-world acceptability due to a lack of external validity. Thus, virtual reality (VR) enables researchers to conduct research in controlled and realistic environments, uniting the benefits of both virtual reality and traditional research methods. Consumer research indicates that VR may both replicate current techniques and provide value in addressing new research problems and behavioural changes, which will have lower costs the less often VR is used.

Literature Review:

Virtual Reality and Consumer buying behaviour

The benefits of VR in consumer research must be taken into consideration when the methodological difficulties of utilising new technology like VR are balanced against them. However, despite the potential utility of virtual reality in conducting many kinds of innovative research for changing consumer behaviour, we still do not know how versatile virtual reality is. A person who has movement feelings will often utilise virtual reality (VR) (for more information on this, see Kim Park Choi & Choe, 2018). Such feelings are unlikely to arise while research is being done in a lab or in the field. Furthermore, it is conceivable that in certain cases, such as when VR apps try to duplicate reality in a virtual environment, the present degree

of technical preparedness may hinder VR in its current state. The processing capacity of the VR device may cause virtual model objects to seem angular, which may result in people not believing that the items are 100% realistic. Creating an immersive VR experience may require a considerable amount of effort and money. The realism of the entire VR environment has little bearing on what a user perceives or does in VR. Even if VR doesn't make people feel like they're really there, it must be sufficiently realistic to affect behaviour. VR study design factors in the technological challenges while excluding the technological specifics of VR. The research is still in its infancy with the usage of VR, and there is presently no complete list of studies on VR studies done in a consumer setting. VR has been used in research reviews and meta-analyses to determine the potential appropriateness of VR in the Social Sector, such as for influencing athlete performance or for patients' rehabilitation (Garca-Bravo et al., 2019). Despite VR's capabilities for consumer research, no study has ever utilised technology to capture and measure customer behaviour systematically. To the growing use of VR in consumer research, an in-depth evaluation is required. As accurate as possible, the research must record real-life consumer behaviour. The third reason for writing a study review is that virtual reality (VR) research is developing quickly, and thus it is essential to give an overview of VR's usage in influencing behaviour, including the most up-to-date and relevant results. When it comes to VR, we've paid special attention to the last five years, with a specific emphasis on using helmet-mounted VR devices (Castelvecchi, 2016).

Seven food industry studies were done on virtual reality (VR) and non-VR in order to analyse the similarities and differences between the two. In all, seven experiments were performed, and four of them successfully reproduced the findings of the corresponding VR research, while three others found some notable differences. It is possible to preliminarily determine that these studies' results are very comparable. Both the number of these studies and the results are alike: it is just possible to mimic consumer behaviour in the real world using a VR system, and thus these findings indicate that at least in these instances, consumer behaviour can be correctly predicted with VR. In 2019, Cheah and colleagues performed an experiment on 11 people in which they had the chance to enjoy both a real-life and virtual buffet. Calories eaten in the VR were strongly associated with buffets, with the average amount of calories consumed on each buffet corresponding to the total calories from all food items chosen ($r = 0.64$). As shown by Ung Menozzi Hartmann and Siegrist, there is a strong connection between the calories eaten by participants in a false (physical) food buffet and the calories consumed by VR meal alternatives (2018). There was no difference in the number of breakfast cereals or nutrition information on cereal boxes between physical stool decision-making and shelf decision-making in a virtual reality environment (Siegrist et al., 2019). At least three research have revealed behaviour variations between VR and the same in real life. Participants in a virtual immersion supermarket (experienced via a VR head-mounted display) bought more fruit and vegetables than participants in a real store (Lombart et al., 2020). People spent more time in front of a virtual-reality (VR) image of a business than they did at the physical location, according to Pizzi et al. (2019). This may have been owing to a significant degree of enthusiasm around VR. As a result, both the VR shopping experience and a regular shopping trip resulted in the same amount of food purchases. The results show that the amount of goods chosen, the average price paid by participants, and their reaction to provided property were equal in the

virtual supermarket relative to a real-life supermarket (i.e. number of products selected from a certain shelf). Real-world supermarkets picked many national brands for inclusion in their VR locations, and the marketing strategies used in those locations varied from those in the real world.

Artificial Intelligence

The idea of artificial intelligence implies that "all aspects of learning or any other characteristic of intelligence may be defined so well as to mimic it by a computer" (McCarthy et al., 1955, p. 1). This involves speech, abstraction and idea building, issue resolving, detection of patterns and learning (thereby continually developing and adapting to changing circumstances). Huang and Rust (2018) claim that four kinds of artificial intelligence exist; mechanical (i.e. automation), analytical (i.e. modelling) intuitive (i.e. content creation) and empathic (i.e. content generation) (i.e., social robotics). The position and mobility of artificial intelligence is thus embedded not only in a machine (robotics) but also in a system. For example, when a user enters an inquiry into a search engine, and the system finds the results it shows (Domingos, 2015). Artificial intelligence has several benefits over computer-enabled automations because it can determine which data portions are more predictive (Sterne, 2017). It may also evolve on the basis of fresh knowledge or experiments. All this may happen at a level that a person could not measure, so that artificial intelligence technology can become a clear source of competitive advantage for companies (Kumar et al., 2016). Customer commitment has not been addressed in previous studies of artificial intelligence in service and marketing research (Kaartemo & Helkkula, 2018). The authors asked for further study to address the issue specifically: "What ways might AI enhance consumer involvement?" (Helkkula & Kaartemo, 2018, p. 12). The study focuses on how information systems enabled by artificial intelligence to help organisations decide to improve customer involvement rather than merely referring to conventional advocacy systems. Rather than simply referring to artificial intelligence systems that lead clients to make decisions.

Consumer engagement and behaviour

Engagement was a topic of interest for academics in a variety of fields, including marketing, management, psychology, and information systems. According to the marketing literature, client engagement is a multidimensional psychological state of cognitive, emotional, and behavioural commitment that arises from interactive, cocreative customer experiences with a focal point/object in a service relationship, according to Brodie, Hollebeek, Juri'c, and Ili'c (2011). (2011, p. 785) Hollebeek's definition of consumer brand engagement is "the degree to which the customer has a motivated, branded, and context-dependent mind, characterised by certain degrees of brand cognitive, emotional, and behavioural activity." Accordingly. A few academics are interested in the behavioural component of commitment (i.e. cognition and emotions) in acknowledgment of the importance of psychological state (e.g., Jaakkola & Alexander, 2014; van Doorn et al., 2010). Compliance with consumers is essential for the business since it may have a positive or negative impact on the firm, its environment, and its employees (van Doorn et al., 2010). A business's marketing activities are thus designed to result

in customer involvement since other key outcomes for the company are linked to it (Pansari & Kumar, 2017).

A large percentage of the public believes that traditional brick-and-mortar shops will soon vanish as the e-commerce sector continues to grow. Customers appreciate the ease and quickness of e-commerce, and this motivates retailers to include it. As a consequence of e-development, the online and offline worlds are becoming more influential. Brick-and-mortar shops constitute a major component of the consumer buying experience, and as such should not be neglected, according to Rogojanu and colleagues (2018). "Distributing offers across retail channels is what enables consumers to enjoy a smooth and synchronised purchasing experience utilising every retail channel of the dealer" (p. 87). There is a synergy generated when the benefits of all channels are combined. The benefits and drawbacks of brick-and-mortar stores and online are distinct. There are a number of offline advantages for consumers, including: Shops that do not have a website Less information is given about the product, and there is no personalised experience (Hilken et al., 2018). Less data can be gathered to analyse consumer behaviour in an offline store, which is a disadvantage for businesses. Consumer internet channels have a number of drawbacks, including: An online offer in the real world is hard to conceive (Hilken et al., 2018). On the other hand, online retailers have the drawback of a high number of returns for goods. Using artificial intelligence and greater realism, technological advancements may help minimise the disadvantages of each channel. As a result of the synergy between the two levels, many of the channels' issues have become obsolete. In a brick-and-mortar store, for example, a mobile phone may be used to look up product information. To learn more about the pickup they are about to make at a physical store, 82% of smartphone users utilise their device, according to Google research published in 2015. Internet platforms provide advantages for both consumers and retailers. For example, consumers may browse through customer testimonials or compare prices with competitors, or purchase directly from a retailer (Wetlinger, Auinger, Kindermann & Schönberger 2017). In addition, customers may also examine offers with various businesses or websites, which is considered emotional and may help them experience the greatest possible price. Buying a product is also important (Klaus, 2013). Customer experience will be enhanced by an expert environment in stores when specific queries are made; etc. Off-line shops offer sensory product experiences.

Mangiaracina, Brugnoli, and Perego (2009) describe the e-commerce consumer journey map as consisting of five steps: landing, product identification, presentation of the product, shopping cart, payment, and order execution. On the website it is a technological building that was released in 2009. Because of advances in technology such as artificial intelligence, this is an outdated idea that must be rethought to ensure that all points of interaction are covered. When combined and updated with AI, the following two frameworks may be used in today's technological era. It has been acknowledged by Karimi, Pappmichael, and Holland (2014) that the complexity of decision-making requires the addition of two more steps: phrasing and evaluation. (4) Alternative evaluation (1) Appraisal (2) Formulation (3) Information research (4) Commitment to post-purchase (7) Commitment to post-purchase (8) Recognition of Needs They stress the need of understanding how individuals make decisions and understanding

customers, because both may have an impact on the decision-making processes. These studies show how important it is to fully understand the consumer's behaviour and decision-making processes. To emphasise this point from a technological standpoint: this information may have an effect on artificial intelligence, enhancing the consumer experience throughout their whole trip. According to a Klaus study (2013), the "whole mental impressions of the customers regarding their contacts in terms of their characteristics and psychological elements" is the "online experience of customer care" (p. 18). Utility, presence of the product, communication and social presence are some of the sub-dimensions covered in functionality. Psychological variables include context, physical distance, and value of money. Since this article was written in 2013, the functionality components are mostly related to the website's functionality. To the contrary, these qualities are excellent for today's usage in online AI techniques and their impact on the user-experience. Karimi, et al., 2014; Klaus, 2013) will be used in the chapter "Discussion and Conference" to incorporate the AI techniques, recommender systems, and chat bots described earlier in the client trip. This clearly illustrates the impact of artificial intelligence on consumer experience in the digital age.

Case study: Amazon

As a book-selling company in Seattle, Germany, Amazon.com was founded in 1995 by CEO/founder Jeff Bezos. - (Telegraph UK, 2015) During the years that followed, Amazon started to expand its product categories to include, among other things, CDs, DVDs, clothing, and electronic devices. After a few years of selling products, Amazon started providing services like Amazon Web Services and Prime, as well as Alexa, in the early 2000s. "(2019)" in the "North Sea" 2015 saw the opening of Amazon Books in Seattle, the first brick-and-mortar Amazon store. According to 2015 data from The Guardian, The first Amazon Go store opened in 2016. Throughout the years, Amazon's growth allowed them to acquire a number of companies. In 2017, Whole Foods (BrickandMortar Stores) was acquired (Business Insider, 2017). Online and offline operations are therefore carried out by Amazon.com. Amazon is one of the most innovative companies when it comes to artificial intelligence. In the early stages of realising the need for artificial intelligence innovation, Amazon had no inside experts at their disposal and had difficulty obtaining them since they had no reputation in the area. As a result, Amazon has acquired a number of small technological companies to help them develop artificial intelligence (AI). In 2006, Amazon established its own cloud computing service, Amazon Web Services, which offers artificial intelligence services to other companies. Amazon Web Services, year of publication: 2019 (Levy, 2019)

Consumer behaviour and AI

Customers must be made to feel valued, according to Meyer and Schwager, (2007), who believe that businesses must ensure that the brand's value proposition is incorporated into each product or service feature. We provide our consumers with easy-to-use functionality, reliable fulfilment, and fast customer service," Amazon's mission statement reads" (Amazon Annual Report, 2018). Why Amazon is one of the most technologically advanced companies is because of its value proposition of providing customers with a rapid, fast-track service, as well as

investing in artificial intelligence to keep them out of competition (Walmart, Google, Microsoft). In addition to Levy (2018) and Chatterjee (2018),

It follows that both online and in-store, Amazon places a focus on simplicity and speed in delivering products to its customers. The fact that Amazon has just lately started to go into the realm of physical commerce is interesting. The rise of e-commerce has not threatened traditional shopping, according to Amazon, but many offline businesses are in a quandary. Instead, it may be utilised for your own advantage.

There are distortions in offline distribution caused by e-commerce, according to Liu and colleagues (2018). The usage of digital and technological revolution must rethink offline retail. Since its debut in 2016, there has been no check-out wait at any Amazon GO store. When it comes to Amazon, the company boasts that it has the world's most advanced shopping system so you never have to wait in line again (Amazon GO, 2019). A modern way of buying, Amazon GO uses computer vision, sensor fusion and deep learning technologies. Before the launch of Amazon GO stores, Amazon offered a comparable service called Lockers in 2011. Safe, free-of-charge kiosk for picking up Amazon packages when it suits you, these locks are (Amazon Locker, 2019). Its benefits include: "early and late openings; delivery and returns; no lines of anticipation; no additional costs" (Amazon Locker, 2019).

You may verify what you purchased, what you told us to own, what you rated and what you liked by visiting Amazon. That's why we offer suggestions" (Amazon Help, 2019). Along with its own past behaviour, Amazon will also consider other consumer behaviours that have similar interests with its own. As a result of artificial intelligence and machine learning, Amazon is able to provide customers a more convenient shopping experience. Algorithms that reduce the amount of information available to customers are critical, particularly for wholesalers like Amazon, which sells goods in almost every category. Engagement of customers is becoming a hot subject in consumer research. It's a win-win situation for clients and businesses alike (Lemon et al., 2016). Amazon's commitment to the client's intelligent speaker "Echo" is bolstered. With Alexa, Amazon's virtual assistant, Echo may be linked to Alexa through Bluetooth (Amazon Echo, 2019). Using their voice, customers may ask Alexa to do a variety of tasks, including: telling the weather (Wired, 2017; Reinartz, 2019). AI technology at Amazon is always being improved, making it more intelligent and relevant to its users. Amazon's Alexa system's ability to identify emotions is one of its most recent achievements. As a result of its new emotional classification technique, Alexa is likely to become more engaged with its customers (Amazon Alexa Blogs, 2019). Amazon Echo/Alexa is a great example of Amazon's focus on simplicity and increasing consumer loyalty to its products. Customer journey for conversational businesses and customers, according to Piyush (2016), revolves on conversation trade. Included Amazon's virtual assistant, Alexa, in its Dash wall. So, the user may scan the barcodes of goods he or she owns at home and may run out of more easily and quickly. The most interesting aspect of this development is the message it conveys about Amazon's future endeavours. (See 2017 for further information) With Echo Auto (which connects Alexa to your car's speakers) and Alexa-enabled refrigerators (which automatically reorder groceries), Amazon is expanding its applicability to more and more devices (Amazon Echo Auto, 2019; LG, 2019). In other words, there is an increase in the internet of things. A

dishwasher, a refrigerator, lighting, and door locks may all be connected to the Internet of Things, according to Jones (2019). They can communicate freely and intelligently since they have access to the internet's intellect" (p.3).

Experimental studies with only VR conditions

Several studies focused on VR content solely. An experimentally-derived design. Three of the six studies showed a substantial impact (s). in general, this study on VR and behaviour modification shows that VR may be a useful technique to assist encourage behaviour change, since it was successful in all six investigations. Either a virtual hate indicator was found (the experimental group) or the results of the research by Ammann, Hartmann, Peterhans, Ropelato, and Siegrist did not show an indication of virtual dislike (2020). an uncontrolled control group Compared to a control group; individuals who were exposed to simulated disgust in a VR setting consumed less chocolate. Researchers Hsu, Tseng, and Kang (2018) evaluated how different types of feedback impact participants' intentions to conserve water in a VR environment. They found that the direct exaggerated feedback had the most significant impact on behaviour intention when compared to either an ambient exaggerated feedback group or a combination of the two. In research in 2019, Li and Chen used a 2 2 2 transdisciplinary design that included a perceived VR manipulation advantage, such as the screen quality, with regard to VR headset pricing. (The destination's) expected pleasure was high or low depending on the familiarity with the cherry blossoms. They realised that VR made them feel as if they were visiting the location in the VR movie because of the enhanced screen quality. The conclusions of this study Given that visitors will have a good time at the location, more exposure of VR leads in a reduced desire to go there.

In three of the six studies that utilised only VR conditions, conflicting results were discovered. However, all of them concluded that behavioural outcome measures influenced at least a part of their experimental design. The controlled group ate a virtual buffet in which the selected meal had less calories than the rest of the groups that were not given any information on obesity-related risk, as well as their individual risk (2018) However, the number of calories obtained from a VR buffet meal chosen was equivalent to non-users when simply information about the risks of teenage obesity was presented. In the article written by Goedegebure et al. (2020), it was found that the subjects of popularity signals (which equal "the most sales") applied to both regular and light goods. Compared to people who were not exposed to a VR diet cue, persons who had been exposed to a VR diet cue were more inclined to buy light goods. Neither the selection of regular goods nor the nature of those selected was impacted. The product variety of people who got an indication of popularity for a normal product in VR was no different from that of the ones who did not. Participants in Nelson et al. (2020) saw a VR 360 movie on a coral reef, during which time they were asked to consider how VR 360 films might increase the degree of immersion. The video was utilised to communicate either a good or a negative message (stressing environmental losses). People who saw a 360-degree video VR rather than a single-camera VR for that particular project contributed more to the organisation working to protect coral reefs. This study found that regardless of the emotional

content of the VR simulation, participants' behavioural participation had no impact on the quantities of data the simulation generated.

Conclusion:

According to the literature review, research into consumer domains within behavioural change is often based on the findings of comparable studies conducted in VR settings. To assess therapies in a more efficient, controlled environment VR may be used to do so. However, it's important to highlight that such studies are still restricted to a small number of customers, rely on a small number of students, and have been conducted mostly in the food industry up to this point. While VR also seems to be a successful tool for influencing consumer behaviour in many consumer sectors, including food, clothes, and travel, one further finding is the role it plays in modifying buyer behaviour. To realistically modify a behaviour in VR, more effective techniques are often used. With the rapid advances in technology, everyone is current with the newest advancements. Virtual reality is still in its early stages, but owing to the novelty of the technology, its full potential hasn't been completely used in consumer research yet. Although there are a number of research gaps, the present study indicates that the use of VR for consumer research may have a substantial impact on consumer studies that are intended to encourage behavioural change.

Ending with the proposal to use information systems theory to inform the future development of artificial intelligence systems, but to use richer theories to explain human behaviour, especially since these technologies are designed to emulate human-like responses, should be an appropriate guide for the development of new applications. A growing variety of data sets is being used as stimuli to help them achieve this goal. For future research, we propose combining (requested and unsolicited) information sources that exhibit signs of on-line consumer engagement and evaluating them using artificial intelligence systems. Further research is needed to determine if artificial intelligence-enabled personalised responses by the business have an impact on the outcomes seen in other types of customer engagement. So that artificial intelligence information processing systems can learn and respond better, we recommend that managers and academics interested in learning our frameworks gather knowledge from a variety of fields. Future empirical research will provide more explicit management implications for enhancing online customer contact behaviour.

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IMPACT OF COVID-19 ON CUSTOMERS' PREFERENCE OF DINING OUT

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Abstract:

The research is to determine various factors which are responsible for customers' preference of dining out post pandemic. The ongoing pandemic has created apprehensions among people about dining out. It has created a new threat to online food delivery as customers are still concerned regarding the safety and hygiene of the delivery partners. After reopening, there are certain section of people who prefer to dine out. This paper will take various factors in consideration and will determine which of these factors affect the type the of services preferred by customer. This will be helpful to the restaurants' owner and if implied it can help them to retain as well as increase their customer base.

Research design will be quantitative, and primary data will be collected from the customers who have used online food delivery and have dined out post lockdown. They will be differentiated on various factors. A structured questionnaire on google form will be designed. Likert scale, close ended questions and multiple-choice questions will be used to assess the data as it will give clear correlation among the selected factors.

In view of social distancing and present COVID-19 restriction the questionnaire will be floated through online means amongst the targeted source such as WhatsApp, social media, or email. Also, prior consent is taken from the respondents to use their data for the analysis.

Possible limitations could be the false data due to lack in understanding the objective of research by respondents for which the sufficient responses are taken.

Keywords: Dine out, Covid-19, Customer preference, customer, restaurants, post-lockdown, online food delivery.

Introduction:

COVID-19 started in Wuhan, China in late 2019 and spread out all over the world creating chaos in the daily lives of people. India detected its first case of COVID-19 in January 2020. As of 4th March 2021, there are 11.2 million cases out of which 10.8 million has recovered and 157 thousand deaths has been reported. This prompted the Indian government to take precautionary measures with respect to health of its citizens. India went into complete lockdown on 25th March'20 which continued till June. It affected various businesses and economy. People were confined to their homes; social distancing, wearing the mask in public,

self-isolation and other protective processes was encouraged to reduce the contact amongst people. Slowly the essential services were restored, and partial lockdown was lifted.

During this time Online food delivery saw immense growth as dining out was restricted. Slowly food was classified under essential services so online food delivery started. Post lockdown, slowly restaurants started opening with limited seating capacity and taking full precautions in terms of hygiene of kitchen, staff, tables, and chairs. Social distancing is done by installing transparent acrylic sheet between the tables. The mode of payment has also changed as people prefer online mode and even restaurants promote the same to decrease human contact. The menu is also digitalised as it can be accessed through link via smart phone or scanning of QR codes. Wearing of masks, sanitisation of hands, compulsory temperature check and checking of health status on Aarogya Setu app while entering is new normal. To provide an anxiety free dining experience restaurants are doing all these mandatory checks and trying to normalise the situation again.

Similarly, to provide safe delivery of food various protocols has been followed such as digital payment, doorstep delivery, full protective wear for the delivery agent, mandatory temperature check and reporting the same to consumer. Online food delivery platforms like Zomato, Swiggy etc are fully operational with strict adherence to covid-19 protocols.

People started visiting restaurants but few of them still prefer to order food online. Although social distancing has been a norm now and overcrowded places are being discouraged by government, still some section of people prefers to dine out. Possible reason could be out of boredom since lockdown lifted after nearly six months.

The paper division is as follows: First part of paper focusses on the literature review mainly in areas of Online food delivery services and opening of restaurants post covid-19 era. This is to identify the research gap associated with the factors among the consumers of food industry. The next part focusses on the research method. The primary data is collected through questionnaire from various cities in India. Research method and detailed data analysis has been done in third part. The last part contains conclusion, practical implication, and future study in the field.

Literature Review:

(Limon, 2021) conducted the study using online survey on 751 participants who were in online food delivery business through Covid-19 virus in Philippines. The factors involved were individual, cleanliness, cross contagion and cleanliness, food delivery in terms of domestic and global food standard practices and food preparation. During the novel coronavirus pandemic, safety of handling food is quite essential when major chunk of population is using food that is prepared at home and are performing online business. The study shows that origin of contamination is kitchen, however it can happen during any stage of supply chain. That is why delivery partners are to be trained mandatorily and they need to be apprised about the protocols during delivery of food especially in Covid-19. He took

various variables in account out of which age and food safety practices comes to be of significant value. He concluded the research with the statement that researchers, media, educators, and food safety communicators should educate online food handlers regarding food safety.

(Chenarides, Grebitus, Lusk, & Printezis, 2020) This study is based on the online consumer survey conducted in two major metropolitan cities of US regarding the behaviour of food consumption during the lockdown due to pandemic. There was increase in the buying of grocery, but consumers were avoiding delivery of same and were more inclined towards pick up. The shopping was avoided during beginning of pandemic. There was significant increase in pick up directly. They also took account of food consumption pattern. They hinted towards the fact that with improved protocols such as temperature check, compulsorily wearing of mask, virus testing, soon the virus will be contained in cities and shopping will return to normal again.

(Hsin-You, 2014) This study is based on the timely research of data collected after SARS virus peak in Taiwan. The data was empirically verified by application of proposed stage-based model both theoretically and managerial applicability. The results of study shows that the self-protective behaviour is associated with marital status and risk-taking capability of epidemic.

(Habib, Hamadneh, wadi, & Ra'edMasa'deh, 2021) It states that online delivery food platforms have seen a tremendous growth especially during COVID-19. The study was done using questionnaire among 457 Indian customers. Their computational study was based on the hypotheses and then testing it empirically then reveals that brand experience influences the brand loyalty and brand equity.

(Hillen, 2021) This study was US based and it stated that during lockdown there was increase in price of certain food items such as frozen and ready to eat food. Online grocers were gainers during this pandemic as their sale was one of the highest. It increased up to 3500 % usage compared to previous year **(Adimo, 2020)**. The results were declared as such that meat was expensive comparatively. There was no correlation between promotional sales price and price level.

(Li, Miroso, & Bremer, 2020) This research stated that during this novel coronavirus pandemic the benefits of online food delivery were massive. Firstly, it helped a customer to have a prepared meal and secondly due to this the food industry was operational. These were the positive impact of food delivery, however there were few negative impacts also as delivery partners were directly exposed to the corona virus. This review has three major contributions. First – it stands out as first interdisciplinary review in academic research that covers a large area on online food delivery. Secondly, it has discussed both negative and positive sustainability impacts. Thirdly it shows what is going on around and see if things can be done in a better way.

(Mehroliya, Alagarsamy, & Solaikutty, 2020) This paper states that after the outbreak of covid -19 virus, several governments including the Indian government categorized food as essential service. Due to which the restaurants and online food delivery started. Restaurants are being opened and food is being delivered online, however people are hesitant towards placing their orders. It studies the differences between two groups who have and who have not ordered online during this pandemic. This was based on factors for instance age, frequency of online food sales etc. The study shows that during pandemic there is an increase in perceived threat of online food delivery as disease spread is higher through delivery partners. Although the risk associated with delivery partner is small, this is due to lack of awareness among the consumers. Also, the customers who have ordered more previously have high motivation than the consumer who has ordered relatively less. Along with overall ratings, hygiene rating can also be introduced by Restaurants and hotels by online delivery partners. This practice will reduce the threat associated with the online food delivery and will encourage more consumers to order food online. Online payment is also increased during the pandemic to restrict the contact with delivery partners. Currently there is no record of transmission of COVID-19 through food.

(Piton, D'Avoglio, & Cunha, 2021) This study shows the customers intention to dine out during pandemic according to various factors such as their risk awareness and different type of confidence. Study was done in Brazil with 546 consumers using 43 points on questionnaire with 5-point Likert scale and was evaluated by structural equation modelling. Consumer confidence in an eatery, brand name, reasonable cost, cohesion with the restaurant business, disease repudiation, and wellbeing reconnaissance confide estimated intention to visit a restaurant during the COVID-19 pandemic, according to the findings. Age has a major moderating effect, reducing the consequences of disease denial. The largest impact size was of “confidence appearing in restaurants and brands” factor. Restaurant owners and managers must consider these things to draw customers.

(Zhao & Bacao, 2020) This study explores 532 credible FDA users' continued intention to use FDAs for the period of the COVID-19 outbreak era in China using a systematic prototype that incorporates UTAUT, ECM, and TTF with the confidence factor. The statistical outcomes and deliberations reveal that gratification is the most important factor, with apparent task-technology match, confidence, success anticipation, social impact, and validation all having direct or indirect constructive effects on users' intent to continue using FDAs during the COVID-19 contagion. Furthermore, related research and interested party should ponder the basic feature of expertise that is correlated with users' technical and psychological expectations to improve understand and clarify users' intent to continue.

Research Gap

Various studies are conducted to identify the relation between factors associated with customers such as perceived threat, risk taking capability of consumer, demographics in dining out and online delivery. The view and actions of consumer is quite dynamic related to covid awareness. However, there is still scope of getting detailed explanation about the other

factors such as fair price, social factors, government's initiative in curbing pandemic to develop more significant function whether they prefer dining out post covid.

Research Objective

The purpose of study is to pinpoint the factors of impact of covid on consumers' preference of dining out post lockdown.

Hypotheses:

Restaurants have seen the maximum growth in last few years. They are no longer seen as area of recreation but now their visibility is increased to alternate option of meal on daily basis. People either have their meal in restaurant or they order it online. However, due to covid-19 pandemic this sector has been severely impacted especially the dining out services. During lockdown online delivery was still allowed but it has forced many of restaurants to shut down due to non-availability of customer. In this state, we contemplate that consumers' purpose to dine out throughout the COVID-19 would be projected by price factors such as (price and brand), government initiatives (vaccine, safety protocol), social factors (social trust, culture), and customers' risk assessment potential (risk perception). Following hypotheses has been proposed:

H1: Customer's risk assessment potential, price factors, government initiatives and social factors positively impacts customer's preference of dining out post lockdown.

Research Methodology:

The research methodology used is explained in following paragraphs and is based on data collected from various sources.

Approach of Data Collection

Primary Data: Data was collected through questionnaire which was floated among consumers who have used dining out services during lockdown. The questionnaire was floated through WhatsApp, Instagram, and E-mail.

Demographic Distribution of Respondents

MEASURE	ITEM	N	PERCENTAGE
GENDER	MALE	114	52.05%
	FEMALE	105	47.95%
AGE	Less than 18	5	2.28%
	18-30	142	64.84%
	31-40	50	22.83%

	41-50	14	6.39%
	51-60	8	3.65%
EDUCATION	High School	7	3.20%
	Graduate	109	49.77%
	Postgraduate	101	46.12%
	PhD	2	0.91%
EMPLOYMENT STATUS	Employed	165	75.34%
	Unemployed	54	24.66%
INCOME LEVEL	Up to one lakh	14	6.39%
	1 Lakh to 10 Lakh	99	45.21%
	10 Lakh to 20 Lakh	45	20.55%
	More than 20 Lakh	7	3.20%

Sample Size

The questionnaire was floated among 283 people out of which 222 responded and 3 responses were rejected, so overall 219 responses are taken into account for the research.

Sampling Method

Stratified sampling technique is used on the target audience.

Population

The population of the study were the people who have used restaurant services pre and post lockdown.

Pilot Survey

A pilot survey was performed to ascertain the required test sample size before real survey.

Questionnaire

Questionnaire was grouped into four categories to identify the factors.

1. Customer's risk assessment potential
2. Price factors
3. Government initiatives
4. Social factors

Measurement Scale

A five-point Likert scale was used with Strongly Agree was given point 5 and Strongly Disagree was given point 1. It helps in measuring the level of agreement and disagreement.

Results:

Reliability Test

Cronbach's Alpha	0.857
No of items	17

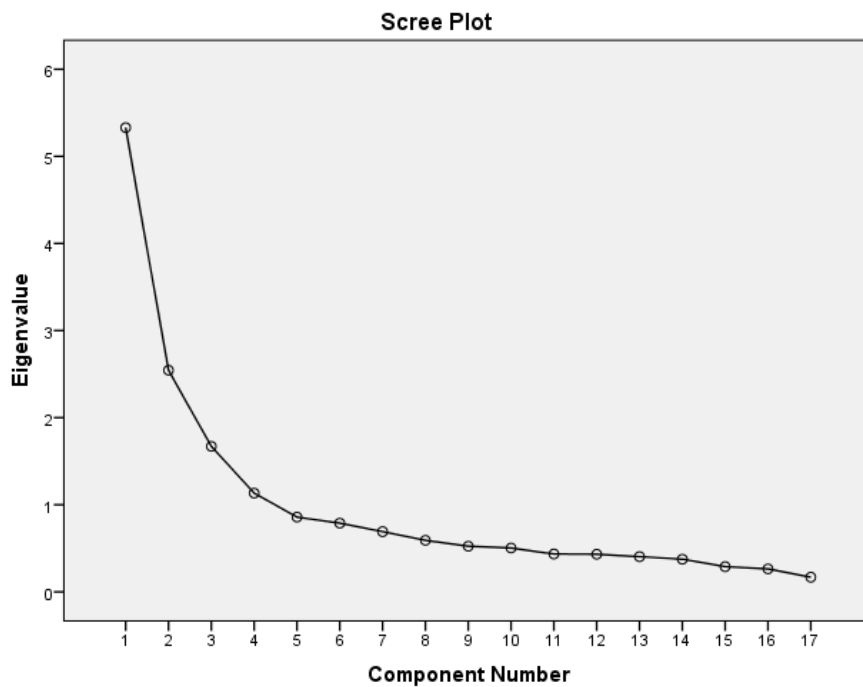
The reliability test was conducted on 17 questions which gives a score of 0.857. The score is above 0.70 cut off and can be used for following analysis.

Factor Analysis:

KMO and Bartlett's Test of Sphericity

Bartlett's Test of Sphericity	
Approx. chi square	1542.082
Df	136
Sig.	0.000

Eigen Value V/s Component



Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.330	31.353	31.353
2	2.544	14.965	46.318
3	1.670	9.825	56.144
4	1.133	6.667	62.810
5	.858	5.047	67.858
6	.789	4.640	72.497
7	.691	4.064	76.562
8	.592	3.480	80.042
9	.524	3.082	83.124
10	.503	2.959	86.083
11	.435	2.556	88.639
12	.431	2.537	91.177
13	.404	2.377	93.553
14	.375	2.205	95.758
15	.289	1.701	97.460
16	.264	1.551	99.011
17	.168	.989	100.000

Factor Analysis with the varimax rotation was applied on 17 variables for the result. Factor value whose eigen value is greater than 1 is preserved. Communalities above 0.5 were preserved and factor loading above 0.6 were retained. Seventeen variables were reduced to 14 variables by following the above criteria. Out of which they were grouped into four factors namely Government's initiative, customer perception, market factors and social factors.

Independent Factors and Descriptive Statistics:

	MEAN	SD	COMMUNALITY	FL
1. GOVERNMENT'S INITIATIVE				
Government methods to curb the risk due to COVID-19.	3.849	0.8514	0.749	0.855
Government's data and news report concerning COVID-19 virus.	3.726	0.9568	0.747	0.845
Government's vaccine drive	3.986	0.8321	0.690	0.814
2. PRICE FACTORS				
Ordering online more often than earlier after my covid vaccination.	3.388	0.9768	0.595	0.653
Going to bars and restaurants if they	3.032	1.2281	0.619	0.812

are not costlier prior to pandemic				
Eating in bars and restaurants if the dine-out prices are lower than food delivery.	2.936	1.2061	0.758	0.819
Eating in bars and restaurants if rates are reasonable.	3.137	1.1961	0.726	0.740
3. CUSTOMERS' RISK ASSESSMENT POTENTIAL				
Trust that restaurant and bar are following covid safety protocols	3.680	0.9665	0.646	0.724
Feel secure while dining out, even though there was no drug or vaccine for Covid-19	2.954	1.1877	0.619	0.605
Restaurants and bars known are trustworthy in terms of health wellbeing.	3.511	0.9643	0.657	0.764
Selecting known dine out places.	3.648	0.9952	0.541	0.650
4. SOCIAL FACTORS				
Comparison of food vendors based on the safety protocol	3.717	0.8997	0.626	0.766
Spending a lot of time picking which diner is safe to dine out.	3.562	0.0694	0.567	0.715
Customer rating	4.132	0.8160	0.513	0.709

Discussion:➤ **Government's Initiative**

The three-variables categorized under the factor “**Government's Initiative**” were **Government methods to curb the risk due to COVID-19, Government's data and news report concerning COVID-19 virus, Government's vaccine drive**. These have factor loadings as 0.855, 0.845, 0.814 and mean as 3.849, 3.726, 3.986.

- **Government methods to curb the risk due to COVID-19.**

Among all these variables, these scored the highest factor loading of 0.855 and mean of 3.849 that means it has highest importance when it comes to the safety during covid-19.

- **Government's data and news report concerning COVID-19 virus.**

This scored at par with the first variable with slightly lower factor loading of 0.845 and mean of 3.726. It is particularly important for the customer to get right information and news about spread of COVID-19. This shows the faith that customer has in government's information during covid-19.

- **Government's vaccine drive**

This shows the relatively lower factor loading of 0.814 and mean of 3.986. This shows the significance of vaccine drive organized by government for its citizens. A customer trusts this government initiative.

- **Price Factors**

The four variables categorized under **Price Factors** are “**Ordering online more often than earlier after my covid vaccination**”, “**Going to bars and restaurants if they are not costlier prior to pandemic**”, “**Eating in bars and restaurants if the dine-out prices are lower than food delivery**”, “**Eating in bars and restaurants if rates are reasonable**”. These scored factor loadings 0.653, 0.812, 0.819, 0.740 and mean as 3.388, 3.032, 2.936, 3.137, respectively.

- **Ordering online more often than earlier after my covid vaccination.**

This has lowest factor loading of 0.653 among all the four variable and a mean of 3.388. This shows that a customer is willing to order more than usual post lockdown after vaccination.

- **Going to bars and restaurants if they are not more costly than prior to pandemic.**

This scored factor loading of 0.812 and mean 3.032. Due to lockdown the restaurant business has suffered the most economically. To overcome the losses, they tend to increase the price of service. According to this, a customer is willing to compromise if there is a slight increase in price, but they might be reluctant if price shoot up unexpectedly.

- **Eating in bars and restaurants if the dine-out prices are lower than food delivery.**

This scored the highest factor loading of 0.819 among all other variables and mean as 2.936. Due to covid-19, customer tend to prefer online food delivery but once the dine out facilities started, they started visiting restaurants but again there is certain section who still prefer online delivery if it is less expensive than dining out.

- **Eating in bars and restaurants if rates are reasonable.**

This scored factor loading 0.740 and mean as 3.137. This shows that customer is very sensitive towards rise in price of service amidst pandemic.

- **Customers' Risk Assessment Potential**

The four variables under this factor are “**Trust that restaurant and bar are following covid safety protocols**”, “**Feel secure while dining out, even though there was no drug or vaccine for Covid-19**”, “**Restaurants and bars known are trustworthy in terms of health wellbeing**”, “**Selecting known dine out places**” with factor loading 0.724, 0.605, 0.764, 0.650 as and mean as 3.680, 2.954, 3.511, 3.648 respectively.

- **Trust that restaurant and bar are following covid safety protocols.**

This scored the factor loading of 0.724 and mean of 3.680. This shows that a customer trust that restaurants they visit are following safety covid practices. Certain protocols such as using sanitizer and mandatory temperature check before entering, use of mineral bottled water, social distancing is some of the protocols that customer observe and it creates trust among customer while dining out.

- **Feel secure while dining out, even though there was no drug or vaccine for Covid-19.**

This scored the factor loading of 0.605 and mean of 2.954. The diligent following of protocols creates faith in customer, and they did prefer dining out if all practices are followed during pandemic.

- **Restaurants and bars known are trustworthy in terms of health wellbeing.**

This scored the factor loading of 0.764 and mean of 3.511. The factor loading is highest among all the variables which means that a customer has confidence in bars and restaurants known to him.

- **Selecting known dine out places.**

This scored the factor loading of 0.650 and mean of 3.648. A customer prefers to dine out in restaurant on which he trusts and the one which follows all safety protocols and after visiting once they tend to prefer visiting that restaurant in view of covid-19 pandemic.

➤ **Social Factors**

The three variables under this factor are “**Comparison of food vendors based on the safety protocol, spending a lot of time picking which diner is safe to dine out, Customer rating**” with factor loading as 0.766, 0.715, 0.709 and mean as 3.717, 3.562,4.132 respectively.

- **Comparison of food vendors based on the safety protocol.**

This scored the factor loading of 0.766 and mean of 3.717. This has highest factor loading among all variables. That means a customer always assess the safety factor among restaurants in view of pandemic and always prefers the one which has highest safety standards.

- **Spending a lot of time picking which diner is safe to dine out.**

This scored the factor loading of 0.715 and mean of 3.562. This has slightly lower factor loading than the first one which means customer never compromises on safety level and is willing to spend time in choosing on this basis.

- **Customer rating**

This scored the factor loading of 0.709 and mean of 4.132. Customer ratings are especially important today and every customer takes rating into account before visiting. Nowadays rating is also done on safety and covid protocol.

Practical Implication

Restaurants were opened as part of helping the economy. Although, all protocols are followed diligently still there is a possibility of contamination. The first practical suggestion would be that restaurants should increase the transparency not only in terms of dine out space but also the kitchen area which will affect the customers' decision positively. Also, all safety measures can be marketed on social media, newspaper, radio etc as noticeable by customer. Once he hears and see such ads, this will increase the trust in restaurant.

Price was also the significant factor affecting the decision. After pandemic, unemployment, salary cuts, a customer is concerned about expenditure and is willing to spend only when price is right. So, owners can introduce discounts, loyalty program for their regular customers. This will help them to retain regular customer. Word of mouth never goes old that means customer's views can affect other potential customer positively.

Limitations:

The limitations of paper are as follows.

1. Large sample size may derive more effective and efficient result.
2. Time crunch of conducting the research.
3. In view of pandemic, research was conducted online, and online survey has its own limitation.

Future Study:

The situation of covid-19 is very dynamic, the customer's preference may change in coming months and with the onset of second wave and certain parts of country are under lockdown the research can be done taking in account new situation. Vaccine drive has started but it is yet to reach wider range of audience, so in coming months more population will be vaccinated and hence it could be one of the areas of research. Also, the study can be done taken in account factors such as psychology and marketing.

Conclusion:

The research shows the factors which drives the customer to dine out amidst covid-19 in India. The factors are **Government's Initiative, Price Factors, Customers' Risk Assessment Potential, Social Factors**. These factors can be assessed by restaurants' owner to increase their customer base. Government initiative in combating pandemic has helped the customers to dine out. Trusting the government in showing reliable information positively

affects customer's decision. Price factors has also influence the customer's decision to go out. Also, a customer notes the covid protocols followed by restaurant and selects them on basis of safety. Social factors also shown a deciding factor and it positively impacts the preference of dine out.

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FACTORS INFLUENCING CUSTOMERS' PURCHASE BEHAVIOUR FOR APPARELS ON E-COMMERCE PLATFORMS IN INDIA

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Abstract:

The Indian e-commerce business has seen an emergence of many national and international online retailers due to the rapid expansion of digitalization and technological advancements. There have been various researches that has focused on customer buying behaviour on e-commerce platforms in general but there is little or no study regarding the factors impacting customers purchase behaviour specifically for apparels segment online. This paper aims to determine the factors that are the most influential in motivating customers purchase intentions for apparels in e-commerce platforms such as Amazon, Flipkart, Myntra etc. using Exploratory Factor Analysis (EFA). After a detailed statistical analysis, the findings helped to determine three factors motivating customer's purchase behaviour namely the perceived value of customers for the Apparel's aesthetics with a wide range of variety available in the e-commerce sites, apparel 's quality and features, Customer's loyalty and satisfaction towards selective Brands.

Keywords: e-commerce, Purchase behaviour, Factor analysis, Product Quality, Brand loyalty, Product Variety

Introduction:

Over the recent years, E-commerce has become an integral aspect of the global retail landscape. A business must consider a variety of strategies while marketing their products and in today's world, e-commerce has arisen as the most popular option. E-Commerce or Electronic commerce refers to the financial transactions between the entities over the internet for the purchase and sell of goods and services. The e-commerce sector, like many other businesses, has changed dramatically since the emergence of the internet and rapid advancement in technology over the years resulting in developing internet based enhanced e-commerce models. Due to the fast-growing internet access and adoption, the number of digital shoppers is continuing to rise every year leading to competitive growth among the e-commerce companies. The internet has in a way boosted a firm's ability to cater to the needs, demands and expectations of its customers efficiently and create one-on-one relationships with them (Jayawardhena, 2006).

As per the latest reports by IBEF (www.ibef.org, n.d.), It is estimated that the e-commerce market of India will grow at a rate of approximately 27% of compound annual growth rate

(CAGR) to reach \$99 billion by 2024 from \$30 billion in 2019. This exponential growth would most likely be driven by the Grocery and Apparel or fashion segments. This means that the Apparel sector in e-commerce which is this study's primary emphasis would play an inevitable role in driving the rapid growth of e-commerce platforms.

Under e-commerce, Apparels or Fashion is one of the fast-growing segments that accounts for about 42 percent of total retail e-commerce sales, alongside computers and consumer electronics (www.wikipedia.org, n.d.).

While majority of the market share in India is held by top fashion giants such as Amazon and Walmart (Flipkart) due to their successful operations and increased customer base setting a benchmark in the e-commerce business model, there are still a number of companies who have managed to strongly compete in e-commerce industry especially in the Apparels sector such as Myntra, firstcry, Koovs, Limeroad, Voonik, Zivame, Ajio and so on. These platforms provide a wide range of fashion products covering Casual/Daily wear, Formal/Western wear, Sweater, Pullover, Jumper, Sportswear, Ethnic wear etc. for men, women and children.

Today, more customers than ever before use e-commerce platforms to make their fashion purchases. The revenue generated by these customers has allowed firms to expand rapidly. Though there has been a tremendous rate of growth in the apparel sector of e-commerce business, there has been a limited research study done on the factors impacting a customer's purchase behaviour specifically for apparels on e-commerce platforms in India. This research gap calls for a more detailed study on the customer buying behaviour for apparels on e-commerce settings. The results from such a study would help the top fashion giant companies to further enhance their e-commerce business strategies in such a fast-growing competitive business environment.

Review of literature:

With the rapidly growing e-commerce, this section details the pertinent literature from previous researches for the various factors involved in this study regarding impact on Customer's buying intentions on e-commerce platforms such as Amazon, Flipkart, Myntra etc. While there had been limited researches on the impact study specifically for apparels, researchers have concluded numerous factors on their study regarding impact of e-commerce platforms in general on customer's satisfaction and hence their re-purchase intentions.

According to a previous research (Agift et al., 2014), Customers are influenced to purchase online by features such as detailed information about the product, comfort and relaxed purchasing, less time-consumption, and ease of pricing comparison with other platforms whereas in another study (Suh & Han, 2003), Security was considered as the most important issue that online shoppers are most concerned about. The ability of a website to protect users' confidential information from any unlawful disclosure during electronic transactions is characterised as security. It is separated into two sections, the first of which relates with the data and transaction security and the second with the authenticity of customers. Before the

buyers shop in a particular ecommerce platform, they need to know that they can trust them. A cyber-attack or breach can drastically affect the platform's reputation, in addition to the financial ramifications. Thus, the stronger the system security of the website, the higher the Customer's intention to purchase (Guo et al., 2017).

The existing research studies identified three kinds of characteristics that influence purchase intentions of buyers including shopping, technology, and particular product features. Under the technological factors, security was mentioned as the most prominent reason influencing customer's purchase (Cheung & Lee, 2005).

Online retailers are working hard to ensure that the online buying experience is comparable to in-person shopping. This includes giving detailed product descriptions and images to customers. From the convenience of their own home, customers may easily locate more information and product descriptions.

During online buying experiences, many customers place a high value on browsing and acquiring information about the products they want to purchase for informational or recreational purposes which might then result in purchase of the product (Smith & Sivakumar, 2004). In addition, A Research study (Limbu et al., 2013) explained that when it comes to internet retailers, some websites provide very scarce information regarding their companies and vendors, making customers hesitant to buy from them.

Many other Researchers have done rigorous studies related to the factors influencing Customer's purchase for a product online and have derived a variety of features among which the most prominent features include Product pricing (Cronin et al., 2000), Product availability (Yang & Mei, 2006), User Interface Quality (Park & Kim, 2003), Product quality (Chen & Dubinsky, n.d.), Fast Shipping (Collier et al., 2006), Product Variety, Prompt customer service, Discounts, reviews from prior customers (Jayasubramanian et al., 2015), offers and discounts provided (Karthikeyan, 2016), return or exchange of product policies (Liang & Lai, 2002), efficiency of on-time delivery (Schaupp, 2005). These features give potential customers a more convenient way to purchase and interact with brands. For this reason, the ecommerce platforms need to build advanced and competitive digital strategies understanding the behaviour of consumers shopping online that will help them stay on top of the ecommerce trends and ensure success in both the near and far future.

When it comes to purchasing specific products like Apparel items, one of the studies mentioned that the reason why shoppers have been hesitant to click the Purchase button is their need to see, feel, and try on those items. Customers find it difficult to make purchasing decisions when they cannot try on the products that they want to purchase to assess its quality. Therefore, as the product is difficult to inspect, it makes harder for customers to make a buying decision (Katawetawarak & Wang, 2011). The limited studies done for purchasing apparels online in the past have discovered some of the prominent factors impacting purchase decision such as aesthetic product qualities like design, style, fabric, fit, shade etc (Kim, 2003), Customer's loyalty towards certain Brands (Bilgihan, 2016), seasonal

trends and styles(Rowley, 2001) or through impulse buying tendencies while browsing appealing products(Jones et al., 2003).

Considering these prior studies by the researchers as the base of this research on the aforementioned constructs that might drive customer purchase behaviour online in general as well as the limited study on customer's intentions while specifically purchasing apparels online, a detailed quantitative analysis has been performed in the next sections.

Research Methodology:

The Research work involved a comprehensive literature study to get different insights on factors that impact the customers buying behaviour when purchasing apparels online. This study helped to further develop measuring instrument which was then followed by a survey to collect data for further analysis.

Construction of Measuring instrument

A structured survey questionnaire is the measuring instrument used to collect data for this study. The survey questionnaire has been designed on the basis of comprehensive literature review and the results from the past studies which comprised of 26 statements.

This survey was further divided into following three sections:

Section I involved a filter section comprising of 1 question to eliminate respondents who do not have a prior experience in purchasing apparels/clothes online from any e-commerce sites.

Section II involved demographics information comprising of 10 statements regarding respondent's gender, age, occupation, family monthly income etc.

Section III involved our research themed information comprising of 15 statements to measure and analyse the Customer's Purchase behaviour about the variables defined in this study.

Participants' responses were recorded on a five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree."

Collection of Data:

The target population for this study involved the participants who has a prior experience of purchasing apparels on e-commerce sites. The survey was constructed on google forms and the same was circulated via messaging, mails social media platforms to target respondents for collecting data. Prior to administering the questionnaire, the purpose of the study and the questions contained therein were explained to all the respondents via a small introductory message so as to obtain relevant responses.

This survey instrument was administered to 224 respondents, out of which, 3 were eliminated during the first stage as they didn't have any shopping experience on e-commerce sites. Hence, responses from 221 respondents were finalized for further analysis. To fulfil the objectives of this study, the data will be analysed using the software SPSS -version 21.

Reliability Test

Cronbach 's Alpha Reliability test has been applied to check the reliability and validity of the data collected from respondents before beginning with detailed analysis. Cronbach's alpha is a metric for determining the internal consistency or reliability of the questionnaire with respect to the responses.

This test helped to check the reliability of the respondent's answers to the questionnaire designed and if it can be considered for further analysis. The value of Cronbach alpha for all the variables taken for the study should exceed 0.7 to be considered consistent for further analysis (Koonce & Kelly, n.d.).

As shown in table 1, The reliability test for 15 variables (statements) resulted a value of 0.763. This is greater than the value recommended i.e., 0.70 and hence, the data was considered to be reliable for further study.

Table 1: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.752	.763	15

Data analysis and results

Demographic profile analysis of the Respondents

Table 2 summarizes the demographics profile of the 221 respondents considered for this study. This is derived from the section II of the survey questionnaire containing 10 statements. All the respondents had a prior experience of purchasing apparels from e-commerce websites. More than half the population (56%) represented Male participants. Approximately 85% of the responders were between the age group of 21-30 years old and about 76% were undergraduates who had participated in the survey.

More than half the sample population i.e., about 69% of them were employed whereas 19% of them were students. Of all the respondents, only 12% of respondent's family income having less than 30000 per month was observed. More than 80% had a family monthly income ranging between 30000-60000, 60000-90000 and above 90000. More than 90% of the respondents spent less than 5 hours on the shopping apps/websites per week.

With respect to the number of times apparels purchased by respondents per month, over 64% percent of the respondents had purchased apparels less than once a month whereas about 28% of them respondents purchased between one to two times a month. Of the total, approximately 45% of respondents have already spent about 1000-5000(INR) on online shopping so far whereas 31% of them have spent between 5000-10000(INR).

Among the most preferred type of apparel purchase online, it was found that about 31% of the respondents preferred buying Casual/Daily wear followed by 25% of them referring to buy Sweater, Pullover, Jumper & others. Only 8% of respondents preferred purchasing sportswear online. This demographic profile analysis illustrates the shopping attributes of online customer's (Liao et al., 2010).

Table 2: Demographics Profile

Group	Category	Count	Percentage
Gender	Female	91	41.4%
	Male	126	56.9%
	Prefer not to say	4	1.7%
Age group	21-30	187	84.5%
	31-40	30	13.8%
	41-50	4	1.7%
Qualification	Undergraduate	168	75.8%
	Post-graduation or above	50	22.4%
	High School	4	1.8%
Occupation	Student	42	19.0%
	Employed	152	69.0%
	Unemployed	19	8.6%
	Others	8	3.4%
Family Monthly income (INR)	Less than 30,000	27	12.1%
	30,000-60,000	61	27.6%
	60,000-90,000	65	29.3%
	Above 90,000	69	31.0%
Hours spent on the shopping apps/websites per week	Less than 5 hours	202	91.4%
	6-10 hours	8	3.4%
	11-15 hours	4	1.7%
	More than 15 hours	8	3.4%
No. of times apparels purchased online	1-2 times per month	61	27.6%
	Less than once per month	141	63.8%

	More than 2 times per month	19	8.6%
Highest amount spent on online shopping so far (INR)	Less than 1000	46	20.7%
	1000-5000	99	44.8%
	5000-10000	69	31.0%
	More than 10000	8	3.4%
Most preferred type of Apparel purchase online	Sports wear	18	8.2%
	Formal/Western wear	36	16.5%
	Ethnic Wear	43	19.4%
	Sweater, Pullover, Jumper & others	56	25.2%
	Casual/Daily wear	68	30.7%

Exploratory Factor Analysis

The section III of the survey questionnaire containing 15 research themed statements has been considered for this study which is represented in table 3. To group and deduce these 15 variables/statements into fewer factors, the most widely used statistical technique called Factor analysis has been implemented using the extraction method i.e., Principal Component Analysis (PCA) and Varimax Rotation method with Kaiser normalization. According to this applied technique, an underlying structure model for a large set of variables could be derived by grouping them into few factors having large common variance (Babin & Anderson, n.d.).

Table 3: Survey Questionnaire

Variables	Statements
V1	I feel safe to purchase apparels online from a preferred e-commerce site for its good image and reputation
V2	I look for a range of Apparel options available in a shopping website before making the purchase.
V3	My preferred shopping website provides Apparel products in a variety of trending styles or designs.
V4	My preferred shopping website provides Apparel products in various colours option.
V5	I am satisfied with the product quality delivered by my preferred shopping website.
V6	The Apparels purchased have the same features as was described in the website.
V7	The apparel holds up and doesn't fade even after repeated washing
V8	I look for up-to-date fashion items in a shopping website.
V9	I buy apparel items at a whim (sudden desire) on the Internet.
V10	The selected apparel is affordable that meets my needs and expectations

V11	I prefer my choice of brand for online apparel purchase.
V12	I do not prefer shopping from a particular site if I've a lack of trust over vendors.
V13	Increase in price does not hinder my purchase for apparels from a specific company (Allen Solly, forever 21, H&M, Levis etc)
V14	I do Apparels shopping online to get discounted prices and offers.
V15	I do Apparels shopping online to save money than traditional shopping.

SPSS Software version 21 has been used to implement the aforementioned method on the collected data. Detailed analysis is discussed in the below sub-sections –

Kaiser-Meyer-Olkin (KMO) Test

A Kaiser-Meyer-Olkin (KMO) test is used to assess the sampling suitability of data for Factor Analysis. This test allows us to establish whether or not the data we have is suitable for a Factor Analysis and, as a result, whether or not we have defined what we want to measure. This can have a value from 0 to 1 and the closer the value is to 1, the better data adequacy (Babin & Anderson, n.d.). As per our SPSS results on Table 4, KMO is observed to be as 0.829 which is closer to 1 confirming adequate sampling for factor analysis.

Bartlett's test of sphericity test

This test determines whether there is any duplication between variables that may be represented using a few components or factors. Values less than the significance level i.e., 0.05 indicate that a factor analysis may be useful with the data. As indicated in Table 4, we have significance 0.00 hence we factor analysis can be implemented further to the data.

Table 4: KMO and Bartlett's test of sphericity results

KMO Measure of Sampling Adequacy		.829
Bartlett's Test	Approx. value of Chi-Square	2400.970
	Degree of Freedom	105
	Significance	.000

Communalities values

Table 5: Communalities

Variables	Initial Value	Extraction Value
V1	1	.840
V2	1	.810
V3	1	.852
V4	1	.792
V5	1	.704
V6	1	.652

V7	1	.736
V8	1	.709
V9	1	.619
V10	1	.714
V11	1	.842
V12	1	.783
V13	1	.876
V14	1	.697
V15	1	.052

The extraction method applied is PCA (Principal Component Analysis) where the initial values of Communalities before applying PCA is 1 as represented in table 5. After applying PCA, the values in the extraction column indicates the proportion of each of the variable's variance shared with other variables.

As per table 5, V13 variable shares the highest variance with the value of 0.876 followed by V3 variable with 0.852 and V11 and V1 with 0.842 and 0.840 respectively.

Total Variance Explained

As per this section, components having eigen values greater than 1 has been extracted which accounts for most variance with other variables. Hence, we get 3 factor that accounts for cumulative % of total variance of **71.194%**. This cumulative value should be **greater than 60%** for a good fit model.

The first component or factor having the highest eigen value accounts for maximum variance and the following component will try to account for as much of the remaining variance as possible and so on. The other components after the first 3 components having low % of variance indicate that they do not represent real traits or features underlying the 15 questions. Hence, each successive component will account for less and less variance. These components are called scree which is represented in chart 1 below.

Table 6: Explanation on Total Variance

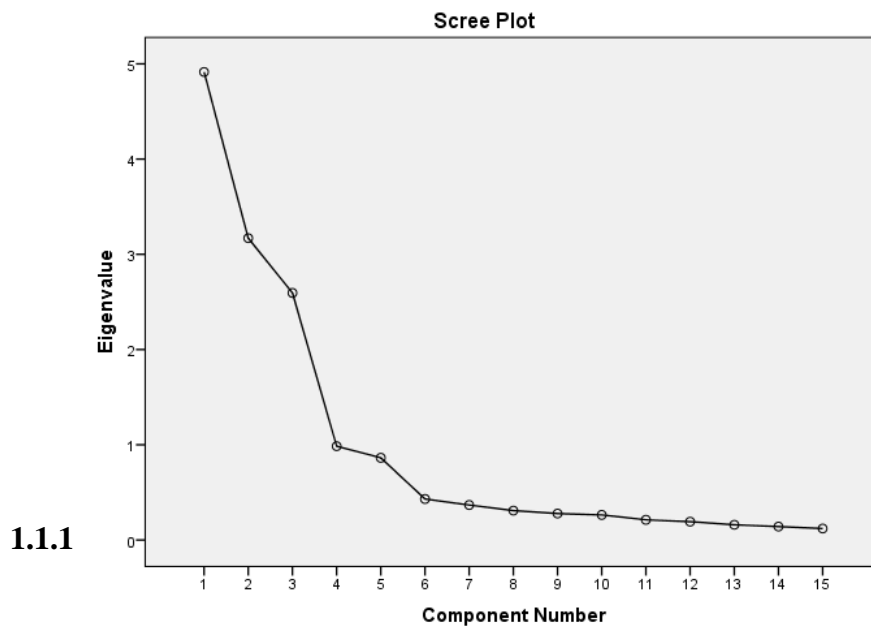
Component/Factor	Initial Eigen values			Extracted Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	4.915	32.765	32.765	4.915	32.765	32.765	4.321	28.810	28.810
2	3.170	21.133	53.897	3.170	21.133	53.897	3.688	24.584	53.393

3	2.595	17.297	71.194	2.595	17.297	71.194	2.670	17.801	71.194
4	.985	6.568	77.762						
5	.863	5.753	83.516						
6	.431	2.870	86.386						
7	.368	2.451	88.837						
8	.309	2.058	90.895						
9	.277	1.849	92.744						
10	.263	1.756	94.500						
11	.212	1.412	95.911						
12	.193	1.283	97.195						
13	.159	1.063	98.258						
14	.141	.939	99.197						
15	.120	.803	100.000						

Scree Plot

The Scree plot visualises Eigen values of the components. From the chart 1, we observe that the first 3 components have Eigen values over 1. These are called as strong factors. The Eigen values drop off dramatically from component 4 and onwards. This significant reduction between components 1-3 and 4-15 strongly suggests that the 15 statements are based on 3 factors.

Chart 1: Scree Plot



1.1.1

Once the factors were extracted, the variables were rotated using Varimax Rotation method for better interpretability and simplicity of the results obtained. Only the variables with component scores more than 0.7 for each of the 3 factors were taken into consideration. This component score indicates the degree of correlation with the variables. Higher this score, higher the correlation. The first and second Factor is represented by 4 variables/statements each having value more than 0.7. Third Factor is represented by 3 variables. This is indicated in the table 7.

Statements represented by variables V2, V3, V4, V8 loads into the first factor “**Perceived value for Apparel aesthetics and variety**” with the highest factor loadings of 0.893,0.914,0.884 and 0.832 respectively when compared to the rest.

Statements represented by variables V5, V6, V7, V10 loads into the Second factor “**Perceived value for Apparel quality standards**” with the highest factor loadings of 0.793,0.778,0.727 and 0.825 respectively when compared to the rest.

Statements represented by variables V1, V11, V13 loads into the third factor “**Customer loyalty and satisfaction towards selective Brands**” with the highest factor loadings of 0.899,0.899 and 0.929 respectively when compared to the rest. Remaining statements V9, V12, V14 and C15 were eliminated as it could not load into any of the factors when compared to the top variables.

Table 7: Component Score

		Component Score
Factor 1 - Perceived value for Apparel aesthetics and variety		
V2	I look for a range of Apparel options available in a shopping website before making the purchase.	0.893
V3	My preferred shopping website provides Apparel products in a variety of trending styles or designs.	0.914
V4	My preferred shopping website provides Apparel products in various colours option.	0.884
V8	I look for up-to-date fashion items in a shopping website.	0.832
Factor 2 - Perceived value for Apparel quality standards		
V5	I am satisfied with the product quality delivered by my preferred shopping website.	0.793
V6	The Apparels purchased have the same features as was described in the website.	0.778
V7	The apparel holds up and doesn't fade even after repeated washing	0.825
V10	The selected apparel is affordable that meets my needs and expectations	0.727
Factor 3 - Customer loyalty and satisfaction towards selective Brands		
V1	I feel safe to purchase apparels online from a preferred e-commerce site for its good image and reputation	0.897

V11	I prefer my choice of brand for online apparel purchase.	0.899
V13	Increase in price does not hinder my purchase for apparels from a specific company (Allen Solly, forever 21, H&M, Levis etc)	0.929

Discussion:

As expressed in the table 7, the implication of the Factor analysis statistical technique helped to deduce and group a large set of constructs into 3 factors namely Perceived value for Apparel aesthetics and variety, Perceived value for Apparel quality standards and Customer loyalty and satisfaction towards selective Brands. These variables grouped into factors resulted in strongly influencing the customer's purchase behaviour for apparels in e-commerce websites.

Perceived value for Apparel aesthetics and variety

The research findings concludes that the 4 constructs with a high factor loading on this factor had characteristics such as aesthetics value of a product such as color, size, fabric material, trending apparels styles, designs and the range of apparel variants present. This very much resonates with one of the related studies in the same research field (Kim, 2003).

Some fast fashion companies produce new apparel styles every week or so, causing tough competition among e-commerce companies to introduce new apparel products to keep up. This influences customers to remain up-to-date with the advertisements from such companies with fashionable items information as per the findings.

Perceived value for Apparel quality standards

The research findings concludes that the 4 constructs with a high factor loading on this factor had characteristics such as the apparel quality, durability and affordability meeting customer's needs and expectations. Hence, the e-commerce sites offering apparels can focus on providing apparels of highest quality which can highly influence the customers. One of the research studies (Al-jahwari & Khan, 2018) has also concluded that Quality products could directly impact the customer satisfaction level.

Customer loyalty and satisfaction towards selective Brands

The research findings concludes that the 3 constructs with a high factor loading on this factor had characteristics such as the customers preferring to purchase apparels of a preferred brand over other brands which has a good image, reputation and a prior purchase experience leading to high satisfaction level. The customer's intention to re-purchase from a preferred brand increases their loyalty towards that brand despite having price influences or any other situational factors as per one of the recent studies (Oliver, 1987).

Limitations and scope for future research:

This research study had a number of limitations. Firstly, it was mandatory for the respondents to have a prior experience on online apparels purchase to focus on the scope of this study. Another limitation involved is the potential biasness in responses from the participants considered for this study despite of careful inspection and elimination of errored or incomplete information during the data analysis phase. A larger sample may result in more consistent and reliable results. Also, the study has been carried out by deriving the constructs from the analysis of previous studies on the related topics.

There might be several other constructs or factors other than those derived in this study impacting the online purchase behaviour among customers for purchasing apparels. To extend the findings of this study, further detailed studies can be implemented on this topic by following different statistical methods to get a more rigid model that explains customer behaviour.

Though there have been numerous studies done to understand customer behaviour during online purchase, there is only limited research work for online apparel purchase by customers on e-commerce site. With the increased use of technology and an increased number of e-commerce websites today, the research gap advocates the increased necessity of the study to be done on this field with a more detailed data analysis approach.

Conclusion:

This study uncovers the factors impacting customer purchase behaviour for apparels on e-commerce sites. It is evident from the findings of this research that the online customers are highly influenced by three main factors determined using the Exploratory factor analysis which includes the perceived value of customers for the Apparel's aesthetics with a wide range of variety available in the e-commerce sites, apparel 's quality and features, Customer's loyalty and satisfaction towards selective Brands. Due to the fast-pacing e-commerce environment and the highly-driven technology world, the retailers need to implement strategies to survive in such a competitive market by keeping on mind the customer's perspectives for purchasing products online.

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A STUDY ON OPINIONS OF STUDENTS TOWARDS E-LEARNING DURING COVID PANDEMIC

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Abstract:

The purpose of this research paper is to know the students' opinion on about of e-learning which is substituting traditional education. E-learning is performed a very important role in the present educational situation. Technology discovers a new way for teaching and learning method which depends on information technology. As per researchers view today's world is interested in online education because they think that online education is very flexible and very useful for them in pandemic situation there are many institutions they want to customization in modern technology for improvement in online education.

In this research paper, researchers' study about the opinion of students towards E-learning. The researchers have collected primary data onto undergraduate and postgraduate students by using questionnaires.

Keywords: E-learning, Student's opinion, Pandemic

Introduction

Common getting to know involves an instructor a building and a crew of college students that acquire collectively at this facility during unique intervals of the day to analyze from the instructor it may also consist of paper primarily based assignments and exams. Typical face-to-face getting to be aware of interactions that show up in a bodily location, such as on a university campus. This refers to lecture based studying the vicinity teachers grant coaching to students. Traditional training is a way of studying actively in which college students and instructors are actively involved. It has a right interplay between college students and teachers. In distance education has been around for a lengthy time earlier than technological know-how was once introduced. Traditional college education is now seeing a growing proliferation of virtual coaching materials and on-line courses. Although in the world of tested and examined school training systems and curricula, the most profitable schools are those that adapt to changing instances as properly as emulate the expectations of students, their parents and society.

From last two years the situation of world is disturbs due to covid 19 (epidemic disease). And in this situation the educational institutions are closed, but education is calculated in a primary need of human beings, we can't stop it, therefore educational institutions focused on substitutes of traditional learning, mostly educational institutions focus on e-learning and it

spread all over the world.

Review of Literatures

1. Yi Yang, Linda F. Cornelius, Mississippi State University, the author's aim in this study was to understand students' understanding in online study. The author used Qualitative research methods in this study. The author observed that participants had both positive and negative experiences while participating in the online class.

The flexibility of the class time and the flexibility of self-paced study, the cost-effectiveness of the online class and the introduction of the instructor contributed to the positive experiences of the participants. Factors contributing to student negativity are: delayed trainer feedback, lack of self-regulation and self-motivation, monotonous teaching methods and poorly designed curriculum materials.

The moderate level and quality of online education meant that they were not very satisfied with the education they received. Online learners may need to make changes in their own behavior such as lack of motivation and seriousness.

2. Mohammed Kamalun Nabi, Mohammed Arshad Khan, Vivek, (23 December,2020) In this research, the author of the paper studied the perception of students about e-learning in India, where Covid-19 (epidemic disease) is present all over the country (or across the continent). the education system has been adversely affected by the Covid-19 situation. Educational institutions have been completely closed for a long time. One-on-one communication between students and teachers is annoying because of the (epidemic) situation all over the country (or across the continent). To know the understanding and readiness of the students about the online education adopted by the university in the situation of Covid-19, the author used a quantitative approach for this paper. Analysts of the reactions of 184 students of Delhi and some other universities in India, from June to August 2020.

3. Poonam Gaur (Sep, 2015) The written analysis in this study is that the use of technology in education is a step towards technology. Technology is expected to make learning easier and more knowledgeable for students and also for teachers. E-learning can change the whole learning situation but there are also some limitations related to student psychology (mindset) and infrastructure. Researchers are focusing on the present and future prospects of e-learning. User-friendly tools and platforms, fast internet connectivity, low complexity can make learning productive and useful.

4. Mohamed Daffalla-Awadalla Gismalla1 (2021) this study may analysis the perception regarding e-learning among medical students during the pandemic situation of COVID-19. Most of the medical students have a positive attitude towards e-learning. Author used descriptive cross-sectional Study. Author conducted an online survey during 10–25 May 2020 at the University of Gezira (FMUG). Sample size of the study Includes undergraduate medical students of the University of Gezira (FMUG). The pre-planned online-based

questionnaire was developed by the Chief Investigator. Snowball sampling method was used for collection of response. Data was tested using SPSS software (Statistical Package for Social Science). The chi-square test was used for analysis the relevant factor related to Education and e-learning during the covid-19 epidemic.

Objectives

- To know the Merits and Demerits of traditional learning and E-learning
- To know the current status of E-learning.
- To know the opinion of students towards E-learning.

❖ Traditional learning

Advantages

Group work: In traditional classrooms students work together on a group project. Many group activities can be done with the help of friends thereof It's help to increase their confidence. Students can learn many things with discussion. Face to face interaction of students with their friends affects their mental health. Students can develop themselves with group learning.

Skill development: By sitting in type with co-students and learning to relate to a teacher, the necessary personal skills are developed. These abilities are useful in other situations in public or professional life among students. Skills like stage daring, confidence, verbal exchange etc. College students need to spend time with friends for mental health. This is feasible in regular education.

Discipline: Discipline could be an important issue for college kids in their school life. They cannot study well without discipline. Learning and discipline in school life can cost students more later in their career. Discipline in school education is a set of rules and regulations that remind us of the right behavioral code. But discipline is not only important for school students but it is for everyone. This is what helps us all achieve our goals in life. Ask questions in front of whole classroom or present your own view in front of teachers and builds self-confidence.

Disadvantages

Costly: The relatively low infrastructure and equipment required for online learning can provide online education at a cheaper price than traditional education. This is a time-saving way for students, and it is mainly beneficial to students in rural areas. Traditional education is very expensive. Tuition fees are very high. In addition, textbooks and other school supplies are very expensive. Its cost is high. It is difficult for parents to pay tuition and other expenses. These are some of the advantages and disadvantages of the traditional education system. It is good to train students, but not all students can get the same attention from teachers.

The Timeframe: Traditional classes have fixed time which directly effects on students' daily schedule many online classes are in a recorded form which students can watch on their own time anytime whichever they prefer there is one more thing to consider students can easily pause and re-watch the recorded videos as much time students needs but in traditional learning this is not possible.

Inconsistent: Many traditional schools are same in some points but differentiate in rules and regulation time intellectual activity's locations beliefs staff and many things. These creative things make school and colleges unique as compared to others. However, more often than not, it serves as a disadvantage. The quality of education is one of the things that comprehensive here. There have strict rules that make them for feel like a prisoner.

❖ Online Learning

Advantages

Effective: E-learning has a positive effect on students' learning, making it interesting and understandable for students to learn. E-learning improves their skills and knowledge. This increases the ability of students to learn and implement new strategies in their lives. The use of e-learning is favorable for the environment, as researchers say that traditionally education uses 90% more energy and emits more CO₂ gas than e-learning. E-learning helps to reduce the use of paper so e-learning is an environmentally friendly way of learning.

Cost: E-learning is less expensive than traditional education. The reason for the reduction in cost is that learning this way is quick and easy. A lot of time and money is saved in terms of trainers, travel, study materials and accommodation. This also makes the cost effective to reduce costs. Even when you are studying in your own place. Your costs will be lower even if you need to study in another country or city.

Choice: There are many courses available in online educations which are relatively more than traditional education. Students can study those courses which are not available in their hometown or village. Students can study abroad courses online and it is comparatively less expensive.

Disadvantages

Communication and skill development: It is noticed that e-learning helps students to increase their knowledge in online learning the communication skill isn't developed in online modes communication between instructor or a learner is very weak in compare to traditional it is incapable of working effectively in a team setting many graduates who excel in theoretical knowledge will be indispensable if their communication skills are neglected but their knowledge may fail to be passed on to others.

Trainer tends to focus on theory rather than practical: In most of the online course is there is no scope for practical knowledge but the trainers focus on theoretical knowledge either than practical skills. But beyond physical classes used as face-to-face interactions and seminars, working on practical projects in online courses requires more upfront planning than physical training.

❖ Types of E-learning

Synchronous E-learning: Synchronous e-learning is based on direct classroom teaching. In Synchronous learning teachers and students communicate simultaneously with the help of live videos or applications. In this type of study, students can ask their questions to teachers through mobile phones, video conferencing, online chat, etc., and have timely discussions or interactions with friends. The popularity of the synchronized e-learning gained due to the proper availability of internet connection and the tools of technology.

Sources: Audio and Video Conferencing, Virtual Classroom, Recorded videos, Webinars, etc.

Asynchronous E-Learning: It is based on recorded type of videos. In asynchronous e learning the teacher and student cannot be online at same time. Email, blogs, discussion forums, eBooks, CDS, DVDs etc. This type of technology used in asynchronous e learning. Students can learn any time or place. Students can download documents and chat with teachers and also with co-learners. Most of the students prefer asynchronous learning instead of synchronous learning for their studies. Therefore, students preferred online courses to complete their study on preferable time.

Sources: Email, blogs, discussion forums, eBooks, CDS, DVDs, etc.

Research Methodology

Research Method:

Descriptive method is used in this purpose of the research. As the area of the research is large so it is hard to collect the data so survey method is adopted for the study.

Sampling Method:

It is not possible to survey (census) all population. It may be time consuming. The process of sampling is selecting units from a set of peoples who are interested in studying the sample we may fairly generalize the results back to the population from the area that they have chosen.

Data is collected from Students of Amravati division. For collecting data, the '**Simple Random Sampling Method**' is used. In the study, we studied Under graduate and Post graduate students of Amravati division.

Sample Size:

Respondents in Amravati	Sample size
Students	101 students
Total respondents	101 Respondents

Data collection Techniques

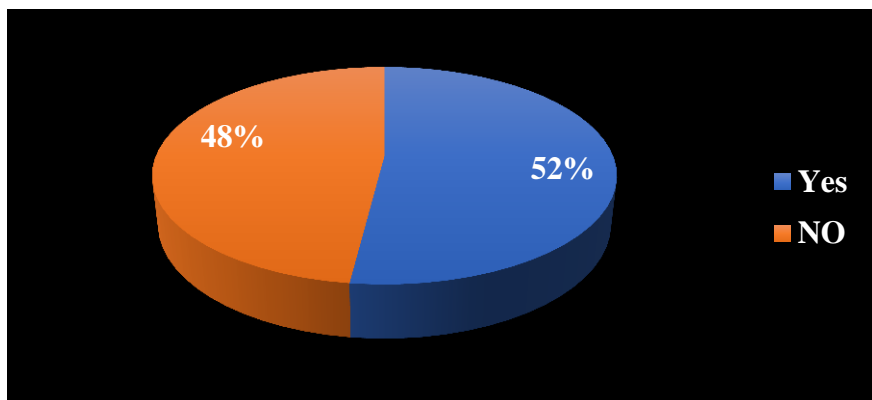
Present research was carried out through primary and secondary method of data collection.

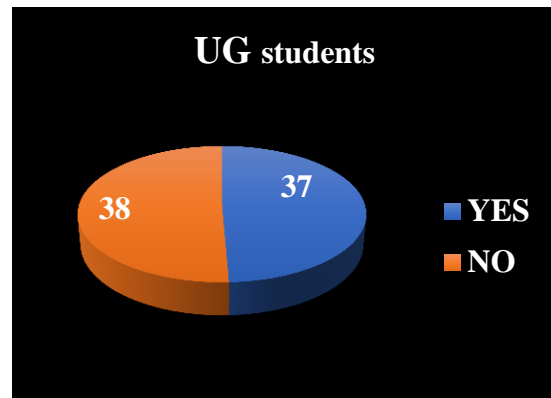
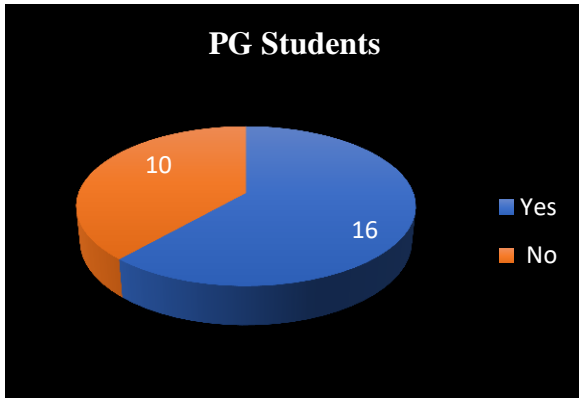
Primary Data:

Primary data is the data which is not existed. It is fresh and newly collected data. In this study primary data is collected from the 101 Respondents. And for this study questionnaire is used. 101 respondents are belongs to UG and PG Students category.

Secondary Data:

Secondary data is those data, which is already available in the form of Magazines, Research Journals and Books etc. For this research work secondary data has collected from internet and research paper.

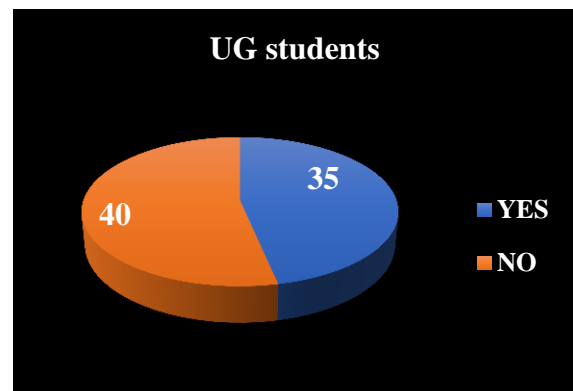
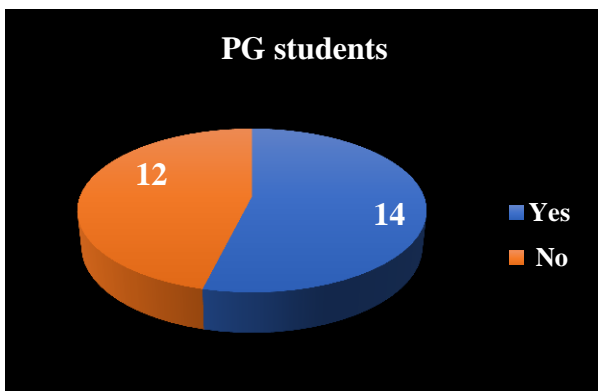
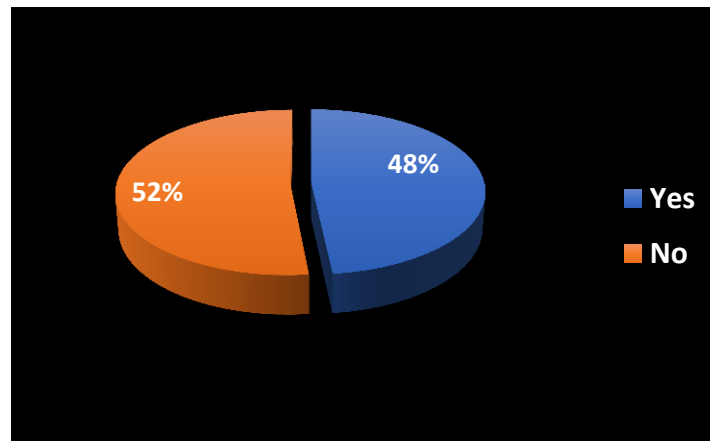
Questionnaire and Observations**Q1. Do you think E-learning is better than traditional learning?**



Analysis:

In the survey, researcher has collected data from 101 respondents about these questions, 52% respondents said Yes, that e-learning is better result than traditional learning and 48% respondents said No e-learning is not better than traditional education. In those 75 students belongs to UG and 26 students belongs to PG. Majority of PG students agrees, and majority of UG students disagree with the question.

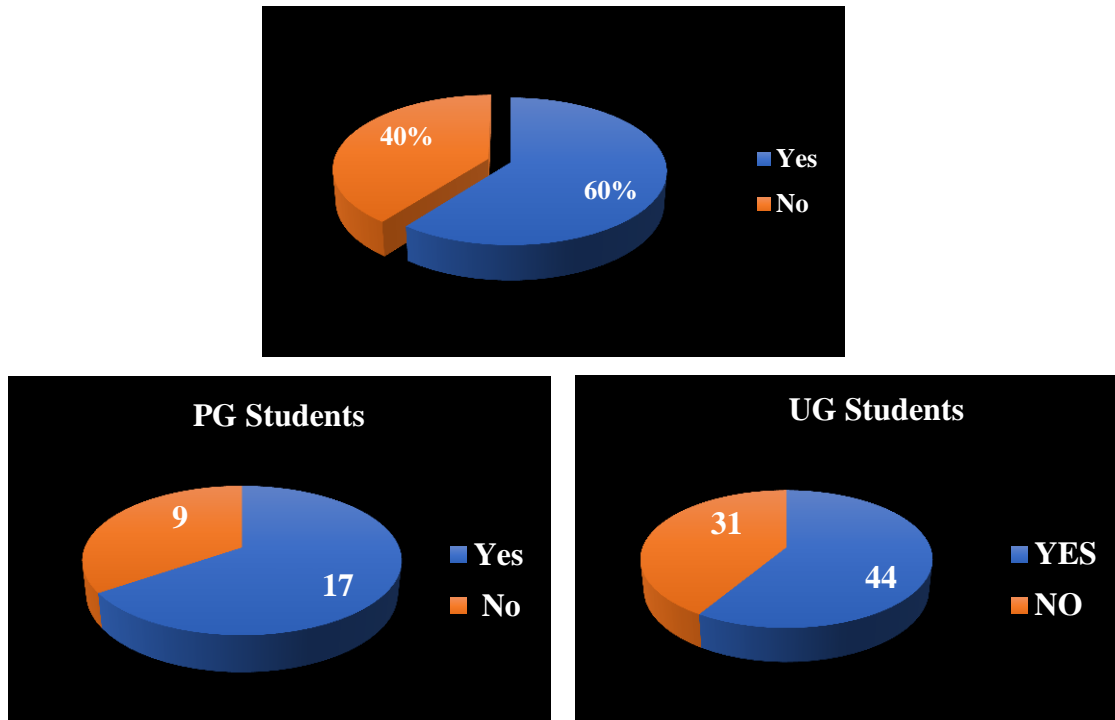
Q2. Does E-learning yield better results than traditional learning?



Analysis:

In 2nd question, 48 % respondents said Yes, that e-learning yield better results than traditional learning and 52% said No e-learning is not better results than traditional learning. In those 75 students belongs to UG and 26 students belongs to PG. Majority of PG students agrees, and majority of UG students disagree with the question.

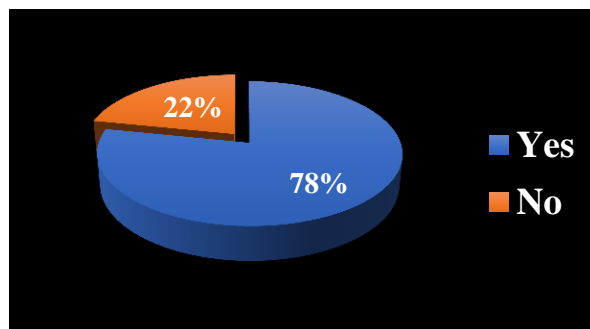
Q3. Do you think E-learning is future of education?

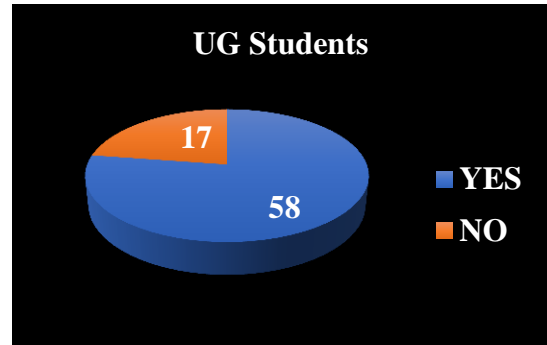
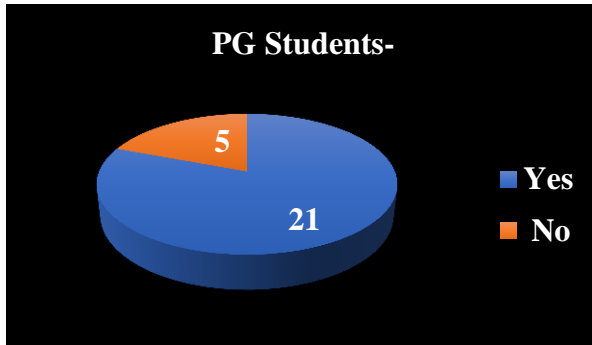


Analysis:

In this question, we found that 60% percent respondents said Yes, e-learning is the future of education and 40% students said No, e-learning is not a future of education. In those 75 students belongs to UG and 26 students belongs to PG. Majority of PG students agrees, and majority of UG students agree with the question.

Q4. Do you think human presence can affect teaching- learning experienced?

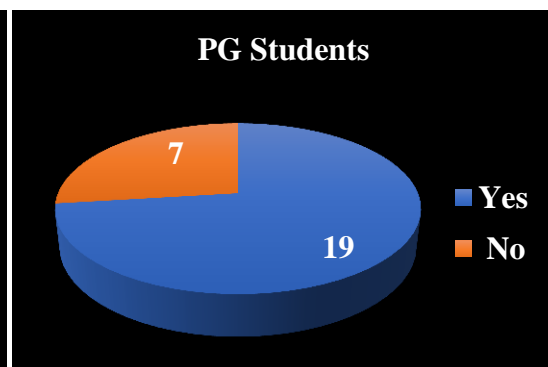
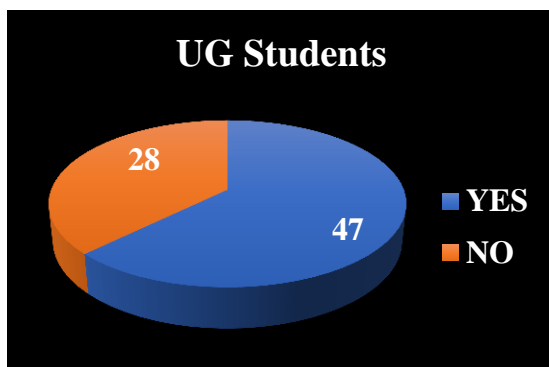
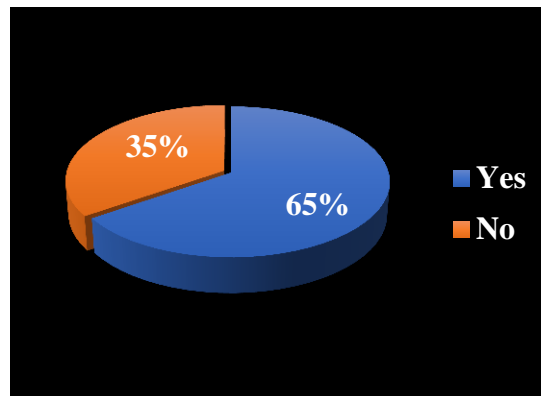




Analysis:

In the 4th question 78%, responded Yes, human presence affect teaching and learning experienced. Only 22% respondents said No, it means they think human presence has not affect teaching learning experienced. In those 75 students belongs to UG and 26 students belongs to PG. Majority of PG students agrees, and majority of UG students agree with the question.

Q5. Does your college have the proper infrastructure of I.T. tools?



Analysis:

In 5th question, 65% respondents said Yes that their college has the proper availability of I.T.

tools and 35% said No, their college has not proper availability of I.T. tools. In those 75 students belongs to UG and 26 students belongs to PG. Majority of PG students agrees, and majority of UG students agree with the question.

Hypothesis:

H₀: There is negative relationship between Gender and Traditional learning.

H₁: There is significant relationship between Gender and Traditional learning.

Hypothesis Testing

Chi square Test

Respondents	Yes	No	Total	Chi-square	DF	C. Value	P value
Male	27	24	51	0.0089	1	3.84	0.92
Female	26	24	50				
Total	53	48	101				

$P > 0.05$ $0.92 > 0.05$

P value is more than 0.05. Null hypothesis fails to reject.

“There is negative relationship between Gender and Traditional learning.”

Findings:

1. Research paper responses of 101 students are collected. where 74 students are under graduates and 27 are post graduates. According to the students, e-learning is better than traditional education and is easy to understand. About 60% of students believe that e-learning will be the future of education. Students should give priority to e-learning in future. Currently, about 65% of the institutions have the sufficient infrastructure for online education.

2. Competition is growing day by day. Students need to have proper or accurate knowledge about each subject and this is not possible in traditional education. In the future students will use traditional learning along with e-learning for their development. This means learning from a hybrid education that is a mixture of traditional and online learning.

3. Indian education system focuses on learners' memory power instead of skills and creativity. Most of the learners just passed out from one class to second class without getting proper knowledge. Most of the learners didn't set their goals. It depends entirely on the learner's mindset.

Conclusion:

After these study researchers concluded that the e-learning performs very important role in pandemic situation on student's life. Students are mostly used e-learning for development. But the mindset of the students depends on how the available resources can be used for educational purposes. Educational institutions emphasize online learning. The scope of online education will increase in the future. At present, 34.7 percent institutions do not have adequate infrastructure for e-learning.

Students want to learn new things every day that can be done with the help of internet. in online learning students have lot of choices and online courses can be available in comparatively low rate than traditional learning.

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A STUDY ABOUT THE INTEGRATION OF TECHNOLOGY WITH COMMERCE EDUCATION

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Abstract:

Commerce education, business education, and research are interrelated terms which include marketing, finance, accounting, human resource management, business law, commercial and entrepreneurship development, etc. Commerce education provides the required knowledge and skill to handle critical situations in the industries, commerce, and trade. In present, Commerce education has a very wider scope. Commerce education train the new generation in different aspects of the business environment and also plays a very important as well as fundamental role. We have to create awareness among students, to enhance Commerce education is the very important field for every student and technology plays a vital role in commerce education. In the last decade, there were tremendous changes emerging in commerce education. In 1991s LPG [liberalization, privatization and globalization] policies were introduced by former finance minister Shri. Dr. Manmohan Singh. In this research paper the uses of E-learning in commerce education is explained. There is immense importance, scope and use of skill-based commerce education.

Keywords: commercial education, Industries, trade, framing policies, Economist, business laws, Finance, etc.

Introduction:

If we looked some decades ago it told us core concept of commerce education, we need to understand the meaning of commerce. Commerce means the activity of buying and selling of goods. Commerce refers to all those activities which are essential for business concern to carry out activities. Commerce is the most effective and efficient means of selling products. Commerce refers to the exchange & purchasing of different type of commodities on a large quantity including transportation from place to place. The word commerce defines its meaning C- Communication, O- Organization, M- Money Management, M- Management of Resources, E- Exchange or Trade, R-Risk Bearing, C- Channels, E- Entrepreneurship.

In commerce education E-learning plays crucial role. The physical barriers for commerce education have ended. Digital society and economy that we are living in is truly inspired by E-learning. Especially in education sector E-learning is growing India and many more country. E-learning is very important branch of Information communication technology. It is proven by research that appropriate use of ICT can improve education system. E-learning is playing a

very important role in each and every field of education. It has revolutionized the teaching strategies including commerce. Indian economy is currently fasted growing economy in the world. In the year 2015-16 the growth rate touched 7.5 %. the government of India is going to organize 1500 multi skill training institute all over our nation on the other hand commerce education is a subject who got employment opportunities.

Commerce education leads to the knowledge of Business, Market, Money, Accounts and many more things which are connected to the Job market. The one who studied science will have many advantages in the scientific field but they could never understand the way of Business. In today's era, most of the Business recruits highly knowledgeable and skillful employees. The one, who get the education in Commerce field, knows how to sell or buy products or how to get profit and deal with every obstacle which comes in the way of forming new enterprises. They know about all business; this type of knowledge is difficult to get in any other fields.

To be accurate E-learning performs vital role in every sector education especially in teaching. Due to that crisis of COVID19 Teaching is made more interactive by the use of e-learning. It is teacher's student interactive class which is healthy for commerce education. There is huge scope for skill development in commerce education both in teaching and learning sector. E-learning is a crucial tool for the spread of quality education. Since it can take education outside the four walls of class rooms' commerce students get to know about the real-life situation and get solution to handle them. Skill development for better employment of commerce student can be increased with the help of E-learning which is a need of time.

Reviews of literature:

1. Ram Chandra Das (July 2017)

He concluded that skill development is a every essential factor in commerce education. He said that commerce education covers wide range of subjects these are given below: 1. Accounting Skill 2. Tax Planning and Management Skill 3. Auditing Skill 4. Marketing Skill 5. Banking Skill 6. Money Management Skill 7. Teaching Skills. 9. Decision Making Skill 10. Advertising Management Skill 11. Leadership Skill 12. Office Management Skill etc.

2. Dr Samir Vohra (2015)

According to them commerce schools and colleges need to go forward from the traditional education system, they need to adopt practical education. In this dynamic world, the international businesses and industries need skilled & knowledgeable employees who can solve any of the organization. They give many challenges and opportunities for commerce education.

3. Prof. Hanee S. Vinchu, Prof. Dr. S.R. Kandalgaonkar (October, 2017)

According to them Ratnagiri division has few colleges which providing higher education in commerce which have not yet driven ICT. ICT based commerce; education is an urgent need of the present day. By the use of ICT in commerce, education more and more ICT skills are increasing and it is every essential for universities and colleges.

4. R. Balaji (2013)

According to him, there is a failure in management education that is obvious with this economic worsening. The tutorial system did not forecast the recession and did not check the hot economy. The four pillars for effective management education are business expertise, practice expertise, analysis expertise, and teaching expertise. Once colleges possess these four areas of expertise and experience which ensures qualitative management education. The current business education is broken and wants to be reinvented with dynamical times.

5. Prof.Goutam, G. Saha (2012)

According to them, we tend to be in the third millennium, India's Management education is undergoing a significant transition. However, compared to U.S. & Japan wherever can we stand? One amongst the vital reasons for Japan's rising to the highest ladder of the commercial world is that they believe 'developing folks before developing merchandise'⁸ Indian management education needs to assume during this direction.

6. Bindu C.N. (April 2016 –September 2016)

She concluded that integration of ICT in education has a positive impact on not only teaching but also learning process. ICT can have a significant influence on students academic performance and educational achievement. It has the potential for a wider accessibility to education resources.

7. Prof. Hanee S. Vinchu, Prof. Dr. S.R. Kandalgaonkar (October, 2017)

According to him Ratnagiri division has few colleges which providing higher education in commerce which have not yet driven ICT. ICT based commerce; education is an urgent need of the present day. By the use of ICT in commerce, education more and more ICT skills are increasing and it is every essential for universities and colleges.

Objectives

- 1] To know the concept of E-learning.
- 2] To find the opinion of student regarding E-learning.
- 3] To find the present teaching method in commerce college.

Research Methodology:

Research Method

For the research, a descriptive method has used. As the area of the research is large, so there will be hard to collect the data so the survey method will be adopted for the study.

Sampling Method

For any study is it not possible to have interaction with the total population, due to Covid-19 and various reasons such as time, cost, etc. sampling is the process of selecting sample size

from the total population. Data is collected from consumers. For collecting data, the simple random sampling method is used.

Sample Size: we took a total of 200 sample size

Respondents	Number Of Reviews
Graduation	75
Post-graduation.	125
Total respondents	200

Data Collection Techniques:

Primary and secondary methods of data collection were used in the present research.

Primary Data:

Primary data is collected by the researcher by his observation, making questionnaires, telephonic survey and Google forms. In this research, we collected data by asking questions to respondents with the help of social media and other online platforms. Once the primary data is used for any other purpose it becomes secondary data.

Secondary Data:

For acquiring secondary data internal and external sources are used. It has been collected from published Books, Reports, Periodicals, Journals, Annual Reports, Research papers, Newspapers. For the present study the secondary data will be collected from, Newspaper, Magazines, Periodicals, Research Journals, Articles, and Publications, etc., Internet, Websites.

Data Analysis Techniques:

Data analysis is the process of getting significant information within the processing of untreated data. However, analysis of the data is a process of examining, picking, modifying and modeling data to highlight useful data, recommending a conclusion and helping conclusion planning. There are different ways to the analysis of data. So, for the analysis of the data percentage method was used and analyzed data will be presented in the form of various tables and graphs.

Scope of the study:

The scope of the study is restricted only to Amravati Town. The study focused on problems faced by students in commerce education.

Limitation:

1. This study is limited up to Amravati town.
2. This study is done within a short period of Covid-19.

Important

- **Traditional commerce education.**
- **E-learning in commerce education.**

Commerce and Management education advanced to funding the increasing requirements of corporate business organization. But, over the time, there has been an important shift in the approach of commerce and management education. At this time, we have to change the definition of commerce education this helps to make stronger to its scenario. Fluctuation in technological trend created obstacles in the way of the success of businesses due to that they face a difficulty to survive in that competitive world. As a result, it increases the need of commerce education. The B-schools have a great responsibility to create an emerging future manager who helps the organization to reach the economy at the no. 1 position.

The Commerce and Management education offered skill-oriented education as well as training to the students to arm them with the expert skills useful in different practical areas such as Trade, Commerce and Industry. Constant supply of high employability skills manpower is important for continues growth and development of whole the industry sector of our country. Commerce and management education shelters differentiated fields of education and research in altered aspects of business environment. It includes Marketing, Finance, Accounting Human Resource Management, and Entrepreneurship Development. Commercial and Business Law etc. management education should be easily decided that it is caring in one's life as well as aptitude the skill in type writing it's most important and this is also a one of the parts of commerce education. These educations are useful for all professionals. It is necessary that Commerce and Management education can be benefited to the professionals. Such as, lawyer, doctor, engineer etc. we can say that Commerce and Management education is a type of Training program, which helps the education system at very different level.

This is a world of great businesses each and every country effort its level best to get frequent trade and profitable businesses with other countries to improve its economy. This object of Country can be obtained through skilled human resources. In making qualitative human resources, Commerce and Management education has great contribution. Many experts have opinion that the fortune and the development of economy of a Nation depends upon its Business, Commerce, Trade and highly growing industries in the past.

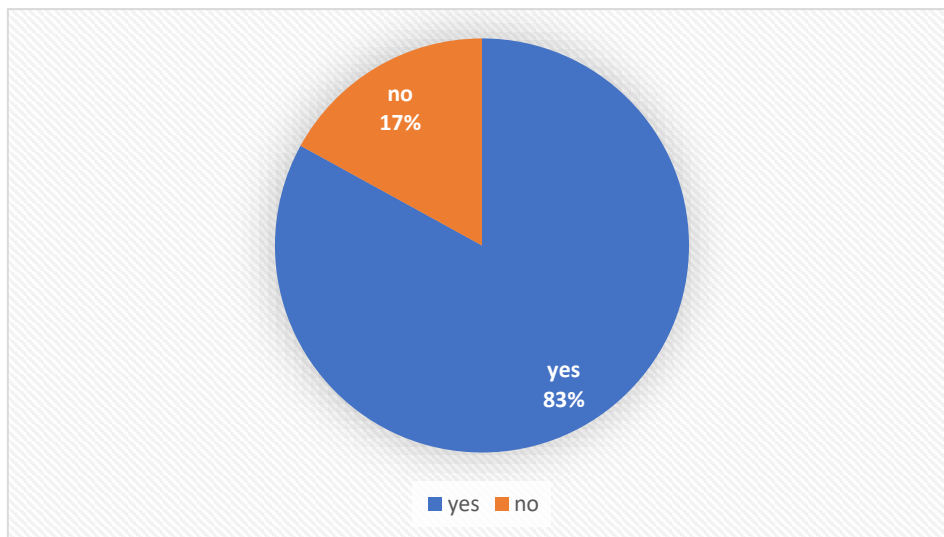
Importance of E-learning in Commerce Education:

- Anytime learning.
- Anywhere learning.
- Authentic and up to date information.

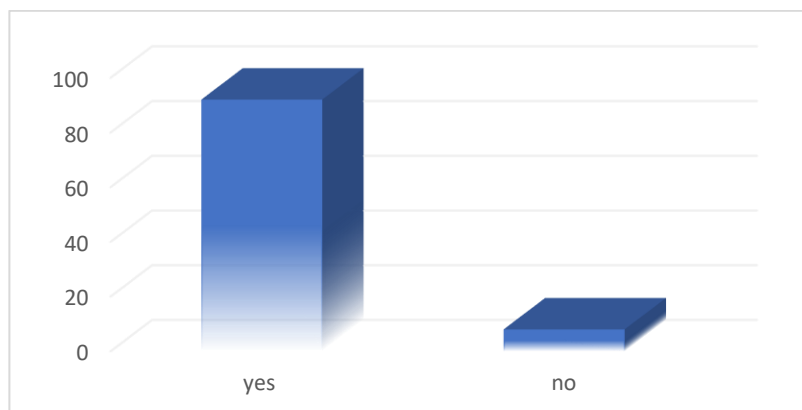
- Access to online libraries.
- Educational data storage.
- Distance education.
- Access to the source of information.
- Multiple communication channels-e-mail, chat, forum, blogs, etc.
- Access to open courseware.
- Better accesses to children with disabilities.
- Reduces time on many routine tasks.
- Collaborative learning.
- Access to variety of learning resources.
- Immediacy to information.
- Multimedia approach to education.
- Teaching of different subjects made interesting.

Data Analysis and Interpretation

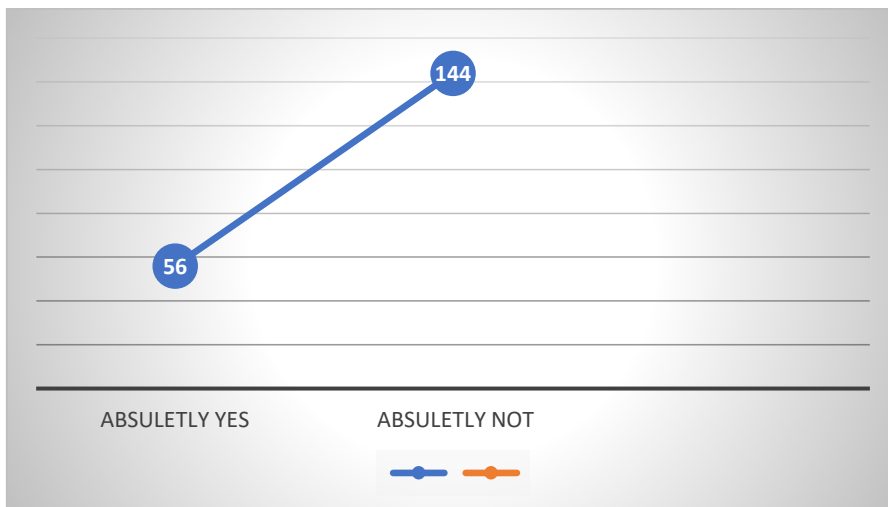
1. Do you think, E-learning will provide proper knowledge about market regulation?



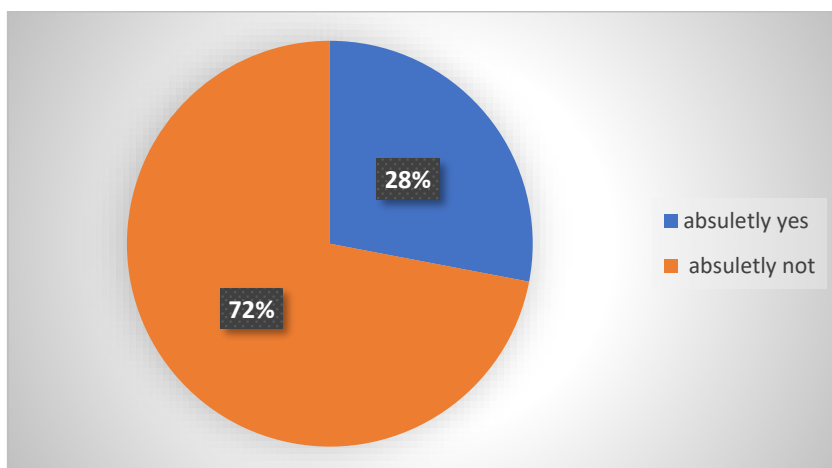
2. Is doing career in commerce stream is beneficial?



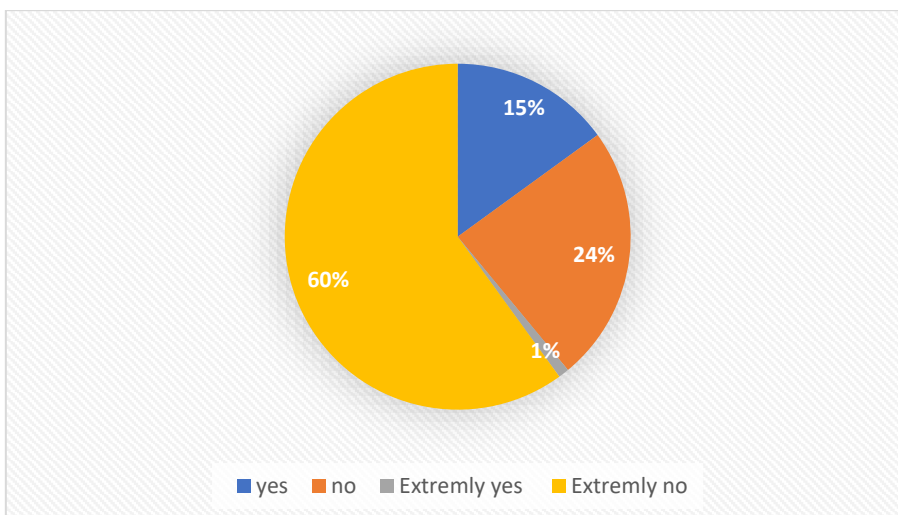
3. Is your college conducts regular online classes?



4. Is online learning easy way to understand the concepts?



5. What do you think your teaching faculty is well knowledge?



Findings:

1. Now a day's commerce education becomes the backbone of a country's economic system. To make commerce education to meet global challenges insufficient and outdated learning methods should be replaced with practical based knowledge and skill-based techniques.
2. Inertia of teachers to learn must be knowledgeable and skillful.
3. Due to covid-19 all the colleges have to conduct their classes at online platforms like google meet, zoom, WebEx etc. due to that most of the students do not have even smartphones and fast internet connectivity and if we move towards the offline education most of the colleges have to build up required infrastructure like a well-equipped classroom with modern communication technology like computer labs, internet facility, business lab, digital library, ventilation facilities, etc.
4. In the online education 72 %of students do not able to recognize about the concepts. Most of the colleges did not conduct any during that whole period of lockdown.
5. Commerce education offers vast opportunity to the student for employment but due to unawareness of commerce education and lack of employable skills in student benefit is not being taken its completest level.
6. Use technology if it can be helpful to impart these skills in students. Ex. E-learning.
7. There are numerous job opportunities for commerce graduates in every sector. But the students are not updated with knowledge which is the demand of the market.
8. As per the conducted survey, students are demanding newly introduced techniques for learning like Agile, six sigma, etc.
9. To meet the expectation of the corporate sector it's need have time to link educational institutions with industry. This helps to generate employment opportunities.
10. As per the conducted survey, the enrollment in commerce stream increasing day by day. Among 100 respondents 92 respondents are thought that commerce stream is beneficial.
11. Students are accepting drastic changes in teaching by implementing various seminars, practical based knowledge which is the need of the time.
12. Technology is a tool which can revolutionized the current teaching method and is performing the role of bridge between traditional education way and E-learning.

Conclusion:

Just like any other tool for education E-learning takes significant place in commerce education. It is playing a key role in effective distant education. Research work in education sector is getting simpler due to introduction of E-learning many education institutions are providing Wi-Fi facilities for involvement of student in sustainable development of commerce and better understanding. In order to increase the value of commerce education and E-learning is a simple but effective tool. Due to covid-19 E-learning gets vast important and most of the students also recognize the importance of e-learning. The world is undergoing LPG (Liberalization, Privatization and Globalization) computer is the only way to sustain this change. Youngsters are getting addicted to a specific dark side of our technology in order to make a voluble asset of our nation skill-based education and involvement of ICT can possibly tackle this problem.

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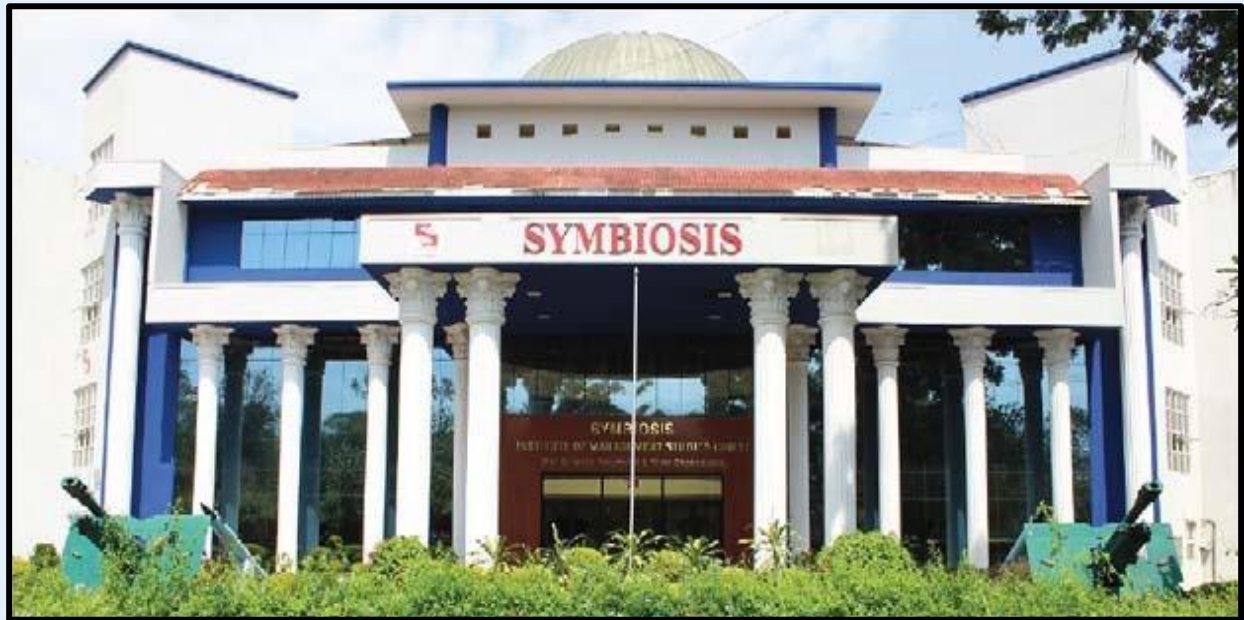
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