RE-INVENTING BUSINESS MODELS FOR GLOBAL EQUITY

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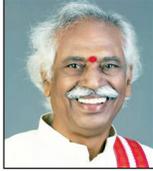
बंडारू दत्तात्रेय

राज्यपाल, हरियाणा

<u>**Message**</u>   29-Oct-2021

I am very glad to learn that the Department of Management, Gurugram University, is organizing a two-day international conference on 'Opportunities in Crisis: Re-inventing Business Models' (IC-MGMT-2021) on November 11–12, 2021, in the Millennium City Gurugram.

It is commendable that Gurugram University has taken up a very relevant topic to deliberate upon at IC-MGMT-2021. Covid-19 has taught many lessons and one of them being the challenge to convert adversities into opportunities.

I am sure this international conference will see scholars and experts from across the globe sharing their thoughts and vision on various relevant and concurrent topics like re-focusing business models, re-visiting business strategies, re-thinking business priorities, which will give a big boost to the build back process.

I congratulate Dr Markanday Ahuja, Vice Chancellor and all faculty members for making sincere efforts in promoting the culture of research and discussion on the campus. I would ask Dean Dr Amarjeet Kaur to relay my heartfelt greetings to all participants coming from across the world.

My best wishes for the success of IC-MGMT-2021!

(Bandaru Dattatraya)

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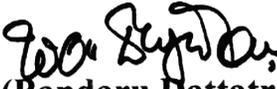
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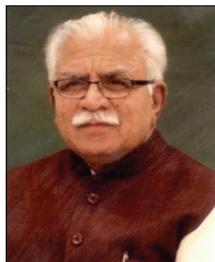
मुख्य मन्त्री, हरियाणा,
चण्डीगढ़।
**CHIEF MINISTER, HARYANA,
CHANDIGARH.**

Dated .... 2-11-2021 ....

Message

I am glad to know that the Department of Management, Gurugram University, Gurugram is organizing a two day International Conference on the theme of 'Opportunities in Crisis: Re-inventing Business Models'on November 11 and 12, 2021.

The decision to hold an International Conference on such an important topic is appropriate and has been taken on an opportune time as it is in-congruence with the Hon'ble Prime Minister's vision to make India 'Atmanirbhar' in every field.

I am sure, the conference will provide an apt platform to the participants to share their rich experiences and expertise with the students of this college. Also, the thought provoking discussions of the conference would go a long way in re inventing new business models and strategies to stay globally competitive and relevant.

I wish the international conference a great success.
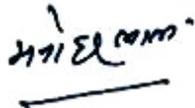
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Education, Forests, Tourism,
Parliamentary Affairs, Art & Cultural
Affairs and Hospitality Minister,
Haryana.

Dated, Chandigarh 28|10|2021

सन्देश

मुझे जानकर अत्यंत प्रसन्नता हुई कि गुरूग्राम विश्वविद्यालय के प्रबंधन विभाग द्वारा 11 व 12 नवम्बर, 2021 को 'आपदा में अवसरः व्यवसाय मॉडल का पुनः आविष्कार' विषय पर दो दिवसीय अंतर्राष्ट्रीय सम्मेलन का आयोजन किया जा रहा है।

अंतरराष्ट्रीय ख्याति के अनुसंधानोन्मुखी कार्यक्रम आयोजित करने के लिए विश्वविद्यालय के कुलपति डॉ. मार्कंडेय आहूजा और उनकी पूरी टीम बधाई की पात्र है। मुझे विश्वास है कि इन दो दिनों के विचार–विमर्श के दौरान, भारत और विदेशों के विद्वान सम्मेलन के विषय पर अपने विचार सांझा करेंगे और समय की मांग के अनुरूप उपयोगी सुझाव भी देंगे। इन दो दिनों के विचार–विमर्श के बाद जो नए विचार सामने आएंगे, वे आगे शोध के क्षेत्र बनेंगे।

गुरूग्राम विश्वविद्यालय भविष्योन्मुखी दृष्टिकोण के साथ उन्नत गुणवत्ता की शिक्षा और अनुसंधान के अवसर प्रदान करने के लिए समर्पित है। परिसर अपने अत्याधुनिक बुनियादी ढांचे, सुविधाओं, सीखने के माहौल और एक संगठनात्मक संस्कृति के बल पर सही पेशेवर ज्ञान और क्षमता के लिए आवश्यक सोच और महत्वपूर्ण समझ को विकसित करता है।

इस आयोजन के लिए मैं एक बार पुनः विश्वविद्यालय की समस्त टीम को बधाई देता हूँ और इस अंतर्राष्ट्रीय सम्मेलन की सफलता की कामना करता हूँ।

(कंवर पाल)

GURUGRAM UNIVERSITY

GURUGRAM (HARYANA)

(A State Govt. University Established under Haryana Act 17 of 2017

Dr. Markanday Ahuja
Vice Chancellor

Ref.: ....

Date: 29/10/2021

MESSAGE FROM THE CHIEF-PATRON, VICE CHANCELLOR

I am delighted to note that Department of Management, Gurugram University (GU) has taken up the initiative to organize its first ever International Conference on "Opportunities in Crisis: Re- Inventing Business Models" (IC-MGMT-2021), at GU campus, Gurugram during 11-12 November 2021.

I am well aware of that we are only a three years old University. We may be younger in age compared to other universities, may be less on infrastructure side, may have smaller group of teachers & staff; yet we all think big, think smart and work as a cohesive team which is well showcased in the achievements of the University even in its infancy stage.

IC-MGMT-2021 represents a broad theme of 'Re-Inventing Business Models'; which encompasses various sub-themes of contemporary interest especially in the new normal world. Businesses are re-inventing their models, strategies, focus and re-thinking on their priorities as key pillars of success to stay globally competitive and relevant. These aspects can also be seen as enmeshing gears which provide the necessary traction to a country to progress towards sustainable development especially in the post pandemic condition. The pandemic has been one of the biggest challenges and crisis which the mankind has faced in almost a century. I feel, the bigger the crisis or challenge, the bigger opportunities and bigger learning it throws. Let's learn from these challenges and try to covert these challenges into opportunities with our dedication and commitment. I am delighted that the department of management at GU decided to provide a platform to deliberate on these aspects through this conference.

I am indeed extremely happy that luminaries in the field drawn from various centers of excellence who have made epoch making contributions would be deliberating on the theme of the conference; which would certainly help participants in upgrading their knowledge.

I sincerely hope that the conference would help in evolving policies for knowledge sharing and in rapid amalgamation of the front line practices.

On this academic occasion of this International Conference I congratulate the Dean, Dr. Amarjeet Kaur for her decision to organize annual International conference and also for keeping her team motivated to organize events of great significance.

Let's work together to mark this conference not only successful but meaningful. May God shower his choicest blessings upon the organizing team!

Dr. Markanday Ahuja
Vice Chancellor, Gurugram University, India

Department of Management
GURUGRAM UNIVERSITY GURUGRAM (HARYANA)
(A state Govt. University Established under Haryana Act 17 of 2017)

MESSAGE FROM THE PATRON, DEAN

It is a pleasure to welcome you to the first International Conference on "Opportunities in Crisis: Re-inventing Business Models" (IC-MGMT-2021), a collaborative effort by the team at the Department of Management, Gururgram University, Gurugram, India.

Organizations across the world are struggling to sustain their operations due to prevailing pandemic condition affecting almost the whole world adversely. The need for Global Equity was never felt as much before as is today. Businesses need to re-visit their operations, re-align their objectives, re-frame their strategies, and re-invent their models: the agenda for this two days international conference.

This International Conference brings together the direct and indirect stakeholders both from academia and industry to this platform for discussions on business models in the post pandemic world.

As India has opened up increasingly to the global players and the world of business is becoming more tightly integrated, I am sure that after the deliberations amongst various stakeholders there would be some practical, concrete and workable suggestions for a more equitable world.

I am very grateful to the Vice Chancellor, Gurugram University for his continuous support and motivation to organize such a prestigious event of international importance. I would also like to extend many thanks to the sponsors of this event for their generous support.

Finally, I would express my heartfelt thanks and appreciation to the conference organizing team for their untiring efforts to ensure success to the conference. However, if there is any disappointment to any of the participant, I shall solely be held responsible and credit of the success goes to the Team-Management.

Once again, a warm welcome to one and all!

28/10/2021

Prof. (Dr.) Amarjeet Kaur
Dean, Faculty of Commerce & Management
Patron (IC-MGMT-2021)

Preface

It gives us immense pleasure to introduce our efforts of organizing and hosting, a two day International Conference on the theme "Opportunities in Crisis: Re-Inventing Business Models", during November 11–12, 2021 by the Department of Management, Gurugram University, Gurugram India.

Here, we would like to introduce the organizing university, Gurugram University, Gurugram, India. Gurugram University aspires to be one of the most prestigious Universities in Haryana and is likely to be a microcosm of the Indian nation, drawing students from every nook and corner of the country and from every group and stratum of society. Gurugram University (GU) is emerging as a global university with a wide offering of programs and courses spanning varied educational faculties. The university believes in creating evangelists of knowledge; people who spread the light quite literally.

The said conference has been conceptualized by the Department of Management. The department of management at Gurugram University takes pride in providing an innovative environment to its students so that they can become ethical business Leaders. Students are trained with a view to face the challenges with the objective of holistic personality development. The Department of Management provides a right mix of industry and academia interaction while encouraging a healthy learning environment.

After Decades of fast globalization; our world entered into a phase of deep crisis. The Pandemic has added momentum to the slowdown in the world economy. However, crisis and extreme threats can be useful for directing individuals and economies in building a better tomorrow and a sustainable future. Organizations are involved in restructuring their processes, supply chains to increase their efficiency and reduce costs. With the changes that have occurred due to the pandemic, the organizations, institutions are pressurized to adapt to the 'New Normal' while changing their business strategies at all functional levels. Therefore, it becomes imperative to seek strength and plant seeds of hope in the challenging times, while gaining possible insights and solutions that can be developed in conjunction with various stakeholders.

In our endeavor, we received contribution by over 100 researchers either in the capacity of an author or a co-author. After passing through stringent double blind review process, finally 38 papers have been included in this edited book and 3 papers have been included in the 'Gurugram University Business Review' Journal.

The edited book has been divided into 4 sections representing conglobate of all the themes. Those 4 sections are:

Section 1: Emerging Practices in Human Capital Management
Section 2: New Dynamics in Economic and Financial World
Section 3: Marketing and Entrepreneurship: Success Stories and Debacles
Section 4: Advancements in Technology and Digitalization

This Conference is the outcome of successful efforts by the organizing team from the Department of Management, Gurugram University, Gurugram. We are grateful to the Hon'ble Vice Chancellor & Conference Chief Patron Dr. Markandey Ahuja, for his constant guidance motivation and unfathomed support. We extend our gratefulness to conference chairpersons Prof. (Dr.) M.S. Turan Dean, Academic Affairs, Gurugram University and Dr. Aman Vashisth, Dean of Colleges, Gurugram University for their continuous encouragement. We are indebted to Conference Organising General Secretary Dr. Shashi Bhushan Bharti Registrar, Gurugram University for his support. We are also grateful to the members of International Conference Advisory Committee for their guidance. We deeply acknowledge with humble gratitude, all the intellectual authors for their valuable contributions. We extend our heartfelt thankfulness to the Conference conveners Dr. Naveen Kumar and Dr. Hawa Singh and Editorial Asssistant Ms.Shilpa Jain for their extensive and appreciable team efforts. Last, but not the least, our sincere thanks and appreciation goes to Ms. Jyoti Mehrotra, Development Editor, Bloomsbury Publishing India Pvt Ltd. and her team for their cooperation and interest in publishing this volume, in meeting deadlines and continued support in designing and editing the content in time.

Dr. Amarjeet Kaur Malhotra   **Dr. Monika Bhatia**
Editor   *Associate Editor*

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EMERGING PRACTICES IN HUMAN CAPITAL MANAGEMENT

Reinvent Yourself before Reinventing Business: A Perspective from Ancient Wisdom

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Abstract

The COVID-19 pandemic has been devastating – not only physically but mentally, socially and economically also. It is probably the toughest of times; the mankind has faced in the last century. Tough times do not last but tough people do. Now the question is; what do we understand by this toughness: toughness on account of physical, mental, social and spiritual strength. This article builds the argument that a men with strong ethics carry high moral values and these values have always survived the battles of life. The study deploys Hermeneutics Analysis to trace out the implications of character traits and personality traits on the quality of lives of human beings, which further affects the business or profession a person is working in. The study concludes that that the best way to come out of COVID times and to re-invent the business model is to first re-invent oneself and then move ahead. The study establishes the importance of character traits and personality traits required for the consistent success of businesses.

Keywords: *Character Traits, Hermeneutics Analysis, Personality Traits.*

Introduction

There is plenty of research on personality traits that explains its impact on human behaviors in different situations. However, there is sparse research available in the literature that explains how a personality trait affects innovativeness among individuals and satisfaction with life perceptions (subjective wellbeing). The theory of personality traits postulates that people naturally deal with different situations and interact with their environment in different ways. Furthermore, a very few studies have considered the mechanisms and conditions through which personality traits improve an individual's perceived satisfaction with life. However, various studies indicate that there may be process variables underlying the relationship between personality traits and satisfaction with life (Gerbing, 1992). Willibald et al. (2017) say that the fact that valuing personality descriptors from the realm of character were deliberately excluded from the Big Five model of personality, in the study of economic games. Filler (1921) says that a trait must be defined in order to be studied intelligently. Michael DePaul (2000). On the hand in his study focusses on clarifying some of the ways in which character traits are understood by virtue ethicists, especially those who look to the classical philosophers. Thus,

there are varied views on character traits and personality traits. But, the history shows that the people with strong ethics and values have survived the toughest times and have relatively consistency in success than the ones with weaker ethics and values.

This propels author to study the character and personality traits of individual in overcoming challenges the life throws, which would affect the success of businesses those people for working with; hence this study. The next section of the paper frames objectives for the study. The third section talks about the motivation for the study The fourth section addresses the research method and section five elucidates character and personality traits with the help of real examples and finally the conclusion has been underlined in section seven.

Motivation of the Study

The COVID-19 pandemic has been devastating –not only physically but mentally, socially and economically also. It is probably the toughest of times; the mankind has faced in the last century. Tough times do not last but tough people do. According to FICCI's Business Confidence Survey, there was a "sharp deterioration" in the optimism level of corporate. A survey by Economic Times shows that over 90 per cent of the Indian business leaders opined that the COVID-19 pandemic has highlighted the need to improve crisis management capabilities, says a survey by consultancy firm PwC India. About 59 per cent of the Indian business admitted having adversely impacted by the corona virus pandemic, said the PwC's Global Crisis Survey 2021- India Insights. All these numbers shows the adverse impact of the pandemic over businesses and pose a question on re-inventing business models; re-visiting the business strategies and the most important aspect of refocusing the individual traits required to face tough times. This leads to the motivation for this study to see how character and personality traits of individuals involved in business do impact the survival and growth of a business.

Objectives

The objective of this study is:
1. To elucidate the importance of ethics and values in human lives though selected legends of tested times.
2. To study the importance of character traits and personality traits required for the success of businesses.

Research Method

In this study Hermeneutics analysis has been used for drawing inferences. Hermeneutics is the study of interpretation. This is an established tool to study a discipline, where the subject matter involves human beliefs, actions, intentions and demands interpretative approaches. There are many disciplines like jurisprudence, theology, especially studies on Bible, and medicine, as well as some of the human sciences, social sciences, wisdom studies, philosophical texts

and humanities where hermeneutics is used to draw inferences. Grondin (1994) says that in such contexts, hermeneutics is sometimes used as a supporting study of the arts, methods, and foundations of research appropriate to a respective disciplinary subject matter. More recently, applied hermeneutics has been further developed as a research method for a number of disciplines (see, for example, Moules inter alia 2015).

Discussion

This section will take examples of selected personalities to explain the importance of reinventing oneself before reinvent businesses. Let's see the lives of few great personalities.

Mohandas as he was known in his childhood was a staunch supporter of truth and honesty. He attended a school in a small town of Gujarat. Once, the inspector of schools was scheduled to inspect. Everybody was having a good image of the school. The Inspector went to the class in which Mohandas was a student. To ascertain the knowledge of the students, he gave them a few dictations. The spelling Mohandas wrote was not right; the teacher was standing in front of him. He hinted to Mohandas to copy the right one from the boy next to him. Mohandas refused to budge knowing well that the teacher would not spare him for his refusal once the Inspector left the class. This was an ordinary incident but the foundation that was based on such truth and honesty was good enough to make Gandhi out of the little boy. He deserved to become the 'Father of Nation'. I also got such an experience in my life in tenth standard. It was customary in the school to send some notes for copying and it used to start from the topper. Naturally as I was the topper it started with me but as soon as the slip was given to me. I started trembling and I requested the duty in charge to give it to somebody else as I never required this. The teacher was angry as instructions were till the time I see it, it can't go to someone else. Believe me; I had never copied in my life, so my psychological condition was very bad. The teacher was pressing hard, so I told him that I have finished the paper. You take my paper and then I will see the copying material. To my surprise, there were certain mistakes in the copying material which I marked and gave it back to the teacher. They all were stunned. They wanted to help me but I was doing it the other way. At last, they conceded my request and in future never forced me to do certain things from copying material sent in exams. They wanted to do better for me as they wanted to see their school on top in Board exams but I was not willing as I never wanted to be a topper by copying. That decision helped me a lot in shaping my career.

Greatest of all American Presidents, Abraham Lincoln hailed from a very poor family. He did all petty works like feeding animals, harvesting crops, planting and chopping trees to earn enough to go to school. But he had a clear aim. He did not have money to buy books; he borrowed and copied them in the candlelight. At the age of 21 he started his career as a mailman in a village. But Lincoln's peculiar ambition led him to become a reputed lawyer, and eventually the president of USA. Not many people believed he would achieve either of his goals. He had farfetched peculiar ambition, which he strived for and succeeded.

During the devastating earthquake in Kobe, Japan, an American newscaster saw a Japanese woman selling flashlights and batteries in a small makeshift shop, which was made up of wooden boxes. There was a great demand for batteries and flashlight torches as there was no electricity. The newscaster went to the lady and asked why she was not selling the essential items for more than the regular price. The woman answered, "Why would I want to profit from someone else's suffering?" These are the ethical values of citizens of a great country like Japan. We during COVID times have seen both sides of coin. People going out of the way to serve the sufferers and people doing hoarding and black marketing of live saving drugs, oxygen and even hospital beds. I think time has come to move ahead.

Behavioral scientists have suggested nine dimensions to character ethics.

In the initial years, character ethics was considered the foundation of success. The most important issues were:

1. Integrity: The oneness of honest approach, which cannot be disintegrated.
2. Humility: Person having a low opinion of one's importance, less proud.
3. Fidelity: the faithfulness and loyalty of a person.
4. Temperance: It is the quality of self-restraint moderation, and total abstinence from alcohol.
5. Courage: it is the ability to control fear when facing danger or pain.
6. Justice: It is the quality of a person of being fair or reasonable.
7. Patience: It is the ability of calm tolerance.
8. Simplicity: It is the quality of a man who is not showy, proud or extravagant.
9. Modesty: Not behaving boastfully and avoiding indecency.

Covey has said that character ethics teach that there are basic principles of effective living and that people can only experience true success and enduring happiness as they learn and integrate these principles into their character. People like Covey, Gandhi and Lincoln are examples of strong followers of character ethics.

Followers of character ethics acknowledge character as the main ingredient of success. Personality ethics believers recognize it as only the foundation, and believe that other issues such as interpersonal, relationship, communication skills and positive attitude play a more important role in achieving success.

They have identified four basic qualities or traits: Character, Competence, Integrity and Acceptance.

For any relationship to prosper, character is the prime quality, which a man must possess. A person may have all the good qualities in him. But without character, he cannot be trusted and therefore can never ever build a sound platform of relationship. A fox is cunning by character and will behave so when it gets an opportunity even with the best of friends. It is character that communicates most eloquently. Generally to improve a relationship a person uses human influence, strategies and tactics to get people to do what he wants, to motivate them, to influence them to work better, to like him and each other without focusing on character building which is not going to last long. The flawed character marked with insincerity in a

relationship will breed distrust and the best of human relationship technique will be taken as manipulative techniques. The best example is the process of farming. Farm is a natural system. You always reap what you sow: "There is no shortcut." The most modern invention of man that has changed human life and his way of thinking, that is computers, also could not change this natural law, i.e. Garbage In, Garbage Out."

About the foundation of character and what makes it, William George Jordan narrated it very correctly as, "Into the hands of every individual is given a marvelous power for good or evil-the silent unconscious, unseen influence of his life. This is simply the constant radiation of what man really is, not what he pretends to be.' An old tiger promising nice and polished behavior to its prey can hardly create a sense of trustworthy relationship. Duplicity in behavior and double standards in dealing with people cannot be sustained forever. When such dubious behavior is exposed, the people around will never forgive you. No man in this world ever wants to be cheated and the worst wounds a person can inflict on others are by cheating. Character is one trait, which comes to its own, when a person is at ease and not under any pressure to buckle.

Out of all the major personality traits of a man the most difficult to change is character building. Character is the structure of the building and is developed on several layers of time-tested concrete. The character of a man comes to its fore at times of distress. People generally resort to unfair and easy path at the time of odds against him. The real test of a person's character is when everything is adverse to him, including his own relatives not willing to come forward for any help. But it is equally true that people, who have experienced such kind of trauma with grace, stand in high esteem of those around him. It is at a time when loneliness is the only companion of a man with hurdles around that the true strong character comes out to overcome the problems.

Second one is the Competence; it comes when a person has the right kind of ability complemented with attitude to serve. The best of knowledge and skills without the right kind of attitude does not make a man competent.

'If we cannot believe in ourselves, who else will. 'There is only one winner amongst several contenders having the same strength, same caliber and skills. A loser gives up the race before it starts, thinking that it cannot be won. I know many of my friends, who did well during their school days. Nobody had any doubts about their competence. But to tell my readers, very few of them have really achieved anything to mention about afterwards. The reason for their losing before they started playing was complacency. Competence can bring success if, and only if the person is strong and resolute. You yourself should be convinced first and then only can you cross the hurdles.

The famous book "Think and Grow Rich" by Napoleon Hill has taught an invaluable lesson that one should not give up the fight on the ground that one would lose. There are several people in our society who are symbols of gloom and who advise not to venture in any new field. They will never try anything new themselves nor allow others to think or try something new. Their plea for not venturing into something new may be as like: It has been

attempted before but without success or it is a risky proposition or what society will say; they will not accept it or It goes against government policy or I do not have time to try something new.

Next time when you are trying one of the excuses mentioned above you must know in which category you are. You are the best judge and you are the one who can cure yourself of disease called exquisites.

Third one is Acceptance; is if we want to have a good relationship we must know the importance of accepting each other with the entire plus and minus points we have. Changing a person as per your own requirement will always create a strained relationship. When we accept a person in life we accept him or her in "toto".

Fourth one is Integrity; is based on the principle of fairness, the principle which gives birth to equity and justice. No example can be better than the sense of fairness prevailing in children. Even in adverse conditions the definition of fairness remains the same. Steven Covey has showed personal integrity as the basis of creating goodwill, which generates trust. Lack of integrity can undermine any effort to create trust in relationships. Even people, who seek to understand, remember the little things, keep their promises, clarify and fulfill expectations, fail to build a relationship because they are inwardly duplicitous. Integrity is more than honesty.

Another important virtue, which helps individuals to face tough times, is fearlessness. The chapter 16, verses 1-3 of Shrimad Bhagwad Gita addresses this state of mind as Abhayam. It is the state of free mind without having concern for present and future miseries. Unwarranted attachment of any kind causes fear. Attachment to wealth leads to terror of hardship, attachment to social prestige causes fear of reputation, attachment to vice leads to anxiety about the consequences of sin, attachment to bodily comfort causes the fear of ill-health, and so on. Detachment and surrender to God helps overcome all fear from the heart.

Lastly, honesty in simple words is telling the truth, or in other words, is conforming our words to reality. Integrity is conforming reality to our words or in other words keeping promises and fulfilling the expectations. One of the best ways to explain integrity is to be loyal to those who are not present. In doing so we build the trust of those who are present. When you defend those who are absent you retain the trust of those who are present. Never sweet-talk in somebody's face and bad mouth behind his back. That's the essence of avoiding duplicity.

Conclusion

The study is descriptive in nature and concludes that strong character traits and personality traits can make you tougher in tough times. Tough times do not last but tough people do. The study deploys Hermeneutics Analysis to trace out the implications of character traits and personality traits on the quality of lives of human beings, which further affects the business or profession a person is working in. The study concludes that that the best way to come out of COVID times and to re-invent the business model is to first re-invent oneself and then move

ahead. The study establishes the importance of character traits and personality traits required for the consistent success of businesses.

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Impact of COVID-19 Outbreak on Student's Attitude and Perception Towards Their Education and Career

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Abstract

COVID-19 has proven to be the most widespread virus in the world, causing a pandemic and affecting everyone in major fields of their life. With that said, educational institutions proved to be major outbreak centers forcing the governments all over the globe to come forward with different policies and techniques to help cope with the situation. This has affected the students and their future plans for their education and career. This research aims to study the impact of COVID-19 outbreak on the attitude and perception of students towards their education and career. The impact of the COVID-19 on the students in respect to different genders is also looked into. Previous literature showed that when similar outbreaks happened in the recent past then distance education and online education were preferred mode of education. A cross-sectional study was conducted among 400 students from different colleges and universities in India. The data for the research was collected through self-administered questionnaire made using google forms. Different types of descriptive mapping of the results have been done to show the impact of the pandemic on the psychology of a student.

Keywords: *COVID-19, Student, Perception, Attitude, Education, Career.*

Introduction

The coronavirus (COVID-19) has spread all over the world causing an outbreak of serious infections among the population. According to Ministry of Health and Family Welfare there are 552659 active cases, 397637 deaths and 29366601 cured as of 29th June 2021. The pandemic has impacted the lives of many people. Along with the risk of death, this pandemic has created psychological fear and anxiety among the population. Since the epidemic is spreading day by day it has forced the students studying in different colleges and universities to stay at homes and in isolation. With no change of environment, the anxiety, stress, frustration of the students has increased. There have been studies on the psychological effects of the widespread on the patients, general public, children, older adults and medical staff (Q. Chen et al., 2020; Yang et al., 2020; Li et al., 2020). Still, there is no thorough study on the mental health standing of college students facing the widespread has been performed till date. In this research paper

our aim is to see the impact of COVID-19 outbreaks on the attitude and perception of the university students. There certainly has been a lot of changes in the education system as many universities started their online courses. The concept of e-learning gained importance and momentum in this changed scenario. Below are some of the important definitions related to the terms used in the research work.

Pandemic: "According to Hornby (2010 p. 1061) is a disease that spreads over the whole country or the whole world."

Attitude: "According to Hornby, (2010 p. 80) denotes the way people think and feel about a thing. That is, the way people behave towards a situation, shows how they think and feel."

According to B. V. H. Gilmer, "Perception is the process of becoming aware of situations, of adding meaningful associations to sensations."

This research work desires to address the following questions:

- Amidst the outbreak, what are students planning to do?
- How has the outbreak affected the career aspirations of the students?
- What changes are there in their attitude after this outbreak?

Review of Literature

Debbie Van et al. (2010) conducted an online survey intended to measure the perceptions and feedback of staff and students for pandemic (H1N1) 2009 at a major university in Sydney, Australia. Indication is towards the aptitude for expanding online teaching and learning resources for sustaining education in disaster horizon.

Hulya Akan et al. (2010) studied university students' knowledge, attitude towards the vaccination and other preventive measures of pandemic influenza A/H1N1. A cross-sectional study conducted among first year university students at Yeditepe University in Istanbul, Turkey revealed that the participants had adequate knowledge about H1N1 pandemic.

Shivlingesh Krishnappa Kamate et al. (2010) did a study to enquire knowledge, attitude and behavioural responses of an Indian community towards Influenza A (H1N1) using a cross-sectional questionnaire survey carried out among 791 individuals. As per the results behavioural response to Influenza A (H1N1) was poor even though knowledge and attitude were acceptable.

Li Peng, Jiajia Zhang, Min Li (2012) did a study on a sample of 1998 medical students in China to evaluate the moderating effect of resilience amongst mental health problems and negative life events. The factors that affect the mental health problems of the students was also studied. The results depicted that mental health problems have a positive correlation with negative life events and neuroticism. Additionally, negative correlation was observed among extraversion, social support and resilience connected to mental health.

Joseph Besong Besong (2015) undertook a survey to examine students' attitude towards HIV/AIDS pandemic in Universities in Buea, South-West Region in Cameroon. For this Student Attitude Towards AIDS Pandemic Questionnaire" (SATAPQ) and Ex post facto design

was used. Results of the independent t-test revealed that there was no significant difference towards HIV/AIDS pandemic among gender, universities students' attitude towards HIV/AIDS screening.

Rosanne B. McBride (2016) studied the resistance among medical students along with the role of teaching and learning, coping style and social support in medicine. It was a cross-sectional study of students at the University of North Dakota School of Medicine and Health Sciences (UND SMHS). The overall survey response rate was 64%. 49% had burnout whereas 17% had moderate to severe depression. It was found that there is presence of stigma regarding mental health in the medical community.

Wenjun Cao et al. (2020) surveyed college students from Changzhi medical college using cluster sampling. Results showed positive corelation among effects on daily life, economic effects, delays in academic activities with anxiety symptoms whereas negative correlation between social support with the level of anxiety. During epidemics the mental health of the college students should be monitored effectively.

Itishree Mohanta et al. (2020) aimed on discovering the impact of COVID-19 on higher education in India. The effect of COVID-19 has been the focus of the majority problems and transition from old-style system of education, i.e. teaching to focus on online learning from face-to-face classroom learning. The authors through this theoretical paper have analysed the transitions in Institutions, teaching-learning process, students, teachers, examinations and admission process.

Orla McBride et al. (2020) in this study aim to assess and monitor the psychological and social impact of the coronavirus (COVID-19) pandemic in the general population with the help of longitudinal surveys and mixed-methods studies in multiple countries.

Hour Vannak (2020) aim to examine the challenges caused by COVID-19 using SWOT analysis. Due to the shift in the students' learning and assessments from offline to online, there is a lot of trial and error going on. The crisis has forced the cancellation of many assessments. Finishing a SWOT analysis support to offer knowledge into areas of attention throughout a strategic planning process.

Zhuodan Xie et al. (2020) explained about autonomous learning. All through the COVID-19 outbreak, the Second Elementary School in Ningbo City, Daxie, Zhejiang Province implemented an online education model to enable distance education and student counselling, along with actively established teaching methods for students' independent at home learning. The teaching practice of home study for students during the pandemic has also been discussed.

Aliriza Arënliu (2020) ran a survey online among 158 students from University of Prishtina "Hasan Prishtina" on psychological distress level as a consequence of mobility constraint of citizens during the COVID-19 pandemics. The results indicate a trend that as compared to respondents who report talking to someone in person or online, the respondents who spend more time in social media or watching films suffer more or severe psychological distress.

Pravat Kumar Jena (2020) through this work highlighted some major impacts of COVID-19 on HEIs in India. Investigation of the procedures taken up by educational authorities of India and HEIs to provide continuous educational services during the pandemic is looked into. Post COVID-19 trends which enabled envisioning new methods of teaching of higher education in India are indicated.

Research Methodology

Objectives

- To study the psychological impact of COVID-19 on students.
- To study perception of the students towards their education after the outbreak.
- To study attitude of students towards their education after this outbreak
- To compare the attitude of students towards their education and career due to COVID-19 in respect to their gender.
- To study the impact of online classes on student's education.

Data Collection

This study is based on primary data collected through self-administered questionnaire. The cross-sectional study was conducted among 400 students from different colleges and universities in India. For the literature secondary was taken from various published journals, articles, magazines, etc.

Statistical Tools

This study uses a descriptive analysis to explain, compare, rate and categorize the demographics of the respondent under the study. To evaluate and describe the impact of COVID on attitude and perception of the students, chi square analysis, t-test, etc., have been used through the SPSS software.

Finding and Analysis

Descriptive Statistics of the Respondents

Table 1 shows the descriptive statistics of the respondents. Out of 400 respondents, 190 respondents were of 18-20 years of age, 151 were of 21–23 years of age, 47 respondents were of 24-26 years of age and only 10 respondents were from 27 and above year range. Under the gender category, 71% (284/400) respondents were female where as 29% were male. The respondents' education level was 3.8% under graduate, 58.5% graduate, 33.3% post graduate and 4.5% of the respondents were pursuing their doctorate.

Table 1: Descriptive Statistics of the Respondents

Descriptive		Frequency	Percent	Valid Percent	Cumulative Percent
Age	18-20	192	48	48	48
	21-23	151	37.8	37.8	85.8
	24-26	47	11.8	11.8	97.5
	27 and above	10	2.5	2.5	100
	TOTAL	400	100	100	
Gender	Female	284	71	71	71
	Male	116	29	29	100
	TOTAL	400	100	100	
Education Qualification	Graduate	234	58.5	58.5	58.5
	Post-Graduate	133	33.3	33.3	91.8
	Pursuing PhD	18	4.5	4.5	96.3
	Under Graduate	15	3.8	3.8	100
	TOTAL	400	100	100	

Further Education

When the respondents were asked about further education, 61% (244/400) of the respondents preferred on-campus courses where as 39% (156/400) preferred online courses, as shown in Figure 1.
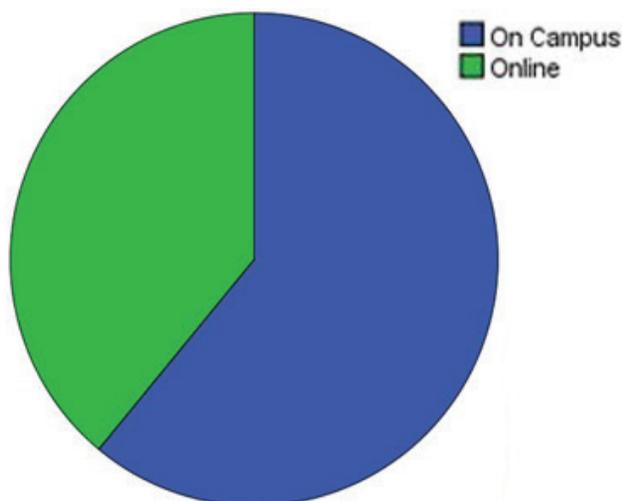
Figure 1: Online or On-campus

Figure 2 shows the response of the participants when asked about future enrolment. 135 respondents were considering different options, 24 respondents had just enrolled, 12 respondents had sent their application for their respective course and 229 respondents were already enrolled in for the course of their choice.
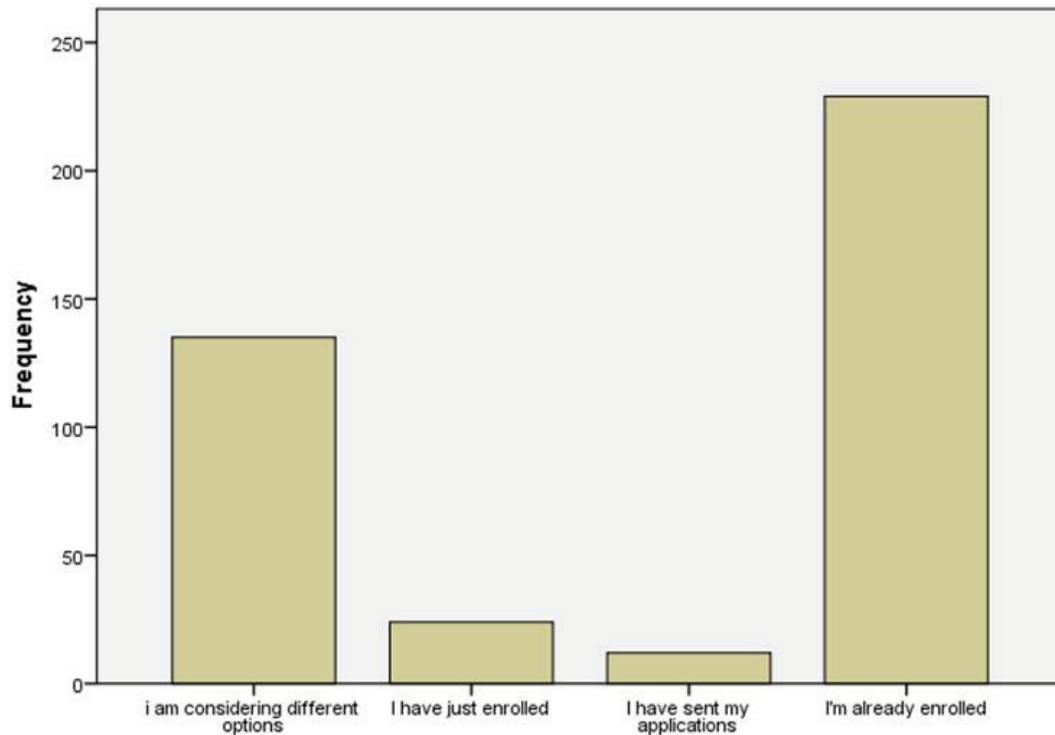
Figure 2: Enrolment

The respondents when asked if there were any changes in their future career plans, 44% (176/400) responded as 'no', 29% (116/400) responded as 'yes' and 27% (108/400) responded as 'may be', as shown in Figure 3.
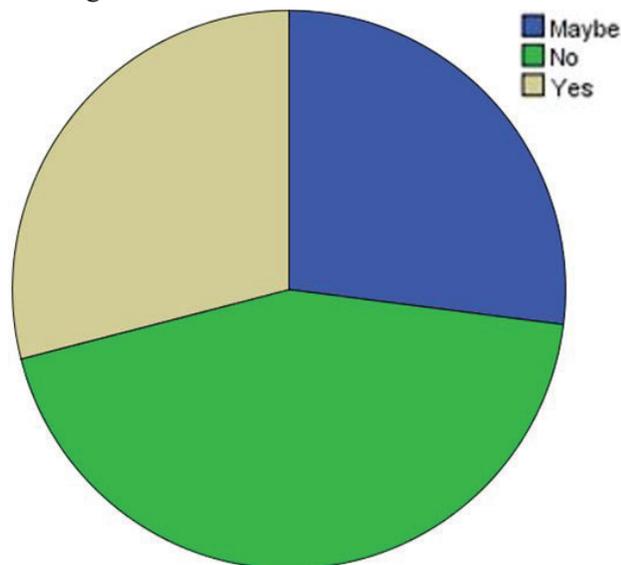
Figure 3: Change in Future Plan

Change in Attitude of Students

*   *Hypothesis 1: H_{01}:* There is no change in attitude of students.
    Interpretation: The respondents considered 'enrolling to online course' as the most significant change followed by 'not going to abroad and enrolling in home country university' and 'postponing enrolment until next year or year after'. Hence showing changes in attitude as shown in table 2.

Table 2: Changes in Attitude

		Changes in Attitude						
		Enrolling to an Online Course/ Degree	*Going to a Different Country*	*Not Going Abroad and Enrolling in a University in My Home Country*	*Not Studying at All*	*Other*	*Postponing My Enrolment Until Next Year or the Year After*	*Total*
Gender	Female	122	23	55	18	18	48	284
	Male	50	3	24	11	6	22	116
Total		172	26	79	29	24	70	400

*   *Hypothesis 2: H_{02}:* There is no significant difference in attitude towards the course for male and female.
    Interpretation: The change in attitude towards the course among male and female respondent is not significant as shown in table 3 uses chi square analysis, significant value is 0.224 which is more than 0.05 and most of the respondents opted for positive attitude, hence accepting the null hypothesis.

Table 3: Chi-Square Tests for Attitude Towards the Course
for Male and Female

	Value	*df*	*Asymptotic Significance (2-sided)*
Pearson Chi-Square	2.994[a]	2	.224
Likelihood Ratio	2.860	2	.239
N of Valid Cases	400		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.74.

*   *Hypothesis 3: H_{03}:* There is no significant difference in attitude towards the course after pandemic outbreak for male and female.

Table 4: Chi-Square Tests for Attitude Towards the Course
After Pandemic Outbreak

	Value	*df*	*Asymptotic Significance (2-sided)*
Pearson Chi-Square	3.804[a]	2	.149
Likelihood Ratio	3.856	2	.145
N of Valid Cases	400		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 35.38.

Interpretation: The change in attitude as shown in Table 4, shows difference in respect to pandemic for male and female respondents is insignificant as done using chi square analysis where significance level is 0.149 is more than 0.05, hence accepting the null hypothesis.

Online Classes

- *Hypothesis 4: H_{04}:* There is no significant difference in online and offline classes.
  Interpretation: Due to COVID-19 outbreak, the trend of online classes increased. When asked the respondents if online classes where better than offline classes, majority answered as 'no'. in respect of gender, difference in such observation was insignificant as shown using chi square analysis as shown in table 5, significant level is 0.063 which is more than 0.05, hence accepting the null hypothesis.

Table 5: Chi-Square Tests for Online or On-Campus Classes

	Value	*df*	*Asymptotic Significance (2-sided)*
Pearson Chi-Square	5.517ᵃ	2	.063
Likelihood Ratio	5.279	2	.071
N of Valid Cases	400		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.82.

- *Hypothesis 5: H_{05}:* There is no significant difference in concentration in online classes.
  Interpretation: The chi square analysis in table 6 shows that the difference in gender on concentration in online classes is insignificant as the significant level is 0.072 which is more than 0.05, hence accepting the null hypothesis.

Table 6: Chi-Square Tests for Concentration in Online Classes

	Value	*df*	*Asymptotic Significance (2-sided)*
Pearson Chi-Square	6.997ᵃ	3	.072
Likelihood Ratio	6.932	3	.074
N of Valid Cases	400		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.16.

Change in Perception of Students

- *Hypothesis 6: H_{06}:* There is no change in perception of students due to pandemic.
  Interpretation: T-test analysis in Table 7 show significant difference of 0.010 which is less than 0.05, hence rejecting the null hypothesis, meaning that there is change in the perception of students due to the pandemic. Majority of the respondents agreed that there would be travel restrictions, decrease in parents' savings, decrease in budget, cannot finish exams and cannot get certificates when requires. They also agreed that to the need to 24/7 helpline, extending application period, online counselling and support and moving lectures online. Hence showing different perception changes in students.

Table 7: One-Sample T-Test for Perception

	Test Value = 3					
	t	*df*	*Sig. (2-tailed)*	*Mean Difference*	*95% Confidence Interval of the Difference*	
					Lower	*Upper*
How likely it is that virus outbreak will affect your studies?	10.195	399	.010	.59750	.4823	.7127

Psychological Impact of Virus

- *Hypothesis 7: H_{07}*: There is no psychological impact of the virus on students.
  Interpretation: The psychological impact of COVID-19 on students' is 'the loss of interest in studies' followed by 'loss of career opportunities' and 'anxiety and stress', as selected options by majority of the respondents as shown in table 8.

Table 8: Psychological Impact Frequencies

		Responses		Percent of Cases
		N	*Percent*	
A10a	Anxiety and stress	101	17.1%	25.3%
	Depressing thoughts	76	12.9%	19.0%
	Loss of career opportunities	138	23.4%	34.5%
	Loss interest in studies	190	32.3%	47.5%
	No, I feel motivated all the time	84	14.3%	21.0%
Total		589	100.0%	147.3%

a. Dichotomy group tabulated at value 1.

Conclusion and Suggestions

This research paper aimed to study the impact of COVID-19 on the attitude and perception of students towards their education and career. The attitude of students seemed to have undergone some change though there was no different of attitude in respect of gender. Online courses were considered as a change in such times but the concentration level decreased. The perception of students also seemed to have undergone change. The overall psychological changes were also observed under the study, suggesting to provide online career counselling for students for helping curb the anxiety in pandemic times and also provide with online career opportunities. For the future research, the factors affecting attitude and perception under pandemic situation in respect of students can be studied with larger sample size.

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Challenges, Opportunities and Job Satisfaction in Work from Home: A New Normal

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Abstract

Whole world has been shaken by the COVID-19 pandemic. It has affected the businesses across the world making many countries becoming economically weaker. With all the restrictions and precautions to be followed this pandemic has led to a new business model across the globe that is "Work from Home (WFH)". Working from home is a new normal now as most of the business organizations have adopted it and has proven very effective during the whole pandemic. It has not only helped running the business but has also proved that not all businesses need offices to run the show. With minimum investment and ease of working it provides, it could prove to be the most useful and a transformational business model in future with many IT & Non-IT companies to continue with it. Though it has given many opportunities to working class, it contains few challenges as well like long working hours, technological needs, monitoring the employee's dedication towards work, employee engagement and changing HR practices which all together effects the Job Satisfaction of the employees. There is a need to ponder upon the challenges and opportunities and their implications on the Satisfaction of the employees with this new normal.

Keywords: *COVID-19, Work from Home, Job Satisfaction, HR Practices, New Normal, Opportunities & Challenges.*

Introduction

The pandemic COVID-19 has affected the whole world in one way or other. It has affected the world in many ways which were unthinkable before, people have been forced to adopt new ways and practice everything differently keeping pandemic in mind from work, to travel, to leisure and day to day tasks. Not only it has impacted individually, but also whole countries from an economic point of view, bringing a wide range of economies to a loss-making entity. Though it was foreseen a way back and warnings given from government and from those working in public health sector, the challenging situation remains as an unavoidable change requiring planning, managing, facilitating and training development. Though the society has been prepared with their minds, the course of changes required and solution remains unthinkable which remains to be a hazard for the policy makers and individuals (Vyas and Butakhieo, 2020).

Work from home (WFH) has changed the corporate world by bringing a revolution in working mode. Before COVID-19 work from home was not considered as a feasible option to work. Companies considered work from home as an ineffective model of working as they thought that employees will take undue liberty during work and will not be able to perform at their best. Employees were not allowed to do work from home even if it was not hampering the businesses. They have to be present in offices to carry out their work.

The pandemic provided the unique opportunity to test the work from home model of work wherein most of the companies run their businesses online and were forced to adopt the work from home model. This model of work contains both opportunities and challenges with it. This study aims to understand the various factors associated with practicality and effectiveness of work from home model and also the challenges which the employees or the businesses might encounter. Further, this study focuses on the potential effect of work from home on worker's job satisfaction keeping in view the factors like flexibility to work, motivation and pros & cons associated with it. At the end we should be in a situation to understand whether work from home is a working model which could be continued and is helpful once the pandemic is over.

Literature Review

An alternate mode of working to minimize the risk of COVID-19 infection is Work from home. However, it is not a new concept in the western world and brought to the minds of different schools of thought for several years now. The work from home concept was initially brought to notice by Nilles (1988) dated back to 1973, as "telecommuting" or "telework" (Messenger and Gschwind 2016). Work from home has been defined in several terms over nearly last forty years, namely flexible workplace, telecommuting, remote work, e–working and tele-work. Terms like these give the liberty to workers to work with flexibility at their chosen places, especially at home-made work place, using technology based working modes (Gajendran and Harrison 2007; Grant et al., 2019). Harrison and Gajendra (2007) explained telecommuting as "an alternative work arrangement in which employees perform tasks elsewhere that are normally done in primary or central workplaces, for at least some portion of their work schedule, using electronic media to interact with others inside and outside the organization," to be noted, they mentioned that "elsewhere" refers to "home" (1525).

Study conducted by Dingel and Neiman (2020) published that 37% of the job in US were completed by the people doing work from home during the COVID-19 pandemic, such as work related to finance, business management, professional, IT and scientific services. Even though most of the jobs were done working at home but few jobs especially like in healthcare, farming and hospitality cannot be performed being at home. Although during the pandemic the acceptance of work from home has increased worldwide, whole world economy has accepted it but academicians argue regarding its pros and cons.

Work from home has benefitted both employers and employees. The advantages of this model of work includes but are not limited to lesser commuting time, staying away from

office politics, less office space being used, increased motivation of employees, gender diversity being improved (example, those women are getting career opportunities which were not able to work earlier as they were not able to go outside), healthier workforces, less absenteeism and turnover among employees with higher talent retention, satisfaction with job, and better productivity (Mello 2007; Robertson, Maynard, and McDevitt 2003). Study indicates evidences for the given benefits; for example, the research in the Greater Dublin Area by Caulfield (2015) found that employees are saving their travel time during pandemic and value of travel time is used for some other productive work.

Some studies pointed out that doing tele-work or working from home can reduce employee turnover rate and increase their productivity, engagement at job, and job performance (Collins and Moschler 2009; Delanoeije and Verbruggen 2020). Similarly, e-working or work from home can increase productivity, flexibility, job satisfaction, work life balance, including reduced work-life conflicts and commuting from home to office (Grant et al., 2019). In addition to it, Purwanto et al. (2020) argued that work from home could support employees in terms of flexibility of time to complete the work (though it has also increased the working hours) and save money by not commuting to work.

On the other side, the drawbacks of work from home, include the blurred line between work and family, distraction at home, social isolation, employees bearing the cost related to work from home. According to Purwanto et al. (2020), there are certain drawbacks of work from home, such as employees working at home have to pay for electricity, internet costs and other expenses themselves. Collins and Moschler (2009) found that during work from home workers were away from their coworkers and supervisors concerned about reduction in productivity while working from home. Moreover, the relationship between coworkers and with managers could also be affected (Gajendran and Harrison, 2007).

Pandemic and Work from Home in India

Work from home working model has got it's pros and cons. It has shown mixed reviews in Indian context as per the studies conducted so far.

As per the report published by the report published by India.com news portal in July, 2020 "74% Indians prefer to work from Home after COVID-19". About 74 per cent of Indians say they want to continue doing work from home more than they were doing before the COVID-19 pandemic, as per a new survey.

According to a new report from the global PC market leader Lenovo shows 62 per cent of respondents in the country are concerned that technological advancement could even eliminate their jobs, further reducing the need of skilled labor. The survey reveals that 82 per cent of the Indian respondents opined, personal data protection is their biggest concern. As per the available data, 91 per cent of respondents in India agreed that during this pandemic their laptop usage increased, which was on the higher side as compared to the global average of 85 per cent.

"The insights from Lenovo global research signals a fundamental shift in the way a modern workforce operates and we are doing everything in our capacity to empower them," as per the

statement given by Rahul Agarwal, CEO and MD, Lenovo India. The report says that 95 per cent of participants in India "became their own IT person" while doing work from home. 81 per cent of those surveyed in India also confirmed a complete shift in their daily work routine during the last three months in pandemic, even greater than the global respondents which accounts for 72 per cent, who agreed on the same statement.

Although most of the Indian respondents said that technology made them efficient and more productive. The report shows a different picture that 78 per cent of Indian respondents believe that the technology used by them at work has become more intuitive and user-friendly, while 84 per cent of respondents think they could do valuable job if they had better technological skills.

As per survey, 70 per cent feels that this pandemic has given their time to think about their self and it is important to have separate devices like personal computers/phones for doing work which can give them space for personal life as well. "This data gave us valuable insights on the complex relationship employees have with technology as work and personal lives are becoming more intertwined with the increase in working from home," as per statement given by Dilip Bhatia, Vice President of Global User and Customer Experience at Lenovo.

Source: India.com, July 23,2020, 2:49 PM IST

While the above statistics shows the contentment of Indian workers towards work from home on the other hand there are reports which shows the other side as well.

As per the report published by Business Standard news portal in October, 2020 "Employees in India are facing increased burnout due to lack of separation between work and personal life as well as concerns of contracting COVID-19". Microsoft's in their latest Work Trend Index, surveyed around 6,000 first-line workers across eight countries, among them India accounted for second highest percentage of workers who are facing increased burnout in Asia at 29 per cent. Indians also topped with over 41 per cent workers mentioning the lack of separation between work and personal life impacting negatively their well-being, which results in increased stress level.

"In the last six months, we have seen how COVID-19 has created an era of remote anywhere. It has led to the evolution of a new workplace – from a physical space to one residing in a virtual world," mentioned by Samik Roy, Country Head, Modern Work, Microsoft India. In India, owing to its increase in workday span by one hour, 29 per cent of workers are experiencing increased burnout at work. As per the data globally, even six months after the first work-from-home orders, people have been attending more meetings as compared to earlier scenario, taking more ad hoc calls, writing more emails than they did before the pandemic. "As people adjusted to remote working, after hours chats, or chats between 5 pm and midnight, have also increased," the report said.

Furthermore, in case of Asian workers working remotely, no commutation is affecting productivity, the reports said, Microsoft's researchers have studied how commutation is affecting worker performance and productivity and the way it has been helping in maintaining

the boundaries of balanced work-life. The team said Microsoft has launched virtual commuting to let employees experience the commuting experience virtually.

<div align="right">*Source: Business Standard*, October 08, 2020, 01:04 IST</div>

Job Satisfaction and Work from Home (WFH)

Working remotely from home is considered to be a working model which would increase the Job Satisfaction of workers by maintaining their work life balance and giving them the opportunity to pay attention to their personal lives along with work. The pandemic COVID-19 has shown us that work from home could be a better option to provide the Job Satisfaction to workers. Though WFH could not be employed by all the industries based on the nature of work and services they provide, industries which could adopt it may find it quite helpful in maintaining the satisfaction level of employees as they work from their home in their comfort zones. However, Job Satisfaction is a complex thing to obtain as it depends upon the opportunities/benefits and challenges which are associated with it. So the one being more productive & satisfactory working environment for employees (office/home), it is yet to be decided.

Arora (2020), has come out with the below benefits/opportunities and challenges associated with Work from Home.

Benefits/Opportunities of Work from Home

Flexible Schedule to Work

The normal schedule which goes from 9 to 5 job timing makes us avoid many things which could be fruitful for our lives and we would like to do but we do not get that time and liberty with the normal schedule. The work from home model has given employees that liberty and flexibility to work so that they could pursue and live those moments of their lives that they were not able to live. Spending time with family and working was once considered a dream by many.

No Expenses and Wastage in Commute Time

A Lot of money and time could be saved which was earlier used in commuting from home to office and back.

Employees Work Autonomously

Giving the employees flexibility to working from their comfortable place allows them having more control over their work and self-improvement could be worked upon. In office all the employees have to follow the code of conduct but at home it's up to us on how we could approach towards our work. It gives boost to the performance as well. On the other hand, managing the team and collaborating for work becomes challenging too as all the team members are dispersed from each other and are in social isolation.

Challenges Associated with Work from Home

Stay Motivated during Work from Home

For employees working from home, the major challenge remains to stay motivated and work in a monotonous environment, unlike office where you would have interacted with the colleagues or chatting inconsistently with them which could lighten your mood and help you staying motivated for work. An appreciation on good work from the supervisor would make you happy and gives you that energy which is needed for delivering a good performance at work.

A survey 'Remote Working and its Impact on Women Professionals', performed among 250 women workers in New Delhi, Kolkata, Chennai, Pune, Hyderabad, Bengaluru and Mumbai.

As per findings of the survey, around 67% of the managerial post holders respect timings even working from home, still there are (33%) that do not value it. Though the pandemic allowed men to help their families at home, still, managers (most of them are male) are not found sensitive to this situation which results in higher stress level for women. Women also handled office work and house work effectively during the pandemic but it has resulted in them been victim of "Double Burden Syndrome". Also, over 50% have still been facing motivation related challenges while working from home. A decrease in performance of employees and a dip in motivational level ends up increasing the time required by the 75% of women surveyed, for each task.

Technology and Network Interruptions

Technological hiccups makes working from home challenging for employees. An internet outage or bad connection on call can spoil your mood and pace of working. At home we cannot guarantee a hustle free network and all the time available electricity backup as well. Also, networking is a necessary way to stay in coordination with coworkers and other employees.

Coordination Challenge

Working from home inherits a challenge of communication and coordination among the coworkers. It becomes harder to be on the same page with calls and emails. It also leads to misinterpretation of email or text messages. This problem is a major issue while doing the work online and remotely.

Conflict between Personal and Professional Life

While doing work from home, you don't have the option of getting clear geographical division between workspaces and personal place of living. Home is a place to relax, full of safety and secure, where you live in easygoing and calm state of mind and working at home puts the load and stress of the work behind you. Working from home enables you with working conditions with help of those you can maintain the balance with mental peace and well-being. Most of

the employees working from home, complain that they feel like they are always on duty. There is always a pressure of work, read or write emails and take up the calls.

Distractions at workplace (home)

Even if we have our decided schedule of work and fixed working hours but working at home includes many distractions at work due to family related work, television, books, daily basic needs. It has resulted in the increased working hours. Employees work even in extended shifts once their managers ask them to stretch at work mentioning that they are at their home only.

Isolation from Society

Interaction with the co-worker is one of the positive aspects of several jobs. Though we are there to work but social contact with the co-worker is very important and it can help in boosting up the productivity. COVID-19 pandemic has resulted in social isolation due to working from home.

Difference in Time Zones

While doing the work from home, it becomes hard to manage the coordination with the team members and the subordinates as tey work in the different time zones, being relaxed at home during work you tend to miss a call or meeting, you have to be attentive.

Discussion and Conclusion

Based on the available statistics and reports it is evident that Work from Home has become a new normal for the working class. Earlier it was not much practiced but COVID-19 has given the world opportunity to adopt it as a mode of work. If we talk about more favorable mode of work among working from office and working from home then it would be easy to figure out as both have got their pros and cons. From business point of view as it saves per employee cost to company at the same time it is hard for the managers to keep an eye on the performance and motivation of the subordinates.

If we talk about the Job Satisfaction and work life balance point of view, we can say that working from home is very rewarding if we can take a count of the challenges involved and overcome them. It is satisfactory for an employee to work in his/her comfort zone and balance their work and personal life both. Though the challenges like extending the working hours, more meetings, lack of motivation, technological hiccups, communication and coordination challenge are bound to happen but if the company and employee work together to overcome them, it would be a great working model. In future we could expect Work from Home to be more rewarding and accepted work model. It surely enhances the Job Satisfaction level of the employees as it provides them more freedom and control on their work and life. Moreover, companies should draft proper work from home policies keeping mind the interest of employee and the company both so that work from home could be adopted properly.

Most of the industries like the IT industry are going ahead with the work from home model even after the revoke of restrictions due to pandemic. Work from office along with the work from home has provided a new hybrid model of work to the world.

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Future of Organizations: Reimagining Human Resources

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Abstract

Traditional human resource management (HRM) support methods are no longer sufficient to demonstrate HR's value to the organization. (Garcia-Arroyo & Osca, 2019). With new business models, technologies, and changing labour demands, businesses are fundamentally altering. HR departments are frequently left juggling with the demands of both the business and the workforce. According to Deloitte's Global Human Capital Trends Report, HRM departments are failing to keep up with technological advancements (Bersin, Pelster, Schwartz, & Van der Vyver, 2017), with only 35% of global human resource practitioners (HRPs) assessing their HRM capabilities as reasonably good. (Bersin et al., 2017). Consequently, employers are looking to transform HR functions into true drivers of businesssuccess that are fundamental to enhancing the competitiveness, talent access, and public engagement of their organizations—going beyond the functional roles to a strategic one. This research paper delves deeper into how Enterprises can compete—and succeed—by changing entire HRM model.

Keywords: *Flexible working, Remote working, Automation, Technology, Digitalization.*

Introduction

One of the most significant corporate shifts in decades is being hastened by Corona virus. Not only is this a health catastrophe, but is also a fantastic chance for most companies to transform. (Joshbersin,2020) Regardless of the situation, businesses all over the world are going out of their way and doing everything they can to ensure that deliveries are on time and that productivity is consistently improved, even in these unusual circumstances. In such a situation, HR's most important responsibility is to deal with the ongoing crisis and ensure that their organisations run smoothly. HR is now a critical component in propelling the company forward. During these exceptional circumstances, HR leaders play a critical role, and they are expected to recognise the global crisis immediately and comprehensively, taking into account immediate, short-term, and long-term effects. (Subramanyam, 2020). HR will increasingly need to find ways to assist business leaders in restructuring during and after the pandemic, as well as to implement workforce rationalisation measures while managing the risks associated with such interventions, and to boost productivity and employee engagement.

Literature Review

Human resource practises' superiority and originality have received recognition as a vital source of competitiveness across a wide range of businesses during the previous 10 years. Ulrich (2020) emphasised the importance of considering the next phase in the pandemic recovery process. Following the interruptions caused by the COVID-19 outbreak, an investigation into the possible effects of human resource management (HRM) practises on organisational competitiveness looks to be critical. The COVID-19 has posed a direct danger to human resources, with ramifications on all other aspects of a company. As a result, there is a growing need to address HRM practises in order to revitalise all other elements of a business and achieve competitiveness. Aoife Harte (2020) described the issues that HR faced during the COVID pandemic by stating that people were affected in a variety of ways, including mentally, physically, and financially, all around the world. Furthermore, the COVID illness outbreak has posed a significant challenge for human resource management, as managers have been forced to quickly navigate the "hidden unknowns" while attempting to assist their employees to face the radical changes in workplace and social environment (Carnevale & Hatak, 2020). The growth of digitalization processes is one of the economic effects of the global COVID-19 epidemic. Organizations must increasingly use digital platforms to provide immediate access to their personnel. Human Resource Management has been critical in assisting organisations in coping with the drastic changes brought on by pandemic lockdown. (Carnevale & Hatak, 2020) Throughout the rapid changes across the globe caused by the epidemic, businesses must acclimatize and respond to the vicissitudes, as well as build their personnel effectively. (Gigauri, 2020) According to prior studies, emerging technologies such as digital platforms, augmented reality, robotics, artificial intelligence, and blockchain will revolutionize the duties that HR professionals execute. (Parry & Battista, 2019) According to one of the researchers, COVID-19 has transformed employees' working schedules by allowing them to move from working in an office to working from home, as well as adopting management, virtual leadership, and team interactions. The study also examines how the pandemic has impacted sociopsychological issues such as unemployment and layoffs, stress and burnout, economic disparity, social alienation and loneliness, and so on (Kevin M. et.al., 2020). HRM must now cope with the rising stress levels among its employees as a result of remote working, which has blurred the lines between work and family life. (Giurge & Bohns, 2020).

According to Farndale et al. (2018, p. 466), even in the face of severe obstacles, other approaches are feasible because 'HRM works at the intersection of multiple critical organisational areas, giving it a competitive advantage to offer value in times of crisis.' In this context, Dundon and Rafferty (2018) argue for a more "inclusive probusiness" approach to HRM, with a concentration on development and sustainability of business—centered on the promotion of mutual gains and worker wellbeing—that takes into account not only the financial interests of shareholders, but also the interests of other business stakeholders and employees. HR plays an important role in creating leaders, ensuring their success, and holding

them responsible for the performance of their teams. (Brower, 2020). Apart from employee upskilling, fostering lifelong learning and growing the talent pipeline is still a major focus for HR, even in the midst of the pandemic (McElgunn, 2020).

Methodology

This study is designed to investigate COVID-19 induced HRM approaches for future organisational competitiveness, given the transitions and difficulties in the sources of competitive advantage. The research topic, in order to attain the stated goal, is: What are the COVID-19-induced HRM practises that underlie future organisational competitiveness? To discover an answer, several industry publications from highly recognised sources such as Forbes, Gartner, McKinsey, Gallup, Boston Consulting Group, KPMG, PwC, EY, Deloitte, SHRM, and others were studied to find new workplace trends following COVID-19. A literature review methodology was used to determine future sustainable HRM practises, with a particular focus on the consequences of the COVID-19 epidemic. HRM post COVID-19, the new normal, and the future of HR were the key words utilised to search for articles. Keywords that were frequently used were noted and used as the foundation for emergent concepts and topics. Key papers were limited to those published in 2021 and 2020 to ensure that they addressed themes arising from the COVID-19 epidemic. Based on the key terms, a thematic review of the papers was carried out. Themes were created using keywords and the frequency with which they were used, with the goal of determining whether certain keywords mirrored certain conceptual themes having consequences for the research aims. The search continued from one article to the next, noting recurring themes and gathering new ones until a saturation point was reached and no new topics emerged. The data analysis resulted in a core category that demonstrated how the workplace can be re-imagined, re-worked, and re-invented during and after the COVID-19 pandemic, where five different strategic and tactical working trends were identified within this process, namely: remote working, growth in the gig economy, flexible working, digitalization, and increased automation and AI.

Remote Working

As Work from Home (WFH) becomes more mainstream, the grimaces and speculations casted on employees for doing WFH by many corporates, including reporting managers in pre-coronavirus times, will alleviate. Studies have found that remote workplaces blur the distinction between work and personal life, allowing personal stress to spread to work and eventually result in burnout. (Peasley, Hochstein, Britton, Srivastava, & Stewart, 2020) In the future, businesses will likely rely on remote working as a key tool to ensure business continuity. To help this along, they could provide strong company support for working remotely as well as a structured policy for work from home.

Securing remote work infrastructure has proven to be a significant challenge. Previously, businesses managed everything from a single location. Now, mass remote working frequently

necessitates structural security changes and adjustments. Employees place a high value on data and network security, and it's easy to see why. Their professional and personal lives have become increasingly entwined, which can be hazardous for team and individual productivity.

Recognizing the gravity of the situation, businesses have begun the process of guiding employees, which includes everything from setting up their physical and virtual workspaces to time management and wellbeing, along with a specific guidance for managers. Everyone's experience is unique, and human resources departments continue to provide learning resources and community spaces, such as Yammer groups, where questions can be asked by the employees, anecdotes can be shared, and ideas brainstormed for remaining healthy, engaged, and productive. This guide aids in balancing the system of working from home with the emotional implications of juggling everything: work, home, children, and, most importantly, one's own self-care. As a result, while creating a virtual workspace at home, employees are also balancing their personal and professional lives. Employers have actively invested in their employees' well-being to assist their remote teams in navigating this pandemic situation (EY, 2020).

During this pandemic, Acharya (2020) emphasised the importance of remote work and stated that remote work is effective if leaders are capable of restructuring the organisational process and communicate, socialize, and coordinate well. With the advantages of tapping into a geographically and ethnically diverse talent pool, managers will increasingly consider how to incorporate remote working into their culture.

Digitalization

Since COVID-19 has intruded, unprecedented restrictions on travel, physical interactions, and changes in consumer behaviour have enforced companies and consumers to change the mode they operate. This has resulted in digital transformations occurring in weeks rather than months or years (McKinsey, 2020).

For HR, digitization entails introducing deep digital discipline into all systems and processes, as well as achieving cost optimization and operational efficiency through the use of digital tools. Companies have digitalized their recruitment systems, improved their performance-management processes, and implemented application-based strategic workforce planning. Data-driven approaches open up new avenues for learning about how to provide information-rich customer solutions.

Human resource and business leaders must educate management and employees about new standard operating procedures for conference calls, video meetings, dress codes and virtual workout sessions. HR processes used for salary, pay, benefit programmes, workforce time management, leaves, performance management, tele-health services, and so on must be updated to reflect the new realities. This will be a significant transformation in and of itself. Furthermore, the aspects of HR data and apps, as well as the hardware and bandwidth that is required for supporting remote work and new tools, require careful consideration (Human capital online, 2020).

There is also a swing toward retaining video meetings and virtual events, and HR leaders are attempting to maintain flexibility and collaboration by redesigning jobs, work processes and duties (Narayandas, Hebbar, & Liangliang, 2020). Analytics should also become more reliant on measuring and monitoring workforce performance and productivity. HR can determine the strategic talent acquisition, development, and management decisions needed to prepare the workforce for the challenges that will face them after COVID-19 by regularly analysing and monitoring employee performance and engagement metrics (PwC, 2020).

Growth of Gig Economy

According to economic historian Louis Hyman (2018), the number of gig workers has increased with every economic downturn since 1991 to compensate for job losses in the low-skilled labour market. The COVID-19 pandemic confirms that demand for freelancers and temporary workers will rise in the next two years compared to the pre-crisis period. These businesses can benefit from a blended economy because it combines the best of both worlds: the autonomy and independence of gig workers with the stability and psychological relief of full-time employees. (Mahato et al, 2021)

These realities will have an impact on organisations that employ traditional methods of labour. They will also need to make massive shifts in their organisational mindsets and reconsider some basic assumptions about work, the workforce, and the workplace.

According to a recent Gartner research, organisations will continue to use contingent workers to uphold more flexibility in management of workforce post-COVID-19, and will contemplate introducing other job models seen during the pandemic, like talent sharing or 80 percent pay for 80 percent work. (Baker, 2020)

While gig workers provide employers with greater workforce management flexibility, HR leaders must assess how performance management systems apply to these employees and determine whether they will be eligible for the same benefits as their full-time counterparts.

Flexible Working

The advent of COVID-19 has also led to flexible working for employees. They are expected to work out of the prescribed structures (space and time) for some part of the day. (Gajendran & Harrison, 2007). This work structure can "deviate from a default nine-to-five, 5-day-a-week schedule … [but employees are] still required to clock in and out about the same number of hours every day, and take breaks at clearly defined times" (Spieler et al., 2017, p. 68). As a result, HRM research is still characterised by a dominant assumption that connects time, task, and place—an assumption that has been present in HRM research since the Industrial Revolution's inception. Working during the COVID-19 pandemic provided us with a taste of a "future of work" in which time, task, and location are not inextricably linked.

The term "virtual work" has emerged as an umbrella term that encompasses various forms of distributed work, full-time telework, and all forms of self-management. (Bélanger &

Collins, 1998: Dulebohn & Hoch, 2017). As we near the end of the pandemic, leaders must assess the best workforce flexibility mix for their organisation, with 90 percent of HR leaders anticipating using remote work across the workforce for at least some of the time. While some employees in the hybrid workforce model will continue to work entirely on-site or entirely remotely, the vast majority will be able to flex locations based on their needs. Jobs performed at night and on weekends, on the other hand, have increased, indicating a disruption in work-life balance.

Automation and Artificial Intelligence (AI)

In order to adapt to the continuous pandemic and uncertainty, technology has become a must. Companies would invest in a new suite of contactless technologies to decrease disease transmission if they redesigned their workplaces after COVID-19.

The emergence of these technologies is fuelled by a variety of causes, the most notable of which being data and analytics, but also artificial intelligence (AI), machine learning, robots, and automation (Meijerink, Boons, Keegan, & Marler 2018).

AI tools analyse massive amounts of data in order to identify underlying patterns and predict human behaviour, among other things. Furthermore, AI-enabled systems are constantly learning. These skills will be extremely valuable as businesses adjust to the new reality of the current crisis and its aftermath.

Artificial intelligence (AI), robotics, and other technologies have evolved over the years, but with COVID-19, their application has been augmented (Giordani and Rullani 2020). With the outbreak of the coronavirus, businesses have realised the importance of automation and incorporating AI into their organisational structure. Following COVID-19, traditional factory floor practises are being reconfigured as manufacturing companies gradually embrace automation and AI throughout the value chain.

The pandemic's impact is anticipated to hasten the automation and digitalization wave across our economy's various sectors (Giordani and Rullani, 2020). Drones have been utilised to deliver products and services in various regions of the world, and disinfecting robotic systems have been installed in warehouses to lessen the danger of infection. Firms have invested in developing an effective virtual network of inter-colleague exchanges, which has shown to be successful in many circumstances (Ekalahare, 2020).

HR professionals play a facilitating and supporting role in this transformation, but they also take responsibility to retain employees by upgrading their skills and abilities, in order to understand the effects of the disruption brought about by digital technologies such as analytics, AI, and machine learning, and formulate a response to that disruption (Parry & Battista, 2019).

Conclusion

HR professionals are accountable for not only facilitating and supporting employees through this unpredictable shift, but also for retaining them. (Buck & Watson, 2002) Apart from

digital skills, which might enable employee flexibility, rapid adaptability, and creativity, HR must focus on improving the cooperation skills of its digitally distributed employees in order to make the transition to virtual work go smoothly. As we move ahead through the current pandemic, organisational leadership and HR professionals need "trust" and "transparency" to act as a foundation in order to build high-performing and efficient teams that can confront the ambiguity and the uncertainty (Bingham, 2020). As businesses struggle to cope with the pandemic by shutting down operations or operating procedures remotely, the HR function and practises will take on a new significance. Human Resources would benefit from being smarter, more adaptable, and more prepared so as to maintain high levels of engagement and keep the wheels of the organisation turning.

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Opportunities and Challenges of Work from Home during COVID-19

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Abstract

Work from home or working from home (WFH) indicates that an employee is working from their home or place of residence instead of their workplace/office. Various companies and industries have opted for the work from home policy for their employees to ensure flexibility and efficient working at their convenience.

Offices consist of diverse workforces with flexible working policies in place according to the organizations' requirements. Working from home has its benefits and drawbacks. While work from home may reduce costs for the organization and save commute time and money for the employees, it can result in hindrances in communication and collaboration. Remote working may improve employee productivity and work-life balance. Employees often use smart-phones, tablets, desktop computers, laptops, etc. to work remotely and stay connected to each other and the organization through the services of teleconferencing available on the internet.

Soon after corona virus was declared a pandemic by the World Health Organization, companies across the world switched to working remotely as an essential step to ensure the provision of flexible working conditions to maintain the efficiency and the productivity of the employees towards their work with the aid of digital technologies. Several IT businesses, academic institutions, and other sectors have gone entirely online and workers are now expected to operate from home with a different set of rules and regulations that would be suitable for the organizations. According to Clutch. co, 44% of employees in the United States of America shifted to remote working during the pandemic compared to 17% before it.

Keywords: *Communication, Collaboration, Remote, Employee, Companies, Teleconferencing, etc.*

Introduction

The effect of COVID-19 on wellbeing, economies, and markets has over overwhelmed with tremendous complexities in different measurements. The observable effect is knowledgeable

about the associations and the idea of working environments. The organizations are striving maximum to run their shows in spite of lockdown restrictions. Many organizations went a step ahead to help their employees in handling stress by setting up virtual counseling sessions for employee wellbeing and motivation. There has been a significant change in the nature of performing the job, so called "Work from Home" (WFH). Work from home indicates that an employee is working from their home or place of residence instead of their workplace/office. Various companies and industries have opted for the work from home policy for their employees to ensure flexibility and efficient working at their convenience.

HR plays a crucial role in evolving, emphasizing and changing the culture of an organization. They are an integral part of an organization that has the prime responsibility of safeguarding and uplifting the employee-centric needs in parallel to the management expectations. They ensure smooth workflow and see to it that everyone in the organization stays updated with the organization's policies and requirements. The sudden shift in the paradigm of work culture at present has its own implications on employee health and wellbeing through stress anxiety and various other mental issues. The sudden outbreak of COVID-19 has brought all these issues upfront which really need to be addressed and overcome. Organizations need to zero in on building and fortifying correspondence, trust and straightforwardness related to the COVID pandemic to reestablish profitability and convey on representative experience. In the real office environment, there was a possibility to understand the pulse and sensitivity of the issues to tackle immediately, but now employees going remote have led to various complexities in the organizational system.[1]

Opportunities of Work from Home

Some five years before COVID-19, Nicholas Bloom co-authored a paper estimating the benefits of working from home (WFH), in which the employee lives within commuting distance of the office. He identified productivity-enhancing mechanisms such as reduced commute time, fewer work breaks, sick days, and the benefits of a quieter work environment. Based on a randomized control trial on 1,000 employees of Ctrip, a NASDAQ-listed Chinese travel agency, the experiment revealed that working from home for nine months led to a 13 percent increase in performance. The experiment was so successful that Ctrip rolled out the option to WFH to the whole firm. The overall impact of the WFH was striking, as the firm improved total factor productivity by between 20% to 30% and saved about $2,000 a year per employee WFH.[2]

Flexibility and Agility

Home working enables more agility and flexibility in working arrangements. With employees no longer tied to an office, they may be better placed and more willing to work flexible hours such as earlier or later in the day or even at weekends. This may help you meet certain business needs, e.g. if you are trading with customers residing in a different time zone.

Improved Employee Retention

Home working can help retain employees as the flexibility of home working can help them meet childcare needs, reduce their commute and enable them to fit their work around their personal life. Being allowed to work from home, staff will also feel increased levels of trust from their employer, which can contribute greatly to staff loyalty.

Increased Productivity

Due to fewer interruptions, which would normally occur in an office environment? By contrast, working from home allows for a quieter environment that can facilitate more focused work. You may also find that employees will work longer hours as they can also use their time saved from commuting to start work earlier, later or both.

Increased Staff Motivation

By working from home staff will feel more trusted by their employer as the working relationship isn't as closely monitored and employees are allowed a degree of autonomy to get on with their work. Staff will also be happier developing a home working routine that suits them better and this can contribute towards them feeling more motivated to give their best.

Improved Staff Health and Wellbeing

Working from home eliminates the need for a commute to work that can be stressful to your employees. Time savings such as this also enables staff to get extra health benefits such as additional sleep, spending more time with family, exercising or preparing healthier meals.

Better Work/Life Balance

Working from home can help employees improve their work-life balance e.g. staff that would have had to commute will now be able to use that time for themselves giving the basis for a better work-life balance. Staff is also able to fit in household chores around their working day giving them more free time in the evenings, e.g. loading or unloading the dishwasher or preparing dinner on their lunch break.

Technology Makes it Easier

The internet has made it possible for staff to be continually connected to the office. Tools such as Skype have made communication between colleagues and teams much easier and at times can lead to more efficient and effective meetings.

Less Sickness Absences

Staff is more likely to feel happier and more energized working from home and therefore less chance of their immune system being negatively impacted by burnout. Also the fact that

employees are working in isolation there is less chance of infections spreading as would be the case within an office environment.

Less Need for Regular Holidays

Working from home can feel like a break from the office even though staff is still working. Working from home staff will feel more energized and will be able to spend more time with their family and therefore will not feel the need to take as much leave. However it is your duty as an employer to ensure staff takes their holidays.[3]

Challenges of Work from Home

The COVID-19 epidemic has made everyone's life worse. It has made business survival extremely difficult as the economy is declining day by day. People get very insecure about jobs. There is no suitable place to work with a spirit of cooperation, and leadership. Employees face negative working conditions and cling to low-paying wages. They strive to achieve goals either at a personal level or at a professional level. There is a need to understand the expectations of employees and their performance. The aspect of employee relations involves listening, influencing, communicating, problem-solving, counseling people when they are most threatened to maintain a healthy work ethic during this difficult time. People face challenges in many areas whether it be personal or professional positions, the employer should fix and advise and resolve their various issues and be sensitive when they need them most.[4]

Lack of Community and Teamwork

Man cannot live alone, or work alone efficiently and effectively. While some employees are quite excited about the idea of working alone without the distractions of the workplace, some might find it difficult. Spending long hours and collaborating with only a computer screen and no face-to-face interaction and communication with team members can be challenging. There are various platforms like Zoom, Skype, etc., where employees can connect through video calls and conferences. It might not be as efficient as sitting together and brainstorming ideas to work effectively.

Lack of Motivation

Motivation drives people to power on and achieves their goals. It can be effortless to lose motivation quickly when one is put in the wrong place and time. It further risks achieving the desired business outcomes.

　　Working at an office with fellow employees with a common goal and purpose, or having a pep talk with a senior at work, can be great sources of external motivation. Whereas working from home lacks that kind of environment.

Lack of motivation can make an employee's life difficult and can adversely affect their productivity. Though self-motivation works to a certain extent, it is not always enough to keep a man going. That's where the use of external motivation comes into play.

Unmonitored Performance and Those Frequent Breaks

Working alone can be a tough job. The role requires employees to keep a check on their performance at work themselves. Self-regulation is a tough job, and work rests on the discretion of the employees.

Employees might often laze around and take frequent breaks, resulting in longer and less work time when the breaks and work go unmonitored. Whereas, in the workplace, one is constantly reminded to be on the right track and perform efficiently and effectively, which is impossible with remote work.

Lack of Office Equipment and Security Concerns

Setting up a home office with a high-end laptop/desktop, a high-speed internet connection, and other equipment, like printers/fax machines, can be costly. and that is not very convenient for everyone. Furthermore, working over the internet might be a problem to access sensitive company documents, which otherwise are easily accessible in the workplace.

Moreover, sharing those documents might raise security issues. Again, various steps need to be taken, such as using Virtual Private Networks or secure cloud access.

Distractions and Lack of a Good Working Environment

Remote work brings along with it the benefit of a good work-life balance. Employees feel that working from home avails them more time for their family and other life events. But there is more to the picture.

A survey released by Glassdoor, where nearly 1,000 American employees were asked about their top concerns when working from home between March 11 and March 13, 2020, reported that roughly 32% of employees say watching TV is a top distraction when working remotely, followed by 27% who say child care is a huge distraction.

Employees need to focus and concentrate while working, to produce expected results. It proves to be highly difficult with the distractions of family wanting attention or other household noises. Not every household can provide good working conditions as an office space does.

Burnout

Flexible working hours are one of the benefits of remote work. It lets employees structure their days according to their convenience. But, this can turn into a disadvantage for some employees. Some may forget to clock out and differentiate between work-life and home-life. This might lead to working longer than one should, thus; resulting in employee burn-out and

added stress. Whereas working in an office helps to draw the line between professional and private life.

Risk to Productivity

It is claimed that working remotely attracts increased productivity. But, with all the tempting distractions of:

- mid-day naps,
- the web series that was left on a cliffhanger,
- spending time with family, etc.

Makes it difficult to concentrate and be interested in work for a long. Furthermore, working remotely can make one feel isolated and not motivated enough to work productively. So, it can be said that all of the various disadvantages discussed above can lead to a loss in productivity when working from home.[5]

Is Working from Home a Boon or a Bane?

No system in this world is perfect. Everything has its own benefits and drawbacks, and we have to make the best out of everything. Some employees are comfortable working from home, and some are waiting to go back to their workplace, sit on their beloved office chair and meet their co-workers.

The disadvantages that have been pointed out, are reasons why some organizations are still not on-board with the idea of remote work, and the concern is real. But, there are various ways of employee engagement, which can help organizations get past these disadvantages.

A shift towards home working doesn't mean employees have to work only at home. Often splitting time between home and the workplace is the most productive solution and you may want the home worker to attend meetings to keep them fully involved and informed.

Conclusion

Offices consist of diverse workforces with flexible working policies in place according to the organizations' requirements. Working from home has its benefits and drawbacks. While work from home may reduce costs for the organization and save commute time and money for the employees, it can result in hindrances in communication and collaboration. Remote working may improve employee productivity and work-life balance. Employees often use smart-phones, tablets, desktop computers, laptops, etc., to work remotely and stay connected to each other and the organization through the services of teleconferencing available on the internet.

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In contrast to other fiasco, the infection doesn't hit once and disappear, yet has left with vulnerabilities and basic speculation towards what's to come. The associations and workers have been authorized to change their operational schedules basically in the blink of an eye bringing about remarkable requests on administrators to settle on choices in extremely unsure conditions. In spite of the fact that the drawn out ramifications of COVID-19 are at present obscure and flighty, however the danger of future wellbeing emergency of this broad nature is practically ensured. Subsequently, our concentration and activity should reexamine past limits, continue by adding to our methodology and executing the correct strides to guarantee the endurance of the association, representative change and prosperity over the long haul. This emergency won't end at any point in the near future, there's nothing left but to change and adjust the way we live and the manner in which the association proceeds.

A study directed with 800 worldwide HR heads in March 2020 discovered that 88% of associations had either urged or expected representatives to WFH during the COVID19 emergency. This process of WFH possibly would have created a drastic impact on the lifestyle of the people leading to increased working hours and also work continue over a lengthy period, and also increased work-life conflict especially for women employees. COVID-19 disaster has relocated collaborative work into the virtual domain.

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Relevance of Lord Rama Preaching in the Modern World

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Abstract

Life of Bhagwan Ram teaches us the code of behaviour to be followed by an individual, by a family and by the society as a whole. Bhagwan Ram's life is an example of compassion, tenderness and moral values. Modern world needs to seek inspiration from Bhagwan Ram for upholding of moral and ethical values in society because in current scenario children are not giving attention to their parents' advice and parents are less concerned about inculcation of moral values among their children due to changed family values and education system. As a result, women and teachers are not getting due respect in the society. In such a scenario, every individual needs to follow the principles of Bhagwan Ram, who aptly describes the identity of a true person devoted towards his family and the society. The life of Bhagwan Ram articulates the importance of moral and ethical values and is significant in context of current endemic such as corruption, inequality and degradation of moral values. This paper elaborates the relevance of Bhagwan Ram's teachings in context of present-day situation.

Keywords: *Moral Values, Ethics, Devotion, Ego, Greed, Women, Family.*

Introduction

More than ever before, mankind today faces a crisis of existence. This crisis is borne out of the fact that there is a continuous degradation of human values resulting in conflicts in all spheres of life. In the political context, these culminate in tensions between nations over geographical control and in the economic context takes the form of trade war. However, the impact of moral degradation in social context is more profound considering that it has affected the very basic units of our society 'Family & Education System' in the form of worsening of relationships, disruption of established societal norms.

Family and Education System

Family and Educational Institutions are primary places where moral and ethical values are nurtured to younger generation.

Family members are taught to be selfless, truthful and uphold high level of integrity. The learnings of Ramayana are intended to make children realise the importance of inculcating

moral and ethical values in life. However, these values take a backseat when the same children enter public life as an adult. There is contradiction in what family and social system teach children in the name of Bhagwan Ram and the real life behaviour as an adult. The evils of corruption and dishonesty have become a new normal. Our society is therefore staring at a huge moral crisis.

Also with regards to Education System, in ancient times, Gurukuls played a pivotal role in shaping the character of children. The aim of imparting moral values and ethics during Gurukul system was to build a positive character among students in order to make them a true citizen and ensure their participation in nation building process. However, with the advent of modern technology during British era, more emphasis was placed on skill education rather than value education. Our vedic beliefs were replaced with modern education. Parents accepted modern education as a new norm in view of the increased competition for limited employment opportunities. As a result, skilled education assumed dominant role over moral education. In addition during employment, corporate culture of organisations focusses primarily on mannerism for achieving of business goals with little emphasis on moral values.

Impact of Media

Today, there is continuous streaming of good and bad information through television, computers and internet services which has a deep impact on development of children and youth. They are easily influenced by characters presented in movies and try to imitate them as much as possible. It changes their physical presence and way of living or speaking. Today's youth continuously look towards society for validation in the form of likes or followers over facebook or twitter. To them, 'greatness' is associated with attaining of celebrity status. So, everyday they aspire for moment of fame. As a result, identifying oneself with other people on an emotional level has become non-existent. Our society is slowly moving towards a self-centered & egoistic model where people communicate on a shallow level. Although social networking sites make our interaction with friends and family regular, but at the same time we cannot deny the fact that they have also ruined the emotional wall between elders and youngsters in the name of 'frankness', which is a cause of grave concern.

Bhagwan Ram: Solution to All Problems

In such difficult circumstances, we can seek inspiration from Bhagwan Ram whose moral and social behaviour can be regarded as an exemplary model for all generations.

In the words of Swami Vivekananda, Bhagwan Rama is "the embodiment of truth, of morality, the ideal son, the ideal husband and above all, the ideal king". He symbolises victory of Good over the Evil.

Bhagwan Ram personifies how an individual should adhere to his moral values and strictly follow the established order so that social order can be maintained. It is precisely due to this underlying principle that He is referred to as "Marayada Puroshattam" or "The Man of Limits".

Bhagwan Ram: A Devoted Son and a Loving Brother

As an abiding son, Bhagwan Ram accepted exile of fourteen years, gave up his title and crowned his brother Bharata as the "King of Ayodhya". Even after the death of his father Dasratha, Bhagwan Ram did not return to Ayodhya till the end of fourteen years of his exile. This was in accordance with the promise he made to his father before his demise. Thus, it is evident that Bhagwan Ram was highly devoted in his duties towards his father and made no compromises in fulfilment of his obligations as a son. He, therefore aptly symbolizes the figure of an ideal devoted son – a son who is willing to make sacrifices for his parents to any extent and a loving brother who has no ill feelings or ego towards his brother Bharat and only showered love on him. Today's children and youth should seek inspiration from these values in order to create a social and family structure that exemplifies harmony.

Ego

It is well known that Ravana's ego led to his own demise. He believed that he was the "doer" of it all. On the contrary, Bhagwan Ram was humble no matter how powerful he was. He even sent his brother Lakshman to learn from the dying Ravana, because Bhagwan Rama knew that, although Ravana's vices had brought about his downfall, he still was a venerable scholar and one from whom great wisdom could be attained.

In general, a sense of superiority engulfs an egoistic person which prevents him from listening to others and renders him unresponsive to constructive criticism. Little does an egoistic person realises that in the 'war of ego, the loser always wins'. But as people 'progress' in a materialistic world, their ego further gets reinforced primarily because of pampering by friends, employees and relatives that makes them unreceptive towards new ideas and learnings eventually leading to their downfall. In the words of a famous personality "it is better to skip 'e' from ego and then let it 'go'".

However, with little realisation in today's world, people refuse to forego their ego under the false belief that they are immortal. This thinking has further culminated limitless aspirations resulting in 'Greed' leading to capitalistic model of economy, where only a few people harbour most of the wealth, whereas the majority of population is left unfed and survive in poverty.

Greed

Greed has led to exploitation of mankind and nature. Greed is the root cause of all evil. A greedy person accumulates countless wealth at the expense of others with the intention of keeping it for self. The consequences are social, economic and environmental issues such as corruption, poverty, unemployment, deforestation, overexploitation of flora and fauna and climate changes in the form of temperature rise resulting in melting of glaciers, destruction of ozone layer, etc.

These limitless aspirations can be countered by following the example of Bhagwan Ram who surrendered his right to the throne of Ayodhya in favour of his younger brother Bharat

without even a blink. The soul can never be satisfied with whatever material wealth has been accumulated. Amassing of material wealth only leads to corruption in public life. The only solution is to be contented and deploy the available resources for the upliftment of mankind which will provide inner peace.

Corruption

It is unimaginable how corruption can survive in the land of Bhagwan Rama - a king who was selfless and considered the interests of his people sacrosanct. In the contemporary world plagued by self-interests, this philosophy needs to be revisited. Countries like Japan and Bhutan have inculcated the ethical values in their system in a much better manner and thus able to create a social model similar to "Ram Rajya".

Crime Against Women

Another pertinent issue today is the crime against women. Bhagwan Rama held women in high esteem. He was fully committed towards his marriage and strictly followed the duties of a married man. This trait of Bhagwan Rama is aptly illustrated in following incident:

> "After the end of war, Bhagwan Rama was resting on a rock. He observed that a shadow was approaching Him. As soon as He realized that the approaching shadow was of a woman, He turned His eyes the other way without even caring to see who it was because of his commitment to principles of 'Maryada' of a married man. When the shadow further approaches Him, Bhagwan Ram holds His feet up and sits in a folded position. By this action, Bhagwan Ram ensured that He avoided even the shadow of an unknown woman touching His feet. He was so cautious that no woman other than Devi Sita was able to come near Him."

> In this scenario, it is very perplexing to note that how a nation which considers Bhagwan Ram as its idol is witnessing an upward trend of crime rate against women. This may be attributable to the fact that people today chant name of Bhagwan Ram while foregoing his guiding principles of "Dharma".

True devotion and not the Social Class leads to Supreme Soul

Even though people read Ramayana, but very few actually understand the essence and even lesser proportion of the people actually apply these principles to practical life. This mechanical action of vocal recitation does not lead to Supreme Soul. This is further incident from Ramayana are mentioned below:

> Shabri was a downtrodden. According to Ramayana, when Rama visited Shabri's place, Shabri told Rama that she had been waiting for his visit as her guru had foretold that he would bless her with his darshan one day and had instructed her to wait for that moment. Shabri then asked, "When even my guru, a great sage, could not obtain your darshan,

how could I, a socially disadvantaged person attain it?" On hearing this, Bhagwan Ram explained that his remembrance is not influenced by gender, caste, title or age but finds its source in true devotion alone. True devotion can only be attained by assimilating and executing the principles of Bhagwan Ram in day to day life.

The above illustration should serve as an inspiration to one and all for upliftment of socially and economically weaker sections of our deeply fragmented society.

Conclusion

To conclude, we need to strive to create high moral standards as an individual, as a family and as a nation in order to achieve peace, stability, hope, and prosperity in the society. For this, we need to return to our roots and embrace the core values of 'Maryadapurushotam Ram' – the Supreme Upholder of social norms and values and an ideal king. A king who is always true to his words and subjects without any self-interest. Only then we will be able to see reflection of Bhagwan Ram's character within us – a life that is governed by principles of truthfulness, justice, purity and humbleness eventually leading to creation of a social order that is committed and displays highest standards of integrity.

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Telework – Paradigm Shift to Work Home during COVID-19 for Indian Employees and Employers with Challenges and Opportunities

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ABSTRACT

2020 has been a year of remote work. Due to the current pandemic, business had to take this new route to sustain them while keeping their employees safe. This way of working gave rise to a lot of new opportunities and challenges as well. In this research paper, we will discuss about the pros and cons of new working style from the perspective of both employees and companies.

Purpose: The purpose of this paper is to investigate the opportunities and challenges as we embrace the concept of Homework from the employer and the perspective of employees in India. Various aspects of these changes in the work culture have been assessed such as levels of employee satisfaction, challenges related to telecommunications and the apparent product of remote work, Reducing Cost of Employment as Opportunities.

Design/Methodology/Approach: Study was based on Literature review and exploratory research design. In study, secondary data collected from journals, books, website and news media etc. and Primary data collected from using semi-structured questionnaire filled from 100 employeesworking online during COVID-19 and 20 employers adopted WFH culture for their organisation representing different sectors of Indian Economy.

Convenience sampling technique has been used to collect data online.

Findings:Throughout Pandemic, COVID-19 made the shift in the attitude and preferences among the employees due to time flexibility but Internet connectivity, lack of equipment or sitting area, blurring boundaries between work and home as major challenges. However, not everyone prefers teleworking. Many workers want to work together, concerned about the lack of equipment or space to do their job and blurring the boundaries between work and home. Whereas Employers face challenges to maintain balance between productivity and health of employees whereas cost saving was arising as major opportunity to Indian Employers.

Originality/value: This is one of the few studies to focus on teleworking (WFH) during the COVID-19 epidemic. The findings have significant implications for practicing professionals, organizations, and HR policy makers.

Introduction

Due to COVID-19, system of flexible work has been introduced, specifically remote work. As complete Lockdown forced unprepared employer except essential businesses, to implement

flexible work options by balancing business profit and employee health stable.COVID-19 may transform how many of us work forever. The shift to home-based teleworking is now an essential solution to a dreadful predicament. It can continue as a popular practise in the post-pandemic world that can, if done effectively, improve employment happiness, boost productivity, cut emissions and distribute work to more remote places.

Telework was once rarely used before the pandemic but has now become a necessity. What can we expect as the trend to telework becomes more permanent? For companies, it would save money on office space, reducing administration cost, increased attendance and productivity and time spent commuting by staff. Commuting should be reduced for environmental reasons as well as the fact that it is one of the least fun activities that many adults engage in on a daily basis.

Even in the face of adversity, flexible job planning can increase recruitment and retention efforts, add a variety of organizational plans, promote ethical ethics, and support the organisation's social responsibility efforts. Employers can benefit from cost savings, increased attendance and productivity, and increased employee engagement.

Conceptual Background

Working from home (WFH), also referred to as telecommuting, teleworking, or remote working, is defined as a flexible work arrangement that allows employees to work from home or a remote location. More than half of company executives estimate that by 2020, more than half of their full-time employees will be telecommuting.

This prediction seems to be coming true, as COVID-19 is spreading like wildfire, causing countries to close down. Homework (WFH) has become a prerequisite for keeping businesses running. Moreover, the participation in telecommuting is much higher before the beginning of the epidemic.

This rate is too high for people with a bachelor's degree or higher, and 38% of these people do remote work on any given day.

Many organizations, however, offer employees the opportunity to telework without first considering the benefits, risks, and consequences of such an arrangement.

Literature Review

However, the Idea of teleworking is not new. It was first emerged back in year 1970s due to Oil crises as prices were rose rapidly, which made the cost of commute costly. In addition, concern for increased cost of oil supply would become permanent. Telework was seen as the option, with individual work from home or nearby telecenter to their home with perspective to reduce high cost of fuel used for commuting to work place as well as cooling or heating the office premises. The oil crisis soon ended but concept of telework give rise to new work culture to achieve desirable goals for employer and employee, including balanced work life, high morale, and enhanced productivity.

Nevertheless, every new concept brings lot of challenges and opportunities alongwith it.

- **Telecommuting throughout the world:**Remote working is an idea that has been adopted by several societies. Developed nations, such as the United States, have around 3.7 million individuals who telecommute 50% of the time or more, accounting for 2.5% of their workforce.
- **Internet Applications Assisting with Remote Work:** The internet is the driving factor behind the notion of working from home. Teleworkers can collaborate remotely using a variety of web apps. Popular communication tools include Skype, Google Talk, and Gizmo. WebEx, Go to Meeting, and LiveMeeting have been used for online presentations.
- **Telecommuters' Job Satisfaction:** Following that, the study looked at the signalling hypothesis, which is linked to job happiness among telecommuting employees. Teleworking availability is a visible activity taken by the firm or organisation to demonstrate that they care about the well-being of their employees.
- **Challenges of Working from Home:** Telecommuting blurs the common differences between work and home. In the absence of these issues, the chances of work-home collisions are very high, leading to negative consequences.

Home and work can cause remote workers to work longer hours each week, especially when they are on time off work. These extra working hours, as well as isolation from co-workers, can be stressful and difficult for teleworkers.

Research Gaps and Unanswered Questions

Finally, the research gaps associated with teleworking should be addressed during the COVID-19 epidemic. The research questions for this study were developed in response to suggestions provided by previous academics who have thoroughly examined telecommuting.

As previously stated, the gaps have given birth to the following research issues about working from home (WFH) in the context of the current COVID-19 pandemic:

- RQ1: Are teleworkers satisfied by their current work from home environment?
- RQ2: What challenges are faced with teleworking?
- RQ3: What are the challenges faced by employers of working from home?

Research Objectives

The broader purpose of this study is to investigate the workings of teleworking professionals to employees and employers during the COVID-19 epidemic. To make the overall purpose of the research, specific objectives are taken from the following research questions:

- Determining the level of satisfaction among teleworkers.
- Exploring challenges related to telecommuting.
- Identifying organizational challenges.

Methodology

For this study, an exploratory and descriptive approach was used. For the study, both primary and secondary data and information were obtained. Secondary data and information were

gathered by analysing previously published research literature in peer-reviewed journals and conference proceedings, books, news media, websites, and so on. As part of the study's aims, primary data and information on occupation, telecommuting hours, and types of work done, and so on have been gathered through questionnaire.

Sample Size: 120 Professionals as Respondents (n = 120)

100 employees working from home (WFH) during the COVID-19 pandemic and 20 Employers from different sectors

Sample Area: Delhi–NCR

Due to the strict measures during COVID-19 and the busy teleworking schedules of specialists and due to the unavailability of sample framework or any accurate index or database to determine the size of qualified people, the sampling process may be difficult to implement. Instead, a sample simplification procedure was used to determine the sample size of the main data collection in this study.

Data Analysis and Findings

An online survey from LinkedIn, Facebook, etc., was used and done on Google Forms has been used appropriately by participants, and their responses are shown below.

Employees from Different Sectors

Table 1 shows the occupations of teleworkers who took part in this survey. Researchers (33%), banking staff (12%), and human resources personnel (10%) comprised the majority of the sample and the 'others' group (14%) has included officials from the development sector, auditors, communications staff, and others. 100 respondents completed the survey satisfactorily, resulting in a 72 percent response rate for this study. A set of double-ended (closed and final) questions in Google Forms was used online to gather key data and data for this study.

Table 1: Various Occupations of the Sample

Profession	Percentage (%)
Researcher	35
Banking Professional	9
HR Personnel	8
Business Owner	20
Engineer	15
Marketing/ Sales Professional	10
Others	3

Others includes Auditors, sector official, auditor and more

Employees Working Hours

As shown in Table 2, respondents worked from home an average of 7.55 hours per day with a typical deviation of 1.45 hours per day. It can be assumed that there are five working days a week. Up to about 38 hours of remote work per week. After that, if there are four weeks a month, this is up to 151 hours of remote work per month.

Table 2: Working Hours of Employees

Duration of Work (per day)	Percentage (%)	Mean	S.D
5 hours or less	12		
6 hours	20		
7 hours	07	7.55	1.45
8 hours	23		
9 hours or more	38		

Job Satisfaction Levels of Employees

40% of participants indicated that they were 'satisfied' with their current home planning work. In comparison, 24% are 'happy.' This indicates that the average level of homework (WFH) satisfaction level is very high among the target group.

Table 3 shows the factors that have a positive effect on the satisfaction levels stated. Flexible work schedules were considered the most important (81%), followed by a better working life balance (45%).

Table 3: Factors for Job Satisfaction

Factors Promoting Satisfaction	No.of Responses	Percentage (%)
Flexibility in work schedule	81	81
Better work life	45	45
No commute	41	41
Less on site interruptions	19	19
Autonomy	19	19

Work from home (WFH) is considered an additional function by employees, indicating that the organization cares about their well-being. The case shows that the organization wants its employees to work safely from home during this critical time. This practical step by organizations increases work efficiency and satisfaction.

Challenges Faced by Employees

For any workplace, challenges are involved. 52% and 46% of respondents reported that the most important personnel challenges were problems with internet connectivity and schedule maintenance, respectively. Typically, professionals have a 9 to 5 work schedule, but that is disrupted while working from home. In addition, general concerns about the impact of COVID-19 on their health are raised by 40% of them, as shown in Table 4.

Table 4: Challenges Faced by Teleworkers

Challenges	No.of Responses	Percentage (%)
Internet connectivity issues	52	52
Maintaining regular schedule	46	46
General anxiety of COVID-19	40	40
Distractions at home	38	38
Social isolation from colleagues	35	35

25% of respondents believe that social isolation is the most significant problem due to work from home. 13% of respondents also reported disturbances caused by children at home. In addition, 59% of participants experienced disruption due to IT problems during online meetings with colleagues. These issues include various levels of internet speed, audio quality, and video during official online conferences.

Gender wise Challenges faced by Employees

Table 5: Challenges Faced by Both Genders

Challenges during WFH	Female (%)	Male (%)
Blurred boundaries between work and Home	53	55
Increased Housework/ Childcare	15	17
Too much distractions at home	14	10
Increased family and work stress	07	12
Less Productive	11	6

Due to Pandemic situation, Parents suffer stressed while adopting WFH especially working mothers. More than 50% females wasn't able define line between work and family. 14% females believe too much distraction at home. She tries to maintain balance between home and work which them more stressed.

However, role of father also stressed full as they have to involve themselves more to take care of children and expecting more contribution in Family matters.

These findings reflect serious concern for the well-being of parents, who are severely stressed by the lock and this may be frustrating as the closure of school/care providers continues or if there will be a next closure in the future.

Challenges Faced by Employers While Adopting WFH

Table 6: Factors that Challenge WFH for Employer

Factors that Challenge WFH for Employer	No. of Responses	Percentage
Less Productive	16	80%
Training not given Properly to new employees	3	15%
Difficulty in monitoring Productive hours	18	90%
Building safe Virtual Workplace	17	85%
Facilitate communication with management	12	60%

As employers work hard to manage successful organizations during the epidemic, protecting workers from misconduct in the workplace and creating safe spaces is a very important part of this figure.

In Table 6, Responses from every employer are counted for every response due to small sample size. Out 20 employers, 16 considered WFH is less Productive and profitable for organisation. Almost 90% Employers' believe that while adopting WFH concept during Pandemic, they faced difficulties in monitoring the Productive hours contribute by the employees and maintaining Virtual workplace safer for employees is the biggest challenge they have for their telecommuters. Training session for new employees are not that effective for new telecommuters.

More or less, Employers believe that WFH is not feasible post COVID-19. However, it is cost effective concept by reducing the administrative cost of organisation.

Research Implication

• Organizations should understand that homework (WFH) is truly productive, and that workers are getting more work done since the removal of the travel problem. Therefore, to maximize these benefits, organizations need to train their employees to use technology remotely systematically.

• HR policy makers also need to know and write official teleworking guidelines (WFH) so that employees are protected from overwork. There are many experts (38%) found in this study that worked for more than 8 hours. Therefore, official hours of teleworking and other guidelines should be provided resembling 7standard operating conditions.

• Workers themselves should be satisfied that their organizations have given them the opportunity to work from home during such a disaster. It shows that their employers are concerned about their well-being and are willing to provide benefits for well-off employees.

- Telecommuting will promote long-term growth between them. The results of this study were also a call to wake up Internet service providers (ISPs) as more than half of respondents reported internet connectivity issues (52%). ISPs must therefore improve their services by providing a seamless and high-speed internet connection and ensuring a stable base for remote workers everywhere.

Limitations and Future Research Directions

This research has faced various limitations along the way. These are as follows:

- First and foremost, the sample had a limited number of telecommuters working at Delhi-NCR. It may not represent the state of the world.
- Alternatively, implementing a sampling process that may be difficult due to the strict measures of COVID-19 and busy schedules for teleworkers.
- The level of productivity between employees and the employer is evident here, and more statistics are needed to find the real story.
- All sectors could not be covered for a clear view of employers and employees.
- Finally, the impact of the organization has not been considered as it was not possible to do so during the ongoing COVID-19 epidemic.

Therefore, more research is advised to disclose the complete effects of the organization while considering the larger sample size. It is also important to give importance to finding the real level of productivity that exists for those workers who work remotely.

It is recommended to have every sector to be included and closely monitor tele-commuting employees and employer in a controlled environment andmeasure their actual output.

Conclusion

In an age of technology like this, work from home (WFH) has now become a reality.

Telecommuting can bring together employees and employers and ensure that business operations continue amid a disaster such as the COVID-19 epidemic. With the blessings of this technology, businesses are now equipped to deal with any difficulties but currently operations in all sectors is not possible.

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Social Media Impact on Well Being of Individuals

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Abstract

Widespread use of the Internet and mobile phones, social networking on various social media channels has become an unescapable part of living. However, excessive use of these social media sites affects the overall health of the individuals. So, the quality of life has been greatly affected by the time spent on social media. It mainly affects young generation as they are more techno savvy. In the present study, a survey was conducted on 180 subjects in the age group of 18 years to 30 years. The data was collected using a self-administered questionnaire to measure various dimensions of life mainly; the emotional, financial, intellectual, social and spiritual aspects. Results of present study depicts significant penetration of social media in the life of young generation. This study discusses both positive and negative impacts on the physical, mental and spiritual health of individuals.

Introduction

Social media such as facebook, whatsapp, instagrams and skype etc are web-based services which provide a platform to individuals for constructing a public profile in a bounded system, and connect with other users with whom they have any connection. Individuals from the age group of 15 to 30 years are major users of these social networking media sites.

In the modern world, advent of the internet and smart mobile phones, networking by social media has become an indispensable part of individual interactions in the modern world. Every day minimum 8 billion minutes are spent on only one social media site Facebook. These social sites are so addictive as it is very convenient to trail the life of your known as well as unknown ones just by visiting their profiles on social networking sites. Internet users in India has increased to 825.30 million at the end of march 2021, registering a quarterly growth rate of 3.79%. (TRAI)

Physical, mental, social and spiritual health of people has been greatly affected by excessive use of social media. However, it has also provided an indispensable way to connect and communicate without geographical and cultural walls. On the positive side, social media by providing wide information on all the aspects of life, enhances physical and professional life of individuals.

In spite of this, we can also observe negative impact of social media on children, teenagers and youngsters as in current scenario they are spending leisurely on different social networking

sites. Major negative impacts can be seen in the form of deteriorated health, psychological issues, mental distress and lack of interest in spiritual activities.

Review of Literature

George & Dellasega (2011), this study stated that student's learning opportunities improved by the use of social networking tools and also raised collaborative opportunities, and enhanced creativity. It also showed far ranging advantages of social networking sites for educational purpose.

Bernard John Kolan (2018), Through social media networks various forms of education has been widely supported and smoothed to some extent. Now, it is no longer a problem to aquire information from friends, lectures or experts both locally and internationally in comparison to the older time and the invent of internet technology is the eventual reason behind its success. This study also highlighted and alarmed of excessive usage of social media's dangers as "Social media is a useful servant but a dangerous master".

Khalid H. (2017), this study explored that every student in Pakistan is using some kind of platform for different reasons as for academic, educational & entertainment purposes. Many students use YouTube for diverse purposes and have their accounts on Facebook site. However, If they use these platforms in a sensible manner, it will not affect their health. Also, the study found out that there are multiple users who are not aware of the terms and conditions of these social networking sites which they are exploring. In the end, the study concluded that social networking sites have a significant role in improving students' academic activities.

Masood Badri (2017), This study found out some benefits of using social media networking sites which includes sharing of information and ideas and reading skills improvement. However, it also explains the harmful effects of students' participation in social media networks. Misuse of social network may affect the academics of the students and, so, their results.

Sudha S. (2016), This study measures the impact of social networking on academic performance of students. The study explored two conflicting views on the impact of social network sites on students. Proponents argued that social networking allows students in connecting people with common interest area and values while opponents of it claimed that unnecessary usage of these sites affect the overall health of the users.

Gok T. (2015), A study conducted to measure the two opposing impacts of digital technologies on students' learning activities. Both the positive and negative impacts of social networking sites on the students were inspected. Results of the study presented that fifty percent of the students spend one and half hour in a day on smart mobile phone. Students mainly use mobile phones for connecting with their friends, listening music and particularly using social networking sites.

Need for Study

Present study has been conducted to study the impact of social media usage on the overall health of individuals in the age group of 15 years to 30 years. Extensive literature survey has

been conducted to find out the relevant literature but no study was found which examines the impact of social media on all the dimensions of health taken in present research. This study particularly conducted to find out the impact of social media usage on physical, mental/intellectual and spiritual health of individuals.

Objectives of Study

1. To compare the social media usage among male and female individuals.
2. To find out the impact of social media usage on physical health of individuals.
3. To find out the impact of social media usage on mental and intellectual health of individuals.
4. To find out the impact of social media usage on spritual health of individuals.

Hypothesis of Study

1. There is no significant difference in the usage of social media among male and female individuals.
2. Usage of social media by individuals adversely affects their physical health.
3. There is significant adverse effect of social media on mental and intellectual health of individuals.
4. Social media usage adversely affects the spiritual health of individuals.

Research Methodology

A cross-sectional survey was conducted to measure the impact of social media usage on various dimensions of life among youngsters in the age group of 15 years to 30 years in Gurgaon. After extensive literature review, a sample size of 180 subjects was taken randomly on convenience basis and tested at 95% confidence. The sample size attained was 90 in each group of male and female subjects.

After explaining the objective of study, their consent was taken and the confidentiality of the data was assured in the questionnaire. The questionnaire was self-administered and pretested for the purpose of study. This questionnaire has been designed to measure three major aspects, i.e. impact of social media on physical, mental/intellectual and spiritual health of subjects. So, the questionnaire has been divided into three sections of ten items each. These sections have six subsections; two subsections in each section to measure issues related to impact of social media usage on physical health (2 sub-sections and 10 items), mental state, stress evaluation & life enjoyment (2 sub-sections and 10 items), and the overall impact on spiritual health (2 sub-sections and 10 items).

Statistical analysis was done by applying various statistical techniques such as mean, standard deviation and regression analysis by the use of SPSS software. Findings of the results were further discussed in the light of already existing literature.

Results and Discussion

Statistical results showed that the mean age of participants ($N = 180$) was 23 years. As this is a cross sectional study in which comparison between male and female individuals' inclination towards usage of social media was checked. Data collected from questionnaire exhibits no significant difference in the usage of social networking sites among male and female participants. More than 91% of female respondents were found using social networking sites for more than 5 hours in a day while 90% of male respondents were using internet excessively. Major reasons of using social media given by respondents were to connect with friends, listening music and watching videos, to get acquainted with new things and sharing & uploading files and videos. However, they also admitted that they wasted lot of time on internet just by surfing without any purpose.

Results of this study exhibits significant association between use of social media in daily life and the physical health of individuals. Individuals reported sedentary lifestyle due to excessive use of social media causing increase in the tendency of obesity, bad cholesterol, diabetes and deteriorated overall physical health. They have also stated increased eyes problems. This may be attributed to more engagement on social media network inspite of moving outside for making connections and socialization.

90% of individuals reported lack of concentration, difficulty in multitasking and increased stress due to excessive use of smartphones. Male participants' mental peace was more affected by the excessive employment of time on networking and surfing social sites like facebook, twitter, Instagram and Whatsapp, etc. However, even female participants also reported significant mental distress in the form of lack of concentration but in comparison to male participants intellect of female participants was found less affected by social media usage. Participants have also reported the issue of insomnia which has largely increased due to excessive usage of social networking sites.

Data analysis also revealed significant positive impact of social media usage on the spiritual inclination of participants as now they can easily attend and participate in any spiritual talks. Individuals who were not religious earlier are also attending such spiritual meets. They have started joining online meditation sessions on facebook. However, in some cases we also found that some participants' interest in religion has negatively been affected by social media usage as they are more involved superfluously in unnecessary activities.

Findings of study also presents some positive impacts of surfing on social media networks as participants were able to make contacts and network with known as well as unknown people. This networking can be used to enhance the business activity, promote their career, and also to improve educational opportunities for students.

Thus, present study concluded significant adverse impact of social media usage on the physical and mental health of participants as they faced lack of immunity, more sufferings from diseases, mental distress and insomnia. However, significant positive impact have been seen on participants spiritual inclination as these social sites provides a platform to join various spiritual meets and meditation programmes.

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Impact of Work from Home (WFH) on Government Professors at College Level during the COVID-19 Pandemic: An Exploratory Study

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Abstract

The main objective of conducting this study was to obtain information about the opportunities and problems of online teaching during this pandemic situation. Research is conducted using Case study methods to obtain qualitative information about opportunities and problems faced while teaching online in this pandemic COVID-19. In this study, respondents were 10 people in a government college in Gurugram. Respondents were selected from different streams to conduct a comparative study. For confidentiality purposes respondents were given the initials A1, A2… A10. Semi-structured interviews were conducted telephonically and a list of questions was prepared based on related literature. The results of this study are that WFH has several advantages and disadvantages. The advantages are no rigid schedule, reduced expenses, and more leisure time. The disadvantages are increased workload, effect on health, lack of peaceful environment, increased electricity bills, network issues, problems in conducting practical's online.

Keywords: *Work from Home (WFH), COVID-19 Pandemic, Exploratory Study.*

Introduction

Work from home(WHF) is a work arrangement in which employees need not work at a central place (office, warehouse, store). WFH has various names such as remote work, teleworking or telecommuting. These terms are used interchangeably in this study. This study focuses on opportunities and problems faced by professors. For Professor's the word teacher's is used interchangeably in the study. The current world situation WHO has announced about the COVID-19 virus pandemic worldwide. Indian government advise people to reduce activities outside the home that are not important. On this recommendation UGC directed universities and colleges to implement WFH system for teachers and online classes for students. Various empirical studies have been done on problem faced by teachers while working from home.

Few studies conclude that teacher's face a lot of difficulties while working from home like family interruption during teaching, lack of basic facilities at home, conducting practicals,

budget for purchasing new technologies, limited awareness of online teaching platforms, lack of motivation. No study was conducted which showed the advantages of work from home. The purpose of this study was to obtain information about the advantages and disadvantages of WFH during COVID-19 for teachers. This study focuses on whether there is any impact of gender, marital status, age, family, personal values on WFH for professors. This study also helps in comparative analysis of advantages and disadvantages faced by professors of different streams (theory, practical).

Methods

Research using qualitative case study methods to obtain information regarding advantages and disadvantages to the WFH during COVID-19. In this study, a sample of 10 professors were taken from a government college in Gurugram. The sample was selected using the Purposeful sampling technique. Qualitative researchers used purposeful sampling technique to recruit participants who can provide in-depth and detailed information about the phenomenon under investigation. Qualitative researchers widely used purposive sampling for the identification and selection of information-rich cases for effective use of limited resources (Patton, 2002). A purposive sampling sample is selected based on characteristics of a population and the objective of the study. This type of sampling is more useful in situations when you need to reach a targeted sample quickly, and where sampling for proportionality is not the main concern. In a purposive sample, the sample size depends on desired information to be collected (Bernard, 2002). The sample size should not be too large which makes it difficult for researchers to take information in depth from respondents and should not be too small which makes it difficult to achieve desired information. Morgan states that 3-5 focus groups are sufficient to reach saturation. Kuzel (1992) recommends that 6-8 sampling units will be sufficient when a homogeneous sample is selected in a qualitative research.

Table 1: Profile of Respondents

Initial	Gender	Age	Status	Family	Stream
A1	Female	38	Married	Nuclear	Commerce
A2	Female	56	Married	Nuclear	Chemistry
A3	Male	49	Married	Nuclear	History
A4	Female	39	Married	Joint	Home Science
A5	Male	51	Married	Nuclear	Music
A6	Female	28	Unmarried	Nuclear	English
A7	Male	36	Married	Joint	Botany
A8	Male	30	Unmarried	Joint	Mathematics
A9	Female	56	Married	Nuclear	Geography
A10	Female	29	Unmarried	Joint	Computer Science

The primary data collection method was used to collect data. Semi-structured in-depth interviews were conducted to collect data from the selected sample. For confidentiality purposes respondents were given initials as A1, A2, A3… A10. In depth interviews were conducted to explore the perspective of respondents regarding WFH.

The questions were framed on the basis of related literature. The interviews were conducted telephonically at the time which is convenient for the respondents and the information was transcripted verbally. Analysis of data is the most critical part in qualitative research, while analyzing qualitative researcher have to read a large amount of transcripts looking for similarities and differences and findings themes and developing categories.

To explore and obtain information on the opportunities and problems of work from home during the COVID-19 pandemic of professors, several research questions were made and asked from the respondents:

• What are the pros of working from home for you?
• What problems have you faced while working from home ?
• If there is an institution which works completely online, would you like to work with that type of Institution?
• Are you facing any Issues in Teaching online ?
• How does remote teaching affect your pocket?
• Are you facing any health issues because of Online teaching?
• Are you facing any Psychological issues because of Remote Teaching?
• Overall, for you Work from home is an opportunity or a burden?

Research Result

This study is conducted to obtain information related to opportunities and problems faced by professors while working from home. Respondents' original quotations were quoted as stated by the respondents.

Question: Pros of Work from Home

Some of the respondents gave statements:

• Work from home reduces the morning traffic Stress and provides a flexible routine in the morning.(A2)
• It is safe in this COVID-19 pandemic to work from home for us and our family.(A3)
• Work from home gives an opportunity to spend more time with family. It gave break from morning scheduled work. It provides leisure time for doing what I like. (A10)
• WFH does not need to pay transportation costs or gasoline costs. You can also save travelling time.(A8)
• It provides a change in environment which means you can work from the balcony, living room with tea and snacks to feel relaxed and more energetic.(A5)

- Reduced morning stress because no need to do morning chores in a hurry. Another advantage is no need to spend hours on the road. and provide safety from COVID-19 pandemic.(A9)
- Work from home provides a break from daily routine work. One can work from a balcony, drawing room and can reduce stress by taking a break and listening to their favorite music. (A6)

Question: Problem Faced by Teachers While Working at Home

Some of the respondents gave statements:

- One of the disadvantages of WFH is that it increases the workload of teachers like keeping attendance records, assignment records, preparing ppt, managing google classroom. It sometimes faced a lot of network issues.(A3)
- The working atmosphere is not as expected, the atmosphere at home is not like a college, it creates a lot of problems. Network issues and increased electricity bills and internet cost also add a burden to pockets.(A1)
- Sometimes, lose motivation and don't get the proper environment to teach. Family disturbance and lack of proper place of working is a major concern in a joint family.(A4)
- Not familiar with the online teaching tools, network issues, increased work stress creates hurdles while Working From Home.(A2)
- Faced a lot of difficulties while remote teaching, like network issues, security problems while working with public WiFi. (A9), (A10)
- Lack of satisfaction due to online interaction with students and problems in conducting practical, network issues are also faced by teachers in remote teaching.(A5)
- Face to Face Communication with students and students responses motivates a teacher to work with more enthusiasm, but it's not possible in remote teaching which sometimes lacks motivation in teachers. Another concern is that there is no peaceful environment at home needed to teach.(A7)

Question: Want to be a Part of a Complete Remote Institution or Not

- Want to be a part of this Institution because it provides new opportunities for teachers to explore their caliber.(A6)
- No, don't want to be a part of such an Institution because the experience of remote teaching in this pandemic is not good at all.(A3) (A8)
- Do Not want to work with this type of Institution because interaction with students and their favorable responses motivates them to work.(A5)
- Being a teacher, can't imagine a situation like that where we have to work from home and not interact with students and colleagues. No proper environment is available at home for teaching. Conducting practicals online is another concern of remote teaching.(A2)

- It is a wonderful opportunity to manage home and work together from home. and in future this type of platform will help those students who can't study for many reasons. and opportunities for many teachers who can't work because of their personal and family issues. (A10)
- If in future proper facilities are available at both ends for students and teachers it will be an wonderful opportunity for teachers to work and learn new technologies which will help them in future.(A9)(A7)
- There are a lot of problems faced in remote teaching like managing teaching from home, conducting practicals, interaction with students, and health issues. This increased stress level, so, don't want to work with this type of institution.(A4)

Question: Issues Faced by Professors While Teaching Online

- Faced difficulty in conducting practicals online.(A4)
- Network issues and lack of interactive interaction with students reduces morale.(A9)
- Student interaction is not in remote teaching which somehow loses interest and increases stress.(A8)
- Face to face communication with students and colleagues encourages them to work with more energy which is lacking in remote teaching.(A1)
- Problem in conducting practicals. Not able to check whether students are getting us or not. (A5)

Question: Remote Teaching and its Effect on Pockets

- Working from home increases financial burden. Increased internet costs, arranging smart phones and laptops add extra burden on pockets.(A3)
- Reduced Gasoline cost and reduced personal expenses somehow reduced financial burden. (A9)(A7)
- Work from home negatively affects pockets by putting extra burden because of increased electricity bills and increased internet costs .(A4)
- Working from home reduces personal expenses and transportation costs. On the other hand, it increases electricity bills a little bit.(A5)(A6)
- At first the cost borne by college (internet cost) is now ours. and we have to spend to buy new technologies to work effectively from home somewhere with increased financial burden.(A2)(A1)
- Work from home decreased financial burden as personal expenses decreased and transportation cost reduced.(A10)(A8)

Question: Health Issues Faced Due to Remote Teaching
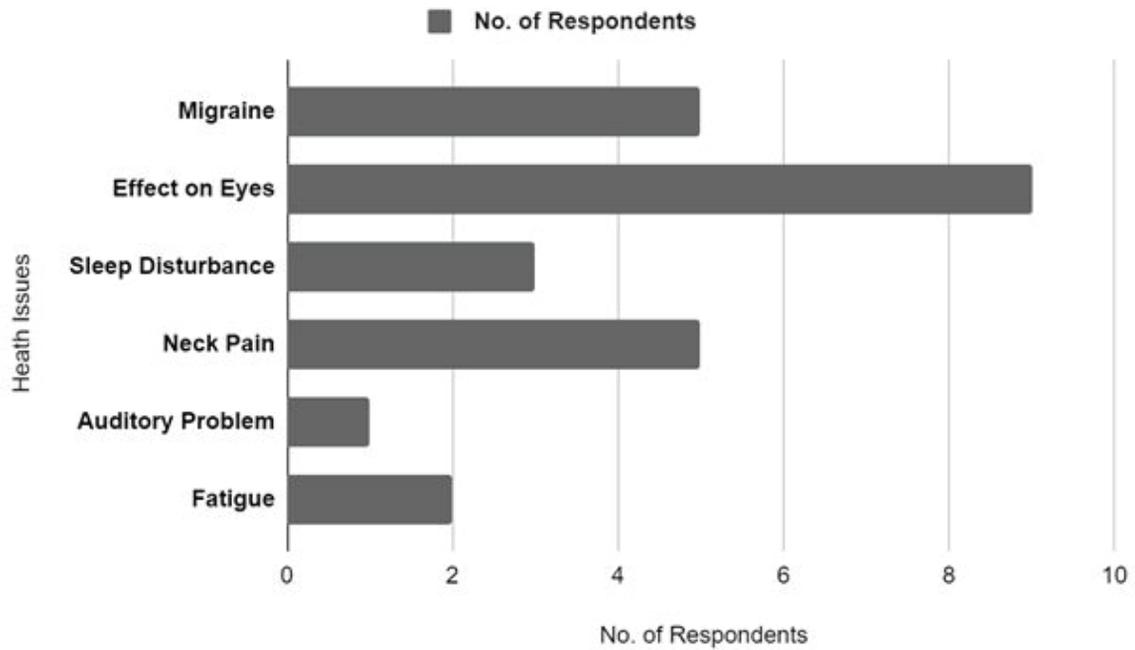
Figure 1: Health Issues Faced by Professor's Due to Remote Tecahing

Question: Psychological Issues faced due to Remote teaching
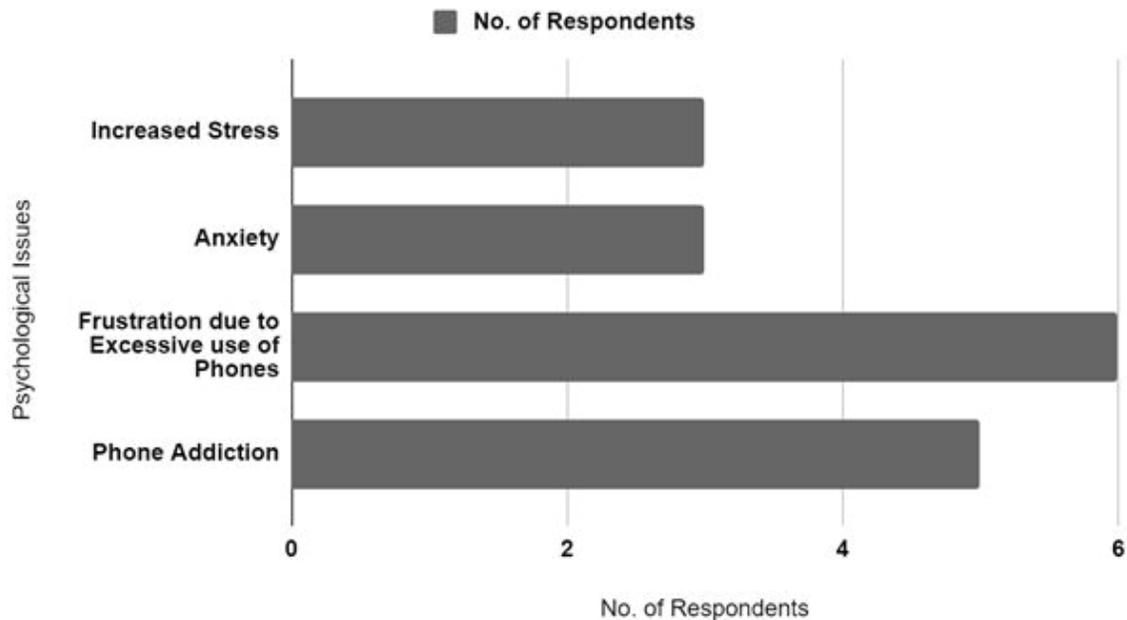
Figure 2: Psychological Issues Faced by Professor's Due to Remote Teaching

Question: Overall WFH is an Opportunity or a Burden

- It's an opportunity to learn more and test your own caliber. (A6)
- WFH is the only way possible during this pandemic with which we can interact with students… so we can't call it an opportunity but a necessity to carry on with our work. (A1)
- Burden because no proper interaction with students, network Issues.(A3)
- If all the facilities like high speed internet, smart devices are available at both ends then online teaching can be managed efficiently. But due to lack of resources, especially at students' ends, they create many issues while teaching. Not able to check if students are actually attending class or just joining the class for attendance.(A7)
- We can say that it increases stress and burden because of lack of face to face interaction with students we are not able to understand properly whether students are getting us or not.(A2)
- Sometimes work from home seems like an opportunity and sometimes it seems to be a burden. When we save our time and money by reducing traffic stress we feel it is an opportunity but when there is family disturbance during our classes we feel it as a burden. (A8)
- It's a necessity in a pandemic situation… also an opportunity for teachers as well as students – more familiarity with digital tools which would help even post pandemic.(A10)
- Definitely it has taught us a lot of new things but many improvements are required to make it less of a burden.(A9)
- In the time of the pandemic it was the only possible option through which we could teach. It's an adjustment.(A5)
- It's an opportunity which teaches us a lot of new technologies and provides extra time for family and self. But when thinking of students and their responses and performance as a teacher we can't say that it's an opportunity. Students face difficulties in practical and far us our first responsibility is to satisfy students. and sometimes it lacks motivation because of no interaction with students and colleagues.(A4)

Practical Implications

The findings of the study can be used by regulatory authorities, employers of higher education institutions who are planning to adopt online teaching as a regular activity in the future. It helps colleges to improve their teachers' performances and provide solutions to their problems. It helps IT companies to prepare new tools which improve remote teaching. This study will help in reducing the stress of remote teaching among Professors which ultimately improves their productivity.

Conclusion

WFH has both advantages and disadvantages of its own. This study considers personal factors and the experiences of teachers regarding work from home. It compares the experiences of

technical subject teacher's and theoretical subject teacher's. Respondents were categorized in two categories one below 40 and one above 40 years. Respondents above the 40 age group take WFH as a burden. They were somehow habitual of old teaching methods and didn't want to learn new technologies. Their responses show that their financial burden increased due to WFH and they faced health issues like migraine, effect on Eyes, auditory problem, increased stress, fatigue and frustration due to excessive use of Phones. Respondents below the 40 age group show that if proper facilities are available then WFH will be an opportunity. But overall it is a necessity of this pandemic situation. This shows that somewhere a new generation is liking work from home and there is a new opportunity for such types of institutions to grow in future.

Unmarried Respondents take WFH as an opportunity because it decreases their financial burden, opportunities to explore new things, and more leisure time for self and family. Married Respondents take WFH as a burden because it increases financial burden, increased stress in maintaining records like attendance, assignment, preparing ppt's. In this pandemic situation it is the only option available to teach the students, so overall it's an adjustment for married respondents because they have problems in maintaining work life balance with children. From the responses received from married respondents shows that they faced problems in managing teaching with children and family.

Respondents who teach technical subjects faced a lot of difficulties in conducting practicals online. On the other hand teacher's teach theoretical subjects feel more satisfied with the online teaching.

Family is an important part of human life. and family affects an individual more. In remote teaching also respondents with joint families faced issues like managing home and work together, and family disturbance in teaching. Respondents with nuclear families also faced some issues in managing home and work but less as compared to joint families.

Remote teaching affects the health of teachers. They faced issues like migraine, effect on eyes, sleep disturbance, neck pain, auditory problems, frustration due to excessive use of phone, phone addiction, increased stress, fatigue, and anxiety.

Teacher's feel motivated if they get good feedback from their students and their students' performance is increasing. Some respondents feel dissatisfied because of lack of interaction with students. A proper platform should be there where teachers can interact with students and feel motivated to work with more enthusiasm.

Overall WFH will be an opportunity in the near future for teachers if proper facilities are available at both ends for teachers and students. To make it an opportunity proper training should be given to teacher's to make them familiar with online teaching tools like Google classroom, scanning, Google meet. If colleges and teachers work together then they can make online teaching more effective. Colleges should provide proper facilities to teachers so that their financial burden decreases and they see WFH as an opportunity. But for technical subjects it is more difficult to teach online. Proper teaching environment helps teacher's to reduce their stress and make teaching effective. Excessive use of Phones lead to many health

issues which can be solved by providing a proper space and latest technologies like Lenovo laptops with smart features, which makes teaching effective.

In this pandemic COVID-19, WFH is the only way through which teachers can interact with students. More of an opportunity or burden it is a necessity at this time. But in future there is a scope for such a type of institution which works completely online, if they overcome the technical glitches and provide proper training and facilities to its employees to make it less of a burden and more of an opportunity.

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SECTION 2

NEW DYNAMICS IN ECONOMIC AND FINANCIAL WORLD

Stock Management Practices and Firm's Profitability: With Reference to Select Private Hospitals of Assam

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Abstract

Stock management is one of the most important functions of management. Efficient stock management practices are required for every firm to improve a firm's position in many fronts. Various studies reveal that firms follow hybrid stock management practices.

*The **Purpose** of the study is to find out the stock management practices followed by the private hospitals in the study area and the relationship between investment in stock and the profitability of the firm.*

***Design/methodology/approach:** The present study is descriptive in nature and based on both primary and secondary data. Primary data were collected through structure questionnaire from the sample hospitals. Descriptive statistics like simple percentage, mean,etc are used for analyses and interpretations. Profitability indexes are used to know the financial position of the selected hospitals.*

***Findings of the study:** The stock management practices which are followed by sample hospitals are just-in time practices, ABC analysis (perpetual system), and economic ordering quantity practice. It is found that application of innovative practices on stock management practices bring more profitability to the organization.*

***Practical implications:** This study provides insights view on the stock management practices followed by the private hospitals in the study area and the relationship between the profitability of the firm and investment in stock by highlighting different issues. Hence, the findings and suggestions will help the hospital industry to formulate policy and programmes.*

***Originality/value:** This paper challenges the results of previous research on the factors related to the stock management practices and their outcomes. Based on the previous studies the authors identify those factors and list those practices to find out the insight view and relationship between the profitability of the firm and investment in stock.*

Keywords: Stock Management Practices, Innovative Practices, Profitability.

Introduction

Stock management plays a major role in effectively implementing the functional activities of any organization and is regarded as the living support to any system (Ballou2000). The

stock are classified based on certain conditions: the classification may be based on the nature of business-merchandise and manufacturing stock or based on suitable strategies for certain business. For example, the stocks are classified as goods in transit, buffer stock, anticipatory stock, decoupling stock, and cycle inventory, etc. (N. Shivam). According to (Ojera, 2012), too much holding of stock consumes unnecessary space, increase the possibility of damage, spoilage and loss. On the other hand, too little inventory often disrupts business operations, leads to poor performance among the organizations. Therefore, sufficient level of stock at an acceptable level with demand availability minimizes the related holding, administrative and stock out cost. According to (Khobragade et al., 2018), stock management practices tracks data as they move through the process, including lot numbers, serial numbers, cost of goods, quantity of goods and the dates when they move through the process and involves several activities, these include purchasing, classification, inspection, codification, store keeping and stock taking. Stock management software's keeps track of those entire systems within the control of administration. Hence, proper stock management is highly essential for any organizations.

However, there is need for innovation in stock management. As the global supply chains as well as customers expectation are making advancement and adding strains to supply chain management processes, innovation in the areas like stock management will swoop in to save the day. To meet the expectation with accuracy and on time delivery in today's world, speed is everything and it can be the competitive edge too. Also the demand for modern and sophisticated logistics or warehouse management practices has witnessed for tremendous increase in India due to the influx of global companies who are ready to make investment in the innovative world. Innovative stock management practices will help to improve operational efficiency, cut cycle time, prevent material handling loss and try to maintain it at lower costs, with ease controlled access system. It will also helps to deliver in speed and ensure high-quality and long-term reliability. Innovation in technology has made stock management practices to reduce its waste and bring down error with continuous improvement in process to facilitate it in better mode. Successful innovative stock practices can keeps the operations, services and products relevant to customer's expectations and changing market conditions. Thus, organizations are leveraging on several innovative practices to manage their stock as a way of enhancing their performance. Innovative practices or multi practices are flexible and provides some provisions on scalability with consistency and uniformity in the workflow and cobble together the various services. It enables better and systematic approaches to problem-solving.

Statement of Problem

The application of efficient stock management practices cannot be over emphasized. Organizations should be more concerned with managing the stock, it includes controlling the stocks. A lots of investment are made in the stocked items; hence, carrying out proper stock management practices is necessary But, there is always a variance between the actual result

obtained and the records kept by these organizations, thus exposing them to stock related costs that affect performance and profitability. Efficient stock management practices with innovative processes helps not only to ensure quality services performance and but also to organize resources appropriately. Therefore, it is necessary to look into the different types of stock management practices which are followed by the firms and relationship between the volume of investment in stock and firm's profitability.

Review of Literature

There are good numbers of studies on stock management practices; some are related to hospitals and some are related to manufacturing and retail firms. The studies which are considered for the present study such as Njoroge's (2015), study was conducted in public hospitals in Kenya and found out the techniques of stock management practices, they are Economic ordering quantity, Vendor Managed Inventory, Radio Frequency Identification Systems, Enterprise Resource Planning, Just-in-time, ABC Analysis, e-procurement and Stimulation. Further, the findings reveal that these practices are positively related with firm's performances. The similar findings are also seen in the study of Dorothy Oballah et al. (2015), Mbiriri, E., & Moronge, M. (2018). The study of Semahegn's (2017), Owusu's (2014), Kebede Tekalign Negash (2020) assessed the stock management practices and challenges faced while implementing the practices in their selected study area. Another study has been conducted on the manufacturing firms of Kenya on financial performance of stock management practices, by Mulumba (2016); the study has provided information on their relationship and further revealed that those practices has helped them to increase the profits and shown growth in sales as well as performance. Another similar findings of Orga et al. (2017) shows that effective stock management practices has positive effect on performance, sales turnover, growth and profitability on departmental stores in Nigeria. Kaudunde Mwajuma (2013) assessed the effectiveness of stock control system in the public sector in Tanzania and found that they have well defined and reliable stock control systems through operating activities at a minimum cost. However, selected inventory techniques are found in the previous studies of researchers and the relationship between stock management and firms profitability is appear to be justified.

Research Gap

From the above literature, it is also evident that there are good number of studies on the present topic whereas, such types of studies are lacking in case of hospital in Assam; in addition studies related to the relationship between the investment in stock and profitability of firm haven not been encountered by the authors while reviewing the literature. Hence, the present study is an attempt to fill up the existing gap in the research world.

Research Questions

1. What is the current stock management practices followed in the selected private hospitals in North-East?

2. What is the nature of the relationship between the investment in stock and profitability of the firm in the selected private hospitals?

Objectives

1. To find out the stock management practices followed by the private hospitals in Assam
2. To examine the relationship between the investment in stock and the profitability of the firm with regard to private hospitals in Assam.

Research Methodology

The descriptive research design is applied in the present paper and both the primary and secondary data are used; the primary data have been collected through interview schedule from 18 employees (who manage stock) from 3 sample hospitals of Guwahati city. Respondents were asked to rate the factors of stock management practices on 7-point scale, ranging from 1 = strongly disagree to 7 = strongly agree according to the statement prescribed. Secondary data have been collected from different sources including books, journals, websites of sample hospitals, etc. To find out the investment in stocks and profits of the firms, annual reports, financial statements of the sample hospitals are reviewed. Descriptive statistics like tabulation, simple percentage and correlation analysis are used to interpret and analyze data. Study period: five years (2015-16 to 2019-20).

Findings and Discussions

Stock Management Practices Followed by the Private Hospitals

From the field study, it is revealed that all the sample hospitals in the study area followed the following stock management practices; they are (a) Economic ordering quantity (EOQ), (b) Re-order level (ROL), and (c) Just in time (JIT); however, the practice of ABC Analysis is not in one of the hospitals of the study area. The opinions of the respondents with regard to the 'following of different practices' under the above mentioned practices are shown in Table 1.

Economic ordering practices (EOQ) techniques help the firm to reduce the cost of stock by ensuring that they can clearly estimate the need of required stock and goods are ordered in right quantity which minimizes the holding costs. The implementing of EOQ techniques is very common and mostly adapted in the hospitals, it is also found in Njoroge's (2015) & Gatwiri R. Kobia (2018) and various reviews are made on EOQ model and theories; Agarwal Sachin (2014) & Senthilnathan (2019) shows the importance of applicability of this techniques. The findings shows that with regard to EOQ, majority of the respondents do agree the statements 'Consistency method in stock management is followed by the hospital' and 'The requirements of stocks are clearly estimated'.

Though the sample hospitals follow the re-order level practices to reduce cost by use of reorder policy, the finding reveals that only 38.9 percent of total respondents strongly agree with the statement that 'The hospital reduces cost by use of reorder policy'; further, it is also

Table 1: Stock Management Practices Followed by Sample Hospitals in the Study Area

Stock Management Practices	*Statement*	*S D (Freq. %)*	*D A (Freq. %)*	*SDA (Freq. %)*	*Ind (Freq. %)*	*SAG (Freq. %)*	*AG (Freq. %)*	*SA (Freq. %)*
EOQ	Consistency method in stock management is followed	0	0	0	0	5.6	61.1	33.3
	The requirements of stocks are clearly estimated	0	0	0	0	16.7	50.0	33.3
ROL	The stock manager has perfect knowledge on when to order and when not to order	5.6	5.6	0	0	16.7	55.6	16.7
	The hospital reduces cost by use of reorder policy.	0	0	0	5.6	33.3	22.2	38.9
JIT	The hospital follows just-in time practices and increases quality, profitability and saves cost	0	0	0	0	22.2	61.1	16.7
	The hospital predicts quickly and accurately the problems related to pilferage and defective quantity of stocks.	0	0	0	11.1	27.8	33.3	27.8
ABC analysis	The hospital follows activity based costing practices.	16.7	11.1	0	0	11.1	22.7	38.9
	The hospitals planners forecast the demand for stock or the requirements of products beforehand.	16.7	11.1	0	0	27.8	44.4	0

EOQ – Economic ordering quantity, ROL – Re-order level, JIT – Just in time, ABC – activity based costing Analysis. SD – Strongly Disagree, DA – Disagree, SA – Strongly agree, AG – Agree, SDA – Somewhat disagree, SAG – Somewhat agree, Ind – Indifferent.
Source: Field survey.
Notes: Name of the hospitals considered for the study Swagat Hospital, Pragjyostispur Hospital, Wintrobe hospital.

revealed that only the 16.7 percent strongly agree with the statement – 'The stock manager has perfect knowledge on when to order and when not to order'. The stock are needed to be regulated properly and hospitals should have adequate knowledge on how much quantity of ordered item is actually left by the time the reorder point arrives. The hospitals should have sufficient stock reserve and make sure that each material are properly reordered and has perfect balance to cover both normal and abnormal situations.

The fixation of ordering level depends upon two important factors, namely the maximum delivery period and the maximum rate of consumption. The Just –in-time practices are followed all the sample hospitals and increases quality, profitability and saves cost to some extent. They can also predict quickly and accurately the problems related to pilferage and defective

quantity of stocks but still required be more efficient in decision-making. Thus, practices of implementing JIT techniques reduce costs and at the same time increase productivity in the hospitals confronts by (Walker, 2003). As mentioned, the activity based costing analysis (ABC) is followed by only one hospital. Some hospitals still follow the traditional method of storing stock despite of implementing or having such practices in their firms, they either do it to avoids or adapted to habit of manually counting.

Relationship between Investment in Stock and Profitability of Firms

In this section, findings related to investment in stocks and net profits accrued by the sample hospitals for a period of six years are presented. Out of the 3 sample hospitals, financial statements of only two hospitals are found; hence, in this section, the nature of relationship between investment in stock and the profitability of the hospitals is examined by considering these two hospitals.

Table 2 clearly reveals that the percentage growth rate in value of Stocks of both the sample hospitals. In case of SH1 the highest percentage growth rate is found in the financial year 2017-18 whereas in case of SH2, the highest growth rate is found in 2019-210. The value of stocks during those years for SH1 is found as INR 41,43,285 and for SH2 is found as 81,31,636.00.

Table 2: Relationship between Investment in Stock and the Profitability of the Hospitals in the Study Area (value in INR)

Financial Year	Value of Stock of SH1	% Growth Rate in Value of Stock of SH 1	Value of Stock of SH 2	% Growth Rate in Value of Stock of SH 1	Profit After Tax of SH 1	Profit After Tax of SH2	% Growth Rate in Profit SH1	% Growth Rate in SH2
2019-20	48,49,630	11.87	81,31,636.00	34.24	828017	6184106.41	(-)98.23	66.8
2018-19	43,34,932	4.62	60,33,399.06	11.87	46919045	3705518.83	(-)18.83	(-) 34.90
2017-18	41,43,285	34.24	50,87,043.00	04.62	57805557	5692161.80	(-)28.01	71.54
2016-17	30,86,403	31.40	40,61,295.00	31.40	80300009	3318212.29	19.69	17.54
2015-16	23,48,763	-	32,27,965.00	–	67087519	2822930.18	–	–

Source: 6 monthly and annual reports.
Note: Hospital 1 – Swagat hospital and Hospital 2 – Pragjyotispur hospital

From Table 2, the differences in the value of inventories in SH1 are found as for the year 2015-2016 = Rs. 2317199, 2016-2017 = 737640, 2017-2018 = 1056882, 2018-2019 = 191647 and from 2019 -2020 = 514,698 respectively. In case of SH2, the differences in the value of inventories in SH1 are found as for the year 2015-2016 = Rs. 3,33,881.94, 2016-2017 = 8,33,330.00, 2017-2018 = 19,44,382.00, 2018-2019 = 13,88,584.50 and for the year 2019-2020 = 15,96,806.00 respectively It indicates that the there is huge differences in the investment in stock in each year.

With regard to net profits, both negative and positive growth rates are found in both the sample hospitals during the study period. It is clearly shown in table 2. To find out the relationship between the investment in stock and profitability, Pearson correlation is calculated and the result shows that (-) 0.78 in case SH1 and 0.78 in case of SH2. It clearly indicates that while there is high positive correlation between investment in stock and profitability in one hospital it is opposite to another hospital.

From the above finings, it can be derived that the profitability of the hospital depends on different factors. The investment of stock is one of the important factors for some, however, it is not for all the hospitals.

Conclusion

Various stock management practices are followed in various organization including hospitals and it showed positive effect on firms performance, reduces cost, facilitates accuracy with timely delivery of stock, forecast the demand for stock. Though some of the hospitals do not follow some practices, most of the hospitals follow common practices; the findings of the present study also reveal it. Further, the present study counters the myth that 'there is positive relationship between investment in stock and profitability of firm'. It is argued by both the authors that profitability of hospitals depends on various factors including availability of experts stocks, etc. However, proper and efficient stock management is also required for every hospitals not only to reduce the cost but also protect from wastage of stocks and maintain an ideal level of stock.

Suggestions

1. ABC analysis is significant to identify the top categories items that have high percentage of consumptions. Hospitals should adopt these practices as it will help them to optimize the stock levels and resources will be used efficiently. For this, every hospital should have sufficient storage facilities and amenities related to stock to apply the above practice efficiently.
2. Just in time practices and decision regarding the reorder point level are followed in almost every hospital. Expertise knowledge and proper analytical with innovative or creative skills and effective training facilities in decision –making process regarding quality checks, obsolesces, timely arrival of stock delivery and when, how to order etc. will helps them to take decisions more accurately and will reduce errors which will save cost and should have ready to use resources in case of any abnormal situations.

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Systematic Literature Review on Application of Machine Learning in Financial Decisions

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Abstract

Purpose: This paper discusses and provides an overall importance of machine learning in the area of financial decision making. The purpose of the study is to find out the areas of application of machine/deep learning in the accounting and finance domain.

Design/methodology/approach: The current study is a qualitative review based research, where the systematic approach to review the existing body of literature has been used. This article employs a systematic literature review of 48 research articles in identified journals from the year 2000 to 2021 that were subsequently evaluated for analysis. All papers were selected based on the search in Google scholar. To enhance the quality of research, a scholarly filtration technique was employed. Only papers listed and accepted by the academia, were shortlisted. The second criteria were to identify the keywords in the area of interest. The final step included only papers listed in established database like Google Scholar, SCOPUS & ABDC.

Findings: The findings of the study indicate the importance of machine learning in financial decision making and prediction. Advanced mathematical models such as unsupervised machine learning techniques have become the need of the hour to model complex non-linear relationships in financial systems, where complex business situations are resulting in generation of 'Big Data' and 'Alternate Data'. However, there are many challenges in applying ML/DL models in these prediction models especially when the modeling in finance involves behavioural aspects of extremely dynamic customers and markets. The findings further indicate major research trends associated with machine learning in accounting and finance.

Originality/value: This is a novel study in the area of accounting and financial research, which requires considerable attention for the interdisciplinary research.

Keywords: Machine Learning, Deep Learning, Artificial Intelligence, Accounting Research, Systematic Literature Review.

Introduction

Financial decisions involve day to day business operations on the one hand and long term decision on the other. A business need to decide about the pricing of the product on the one

hand and the pricing of securities on the other. A business need to review the business risk as well as the financial risk. All these situations involve financial predictions involving complex interaction between various datasets. Unfortunately, the existing financial theories are not able to handle such complex decision situations, though they may give some idea. Heaton J. B. et al (2018) commented in their article "financial prediction problems such as those presented in designing and pricing securities, constructing portfolios, and risk management often involve large data sets with complex data interactions that currently are difficult or impossible to specify in a full economic model". They further say "applying deep learning methods to these problems can produce more useful results than standard methods in finance. In particular, deep learning can detect and exploit interactions in the data that are, at least currently, invisible to any existing financial economic theory". As it is said that every new challenge brings a new opportunity; thereby, Machine learning techniques came as a rescue for business decision-making involving voluminous and complex data. Dixon M. & Halperin I. (2019) claim that even though machine learning has been prevalent in financial services for over four decades now, only in the past few years its impact has been felt in investment management and trading. Both computational and theoretical developments in machine learning have resulted in the increased practice of machine learning in finance area. According to Dixon M.& Halperin I.(2019) "Initial endorsers have been a variety of trading and hedge funds such as D.E. Shaw and Worldquantas they have accepted new machine learning techniques". However, the extent to which Machine Learning can affect quantitative trading is still a subject of debate.

Finance as discipline has grown significantly and new theories and models keep on evolving. Apparently, these developments do not seem to be sufficient to meet the challenge posed by big data and also that of alternative data. Gone are the days when only fundamentals of a firm along with macroeconomic indicators were considered adequate for pricing of financial assets. Now, the information analysts need to consider sources like social media, new announcements, unstructured documents like earning announcements etc. for pricing of securities. This is known as use of 'Alternative Data' in pricing and management of financial assets. Trading firms, asset management companies, fund managers and other businesses involved directly or indirectly with the pricing of securities are now engaging experts from the area of machine learning for better decision making about financial assets. These expert uses Natural Language Processing (NLP) to process alternate data and help financial analysts make more accurate and timely decisions.

The research in the area of use and application of machine learning is at a very nascent stage and is scattered as well, this propelled authors to write on this subject. This paper is organised in seven sections. First section talks about the introduction, followed by the summary of developments in machine/deep learning in section two. The third section highlights the objectives of the study followed by presentation of research method in section four. Discussion on how machine Learning and deep learning can be applied in Finance and Accounting areas is presented the fifth section. The sixth section presents conclusion of the study and the last section talks about limitations of the study and future research prospects.

Developments in the Area of Machine Learning

Data is new oil for the new world economy. By every single passing day, data is becoming more accessible due to technological advancements. Storage and processing of data has never been as easy and economical as is today. This has led to a development of the concept 'Big Data'. Data with high volume is known as big data, which can include both structured and unstructured data. This development has come with new opportunities and challenges. Decision making in any area becomes more efficient if is supported by the analysis of big data. Accounting and Finance are no exception to this premise, especially when it is to predict about the outcome of any business decision.

The world is witnessing tremendous developments in providing solutions to problems through fully realistic modeling for many sectors including accounting & finance. Due to these developments, high dimensional calibration problems can be solved in real time. Wagner W. P. (2017) say that original expert systems, which were used to solve complex problems in a specified field, were rule based programs in languages. However, the developments in the area of artificial intelligence have superseded those classic expert systems. Liu W. et al (2017) concluded that techniques like cognitive computing and augmented human intelligence techniques were used for short time and now the techniques like deep learning neural networks or reinforcement learning, has found significant success across industry and applications.

Gogas, P. & Papadimitriou T. (2021) commented in their article that the term Machine Learning (ML) was introduced by Arthur Samuel while working for IBM in 1959, mainly to describe how Artificial Intelligence systems are able to learn during pattern recognition tasks. P. Domingos (2012) says that "Machine Learning (ML) is a subfield of Artificial Intelligence (AI) that uses statistical techniques that provide computer models with the ability to learn from a dataset, allowing the models to perform specific tasks without explicit programming". Machine learning results in developing a model by training the complex data, which in turn helps in predictions for any complex business situation. Ha, Youngmin (2017) quoted (Alpaydin, 2014) saying that "Machine learning is computer programming to optimise a performance criterion using example data or past experience by using the theory of statistics". Heaton J.B. et al. (2018) say that in ML, input data is used for initial training of a model and this trained model can be used to make predictions. Whereas, Deep Learning (DL)is a subset of Machine Learning, where several layers of abstractions are used to make the same predictions. Dixon et al., 2016 commented in their article that deep learning is a kind of supervised learning method, which uses layers of neural network." Gogas, P. & Papadimitriou T. (2021) argued that "in the beginning ML systems were considered indistinguishable from typical AI systems. But, independent ML systems outnumber the ML components in AI systems due to wide of practical applications of Machine Learning which aren't confined to the box of AI Systems. It is interesting to mention here that ML and AI are often used as synonyms due to several reasons, which may create confusion to non-experts.

According to Emerson Sophie et al. (2019) "There are many well known machine learning networks like SVMs and KNN other than the neural networks (NN). Undoubtedly, artificial

neural networks (ANN) have become a key technology in the development of ML". They further say "Bayesian networks are built from probability distributions and use probability laws for prediction and anomaly detection. KNN selects the most similar data points in the training data; this allows the algorithm to classify future data inputs in the same way. Some techniques are better suited to particular tasks than others". Learning is the specification of neural network which approximates a certain non-linear function on some input space. According to Boyarshinov Victor (2005) "One generally should consider three different facets of designing an algorithm for an artificial intelligence application:

- Constructing a training dataset
- Developing a training algorithm for discovering patterns
- Using side information for avoiding overfitting the training data".

Computers can generate highly convoluted and multi-dimensional data, iterate through multiple model architectures and determine the effectiveness of these models (Dhar, 2013). Constructing a training dataset is the first technical step in developing any model followed by developing a training algorithm. We need to follow a number of steps to construct deep learners. First step in this direction is to divide the data into three subsets namely testing, training and validation sets. The training sets determine the weight configuration of the model. The validation set prevents the model from being confined to suitable use for just the training data, i.e. it prevents over-fitting. Cortes, C. & Vapnik (1995) talked about 'Support Vector Machine' an ML method to classify data. They further say "First, a set of labelled data (training data) is provided to the SVM. During this step the algorithms performs a mathematical optimization based on the labelled data. The train examples that limit the maximum margin defined by the SVM during the training are called support vectors".

The algorithms used in the application of artificial intelligence belong to three broad categories which are supervised, unsupervised and reinforcement learning. Windmann Alexander (2020) says that in supervised learning, the model is given labelled data in order to find patterns and make predictions about new, unseen data, whereas unsupervised learning detects patterns without labels.

In reinforcement learning, a model interacts with many factors from the environment to achieve its goals. This interaction can result into rewards or punishment depending on its effect. The ultimate goal of the modelling in reinforcement learning is to maximise the rewards of the program over the time by including some constraints through its 'agent'. These machine learning models, thus developed can be successfully used in accounting and financial sector.

Objectives of the Study

The overall objective of this study is to carry a systematic review of the existing literature to find out the areas of application of machine/deep learning in the accounting and finance domain with the following particular objectives:

- To explore the areas of application of machine/deep learning in the accounting and finance disciplines.
- To identify specific areas of application of machine/deep learning in financial decision-making.

Research Method

A systematic literature review is an explicit and rigorous method of evaluating and interpreting available studies relevant to a particular topic area or phenomenon of interest by using possible keywords (Bennett et al., 2004). Adopting the standard guidelines of Fergusson and Seow (2011) and Gaunt (2014) firstly, an exploratory search was done by using the expression "machine/deep learning" and financial decisions of all the journals for the field of research (FOR) relating to Accounting and Finance.

In this manuscript, we propose a structured literature review dealing with the reviews on machine/deep learning applications and financial decision-making aspects. To do so, we followed the method suggested by Cerchione and Esposito (2016), which shows how to conduct a structured literature review. Likewise, we organized our study into four phases:

1. Material search stage including the keywords identification, search strings definition and the academic database selection.
2. Papers selection stage owing to the criteria definition for the inclusion and exclusion of a given papers in the review.
3. Descriptive analysis stage to offer reviewers with a opening analysis to classify selected papers.
4. Content analysis stage to review papers, recognize topic areas and research gaps and suggest a conceptual outline.

Material Search Stage

To meet the initial stage of the content search, we opted for two databases to simplify the research review process. Since the machine and deep learning are relatively new area, we restricted the review to the papers published from 2010 to 2021.

The used keywords comprised the strings "machine learning in finance", "deep learning in finance", "machine learning in accounting", "deep learning in accounting", "application of machine learning in finance", "application of deep learning in finance", "application of

Table 1: Summary of Material Search

Keywords used	Machine learning and finance; Machine learning and accounting; Application of machine and/or deep learning in finance/accounting
Date range	2010-2021
Total hits retrieved in goggle scholar excluding duplicates	62

Source: Compiled by Authors

machine learning in accounting", "application of deep learning in accounting". In the initial search process, we found a total amount of 62 papers in the referred databases excluding duplicates.

Literature Review Search Strategies

A search within the timeframe ranging from 2010 to 2021 was considered to be representative of the era covering the emergence of 'machine/deep learning', with a wide-ranging search using the descriptor, "machine learning" conducted within the following databases: Google Scholar and Academia. A list of journals that are considered to be the leading journals in the machine/deep learning and finance field were identified.

Phase of Papers Selection

Regarding the step of papers selection, we identified three criteria to compare the research papers against, so that the focus was the contributions close to the topic under investigation (Table 2). Using the selection criteria, we analyzed the initial sample of papers via two reviewers and selected only the relevant papers. Taking the advice from Gunasekaran et al. (2015), we only selected papers published in peer-reviewed journals. Three researchers read the abstracts of all papers in parallel, and then selected papers whose attention was machine/deep learning in finance and accounting. They then read the selected papers in full to assure that the selected papers were fully relevant to the topic of investigation. In this phase, as a result, we excluded papers and kept selected papers. Reading the remaining papers in details and analyzing their references, we reach to more papers to consider. Consequently, we included a total of 48 research papers for the subsequent phase of descriptive analysis. We emphasize that the paper selection process applied in this paper is in line with Pittaway et al. (2004).

Phase of Descriptive Analysis

Concerning the descriptive analysis of the 48 selected papers, we defined the following aspects:
- papers over time;
- papers across journals;

Table 2: Detail of Selection Criteria

First selection criterion: focus of the abstract	Abstracts focusing machine and deep learning in finance and accounting have been included
Second selection criterion: focus of the paper	Papers focusing on machine and deep learning in finance and accounting have been included
Third selection criterion: sample validation through cited references	Papers not included in the previous sample but cited in the literature on machine and deep learning in finance and accounting have been included

Source: Compiled by Authors

- papers by publishers;
- papers by citations; and
- papers by methodology

Findings and Discussion

As discussed in the second section that emergent of 'Big Data' and 'Alternate Data' has led to new opportunities, where machine/deep learning can be used in the accounting and finance area very effectively. In this section, we will discuss findings of the study on application areas of ML/DL in accounting and finance, which are identified with the help of systematic literature review.

Lindsay, R. K. et al. (1993) mentioned in their article that the very first use of artificial intelligence 'expert systems' can be traced at Stanford, way back in the year 1960, though it became popular only in 1990s. Dixon M.& Halperin I. (2019) say "finance has all the ingredients needed to use ML: Big data, the right resources, requirements to predict, and a suitable environment where everyone is trying to gain an edge. But it is also increasingly under scrutiny by regulators and some of the core research activities are resistant to "black-box" methodologies that are typical with "empirical" or "engineering" approaches". Financial modelling has never been as powerful and reliable as is today. This has become more evident after the financial crisis of 2007-08, where the regulatory bodies have re-oriented themselves toward the 'data-driven' regulation and monitoring. Aziz, Saqib and Dowling et al. (2019) commented in their article that M.L. is seemingly the next frontier for someone involved in finance, as it is highly dependent on practical understanding. According to Dhar (2013), several Machine Learning algorithms can be used for financial modelling of data. Aziz et al. (2019) used topography approach and studied 5,204 articles published from 1990 to 2018 and provided a comprehensive structure of machine learning application in finance.

Dixon M. & Halperin I. (2019) state that both the growing amounts of suitable data and the growth in computation powers of machines point in favour of a boom for Machine Learning. They further say that "Data vendors such as Bloomberg, Thomson Reuters and Raven Pack are providing processed news sentiment data tailored for systematic trading models. See Guida (2019) and de Prado (2018) for extensive discussion of machine learning and big data in quantitative investing and trading". Haung et al (2020) say that due to proliferation of Fintech in the recent past, the application of DL has become very widespread even in the finance and banking sector. Heaton J. B. et al. (2018) argue that deep learning can determine several hidden patterns and trends in data which can't be seen using traditional economic theory.

Financial Services sector of any economy is considered to be very dynamic due to behavioural implications of its players especially that of customers and markets. Thereby, the job of analysts becomes very difficult when it comes to model the same. Mullainathan, Sendhil, and Jann Spiess (2017) said in their article that the crucial role of ML in finance services is simulating the various elements of the markets such as the customers and products. P. Domingos (2012) say that ML is being used to improve several key areas of the finance

industry such as payment transactions, detecting frauds, investment process including return forecasting, portfolio construction and risk modelling. Emerson Sophie et al. (2019) say that the "recently, there has been a proliferation of ML techniques and growing interest in their applications in finance, where they have been applied to sentiment analysis of news, trend analysis, portfolio optimization, risk modelling among many use cases supporting investment management." Liu W. et al. (2017) say that many easy to use programming languages such as R, Python and ML focused framework such as Tensor Flow (TF) has found wide commercial application across multiple industries from automated trading systems in the finance industry to the health sector where ML algorithms assist decision making in fertility treatments. So, there are many ways to apply M.L. techniques in the financial sector which have been discussed in the following section:

ML in Sentiment Analysis for Price Prediction

Sentiment analysis is an established method of studying the future price and returns of any security. This method can be used very efficiently to predict future price of financial securities as well as the returns on securities. Latest studies show that the process of sentiment analysis can be can be improved by using machine learning. Renault, T. (2020) in his study analysed a million messages sent on one of the micro-blogging platform for evaluating the effectiveness of several pre-processing methods and ML approaches for performing sentiment analysis. He concluded that "the pre-processing method and the size of the dataset have a strong impact on the correlation between investor sentiment and stock returns". Thus, the investors opinion about any stock, security or financial asset can be modelled, which can give a very fair idea about the future price of the security than just getting a hint through traditional sentiment analysis. This development can indeed change the whole landscape about trading psychology of the market. Becker Y. L. and Reinganum M. R. (2018) provided a thorough overview of the growth of big data and sentiment analysis research over the last 30 years, highlighting the use of techniques such as NLP, SVMs and ANNs for the analysis of news, conference calls, reports, and social media activity.

DL Hierarchical Decision Models for Returns Prediction

These models can be used very effectively for financial predictions and classification. Deep learning predictor enables to include all data points of importance in estimating a problem, which was not possible in traditional models. This means, practically all non-linear and complex data interactions are also accounted for in the prediction model, making the model more robust and reliable. Lirong G. et al. (2020) commented in their article that deep learning is better in terms of speed and accuracy than traditional pricing models and solves the challenges of pricing popular arithmetic Asian options. Galindo et al. (2020) proved in their article that how much effective the machine learning models can be for predicting financial risk. Most of the problems in financial sector are considered dynamic in nature as they involve

variables or revolves around such variables, which are very dynamic and their value changes with time. Dynamic optimization is a decision making process where algebraic mathematical models are formulated on the basis of predictions. Reinforcement deep learning models are proving very effective in this area as well. Kolm, Petter N. et al. (2019) say in their research that reinforcement learning allows us to solve these dynamic optimization problems. Financial decisions related to pricing, hedging, investment and portfolio allocation, asset-liability management are best examples of dynamic optimization and ML/DL models can result in very successful modeling. Reinforcement learning models enables agents to learn through a sequence of decisions through 'trial and error' method while incorporating feedback from experience.

Credit Risk Analysis Through Default Probabilities

Credit analysts perform an analysis on the perspective borrower's ability to meet the debt obligations and is a very important area of finance especially in banking and non-banking financing sector. Analysts quantify risk of loss of non-payment of principal or interest dues by using many theories and models of quantitative finance. This is another very important area of finance where the machine learning can be used very effectively. Deep learning models in the area of credit risk analysis use multi-dimensional input space. To give an example, in image processing, these dimensions can be looked as entire objects, then part of the objects, then certain features of the object and finally pixels of the object. Such a map of features can be created to determine the credit-deservedness of a company. Zhu, You et al. (2016) used a novel ML techniques referred to as RS-RAB for determining the credit risk of several small and medium sized enterprises of China. Through empirical analysis they determined that the performance of this novel method was superior than the other three methods they discussed.

ML/DL and Stock Market & Exchange Rate Predictions

Many technological advancements including computing technologies have resulted in production and availability of large amount of data related to stock markets and exchange rates. The use of ML/DL models is increasing in this field due to ability of these models to deal with non-linear data more efficiently than the traditional models. Huang et al. (2020) carried extensive literature review on selected 40 articles out of the 140 articles published during 2014-18 and concluded that the stock market domain was the one in which deep learning was most widely used. Zheng et al. (2017) examined the performance of DBN and concluded in their research that DBN model outperformed the FNN model. Yelin Li et al. (2016) in their article discussed meta-learning algorithm as an application of ML in quantitative trading.

Event Studies and Quantum Computation for Return Forecasting

Event studies measure how past events can impact the current return. When coupled with ML/DL models, the event study can result in more accurate predictions about returns especially

when alternate data is included in the model. Mullainathan, S. et al. (2017). Traditional Time series data can now be used alongside highly informational event streams where the data is measured at irregular intervals and these streams are multiplying. Deep learning approaches extend options to built models that can extract meaningful patterns to solve variety of situations arising from a particular event. Application of quantum computation in solving financial problems is growing very fast. Literature review suggests that the machine learning models can be used to maximise portfolio returns, find opportunities to make profit and do accurate credit scoring. Román Orús et al. (2019) used quantum amplitude estimation in their study and proved that it can speed-up for Monte Carlo modelling which has a link to analysing risks and deriving prices.

Evaluation of Investment Proposals

Machine Learning is emerging as a very important tool for evaluation of investment proposals. Investment decisions are the most important decisions in the area of finance other than financing and dividend decisions. Investment decisions can make or break a business for ever. Looking at the importance of these decisions, it becomes imperative to use such an evaluation tool, which provides most accurate information for accepting or rejecting any investment proposal. Emerson Sophie et al. (2019) in their study also argued that machine learning has been finding its application in many areas of business especially in the investment process including return forecasts, risk modelling and construction of portfolio. They further say that "Quantitative investing, traditionally a leading field in adopting new techniques is found to be the most common source of use cases in the emerging literature".

To sum up this section, will quote Emerson Sophie et al. (2019), who identified seven main themes where the ML/DL models can be applied successfully; which includes: return forecasting; decision-making; portfolio construction; fraud detection; language processing and sentiment analysis. The application of machine/deep learning as identified in this study through the systematic review has been presented in Table 3.

Table 3: Application of ML/DL in Financial Decisions

Author(s) and Year of Publication	Title of the Manuscripts	Source	Area of Application of ML/DL
1. Dixon M.& Halperin (2019) 2. Lirong G. et al. (2020) 3. Galindo, J., Tamayo, P. (2020).	1. The Four Horsemen of Machine Learning in Finance. 2. Machine Learning Solutions to Challenges in Finance: An Application to the Pricing of Financial Products. 3. Credit Risk Assessment Using Statistical and Machine Learning: Basic Methodology and Risk Modeling Applications.	1. Igor 2. Technological Forecasting and Social Change 3. Computational Economics	Prediction Modeling, Systematic Trading models

1. Aziz, Saqib and Dowling et al. (2019) 2. Haung et al (2020)	1. Machine Learning in Finance: A Topic Modeling Approach. 2. Deep learning in finance and banking: A literature Review and classification.	1. European Financial Management 2. Frontiers of Business Research in China	Financial Modeling for Return Predictions
1. Dhar (2019) 2. Haung et al (2020) 3. Aziz et al. (2019) 4. Liu W. et al. (2017)	1. Data science and prediction". 2. Deep learning in finance and banking: A literature Review and classification. 3. Machine Learning in Finance: A Topic Modeling Approach. 4. A Survey of Deep Neural Network Architectures and their Applications.	1. Communications of the ACM 2. Frontiers of Business Research in China 3. European Financial Management 4. Neuro Computing	Financial Decision Making & Fraud Detection
1. Guida (2019) 2. De Prado (2018) 3. Yelin Li, Junjie Wu and Hui Bu (2016).	1. Big Data and Machine Learning in Quantitative Analysis. 2. The 10 Reasons Most Machine Learning Funds Fail. 3. When quantitative trading meets machine learning: A pilot survey.	1. Wiley 2. The Journal of Portfolio Management 3. 13th International Conference on Service Systems and Service Management (ICSSSM)	Quantitative Analysis & Trading
1. Mullainathan, Sendhil, and Jann Spiess (2017) 2. Zhu, Youet et al. (2016) 3. Emerson Sophieet al. (2019)	1. Machine Learning: An Applied Econometric Approach. 2. Predicting China's SME Credit Risk in Supply Chain Finance Based on Machine Learning Methods. 3. Trends and Applications of Machine Learning in Quantitative Finance.	1. Journal of Economic Perspectives 2. Entropy 3. 8th International Conference on Economics and Finance Research (ICEFR 2019)	Credit Risk Analysis & Evaluation of Investment Proposals
1. Sophie et al. (2019) 2. Renault, T. (2020) 3. Becker Y. L. & Reinganum M. R. (2018)	1. Trends and Applications of Machine Learning in Quantitative Finance. 2. Sentiment Analysis and Machine Learning in Finance: A Comparison of Methods and Models on One Million Messages. 3. The Current State of Quantitative Equity Investing.	1. 8th International Conference on Economics and Finance Research 2. Digit Finance 3. CFA Institute Research Foundation	Sentiment Analysis for Pricing of Securities
1. Huang et al. (2020) 2. Zheng et al. (2017)	1. Deep learning in finance and banking: A literature Review and classification. 2. Research on Exchange Rate Forecasting based on a Deep Belief Network.	1. Frontiers of Business Research in China 2. Neural Computing and Application	Stock Market & Exchange Rate Predictions

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3. Kolm, Petter N. et al. (2019) | 1. Machine Learning: An Applied Econometric Approach.
2. Quantum computing for finance: Overview and prospects.
3. Modern Perspectives on Reinforcement Learning in Finance. | 1. Journal of Economic Perspectives
2. Reviews in Physics,
3. The Journal of Machine Learning in Finance | Event Study, Computational Finance and Dynamic Optimization for Returns Forecasts |

Source: Compiled by Authors

Conclusion

There is a growing body of literature suggesting sharp increase in the use of machine learning techniques in the area of accounting and finance. Advanced mathematical models such as unsupervised machine learning techniques have become the need of the hour to model complex non-linear relationships in financial systems, where complex business situations are resulting in generation of 'Big Data' and 'Alternate Data' .Heaton J.B. et al. (2018) also concluded that deep learning models are likely to exert greater and greater influence in the practice of finance, particularly where prediction is of paramount importance. However, there are many challenges in applying ML/DL models in these prediction models especially when the modeling in finance involves behavioural aspects of extremely dynamic customers and markets. Thereby, the success of any ML/DL model developed for solving any problem in this sector will primarily depend on the knowledge, experience, understanding of financial theories as well behaviour of customers and markets of developers and checkers, of course along with the modelling experience.

Limitations and Future Work

This article objected to present the application of ML/DL in financial sector. Though we discussed the wide literature of application of ML/DL in finance and accounting area, it is bound to have few limitations as well. Our data includes academic articles from selected databases only and thus does not have a wide coverage. We could have also missed few articles as the study was not very exhaustive; hence, there are chances that some additional knowledge on application of machine learning is not being trapped. Therefore, areas of research suggested are by no means complete and exhaustive. This work can further be extended to draw classifications of ML/DL models used in the area of sentiment analysis, credit analysis, mortgage default predictions, asset pricing, investment analysis, portfolio construction and return forecasting.

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Role of E-Banking in the Development of Indian Banking and its Issues and Challenges

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Abstract

The Indian Banks are the backbone of Indian financial sector and Indian economy. Internet banking is changing the banking industry, having the major effects on banking relationships. The evolution of electronic banking started with the use of ATM and telephone banking. E-banking provides lot of advantages in form of speed, ease and convenience. It has also put forth some issues and challenges that need to be addressed one of the reasons for E-banking gaining momentum in India is the increasing internet penetration among people. Today, one of the most comfortable and less risk oriented faced by banking sectors application of electronic commerce. E-banking is considered to have a substantial impact on bank's performance.

This study focuses on the issues and challenges of E-Banking and analyses the role of E-Banking in the development of Indian Banking System.

Keywords: *E-Banking, Issues, Challenges, Growth.*

Introduction

Banking is the most important part of an economy. In this modern time money and its necessity is very important. A modern bank provides valuable services to a country. The IT revolution has a great change in our Indian economy. Electronic Banking arrived in India in the late 1990s. ICICI was the first bank, to introduced internet banking in 1996. E-Banking is a generic term for delivery of banking services and products through electronic channels such as the mobile phone, the internet, etc. E-Banking is a product designed for the purposes of online Banking that enables you to have easy and safe access to your bank account and to carry out online Banking services 24 hours a day and 7days a week. Through Banking it is possible to do transactions from any part of the world, it provides ease and mobility to the customer, there is no need of physical presence of any customer in bank, Beside this there are so many issues and challenges regarding E-Banking and the main issue is behavioral issue.

Internet: An Important Driver of E-Banking

Initially internet banking was used mainly for the purpose of information sharing and presentation medium. With the growth of faster electronic fund transfer services more banks had also implemented internet banking as their transactional and informational medium.

Advantage of Internet Banking

Internet banking has several advantages over traditional one which makes operating an account simple and convenient.

- Online account is simple to open and easy to operate.
- It is available all time, i.e. 24×7.
- It is quite convenient as you can easily pay your bills can transfer funds b/w accounts, etc.
- It is fast and efficient.
- You can keep an eye on your transaction and account bill balance all the time through internet banking.

Internet banking has definitely made the life easy for users by providing online access to various banking services.

E-Banking in India

Electronic banking in simple terms means, it does not involve any physical exchange of money, but it all done electronically from one account to another, using the internet. Online E-Banking, Internet banking or E-Banking allows customers of financial transactions on a secured website operated by the institutions, which can be a retail bank, Virtual bank, credit union or building society. The popular services covered under E-Banking include:-

- Automated Teller Machines (ATM)
- Credit cards.
- Debit cards.
- Smart cards.
- Electronic funds transfer system
- Mobile Banking.
- Internet Banking
- Telephone -Banking
- Electronic Clearing Services.

Reserve Bank of India has facilitated the development of E-Banking in India. The government of India enacted the IT Act, 2000, which provides legal recognition to electronic transaction and other means of electronic commerce A successful E- Banking offers:

- Quality customer service with personal attention.
- Checking with no fee, free bill payment and rebates on ATM.

- Easy online applications for all accounts, including personal loans and mortgages 24 hour account access.

Uses of Different Means of Accessing Banking Services
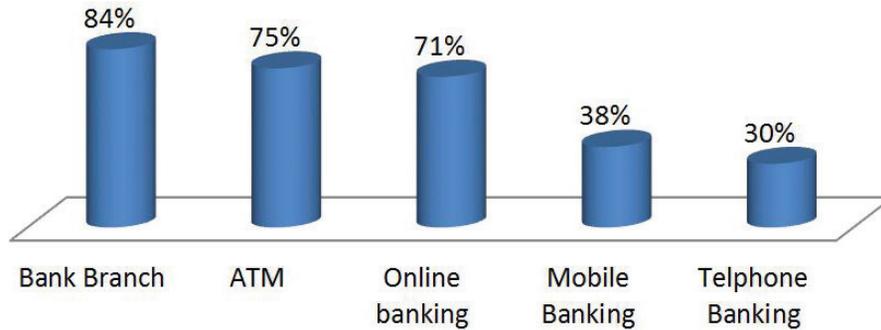
Figure 1: Uses of Different Means of Accessing Banking Services
Source: www.Statista.com

Review of Literature

Katta Ashok Kumar (2015) this study investigates the factors which are affecting the acceptance of E-Banking services among the customers and also indicates level of concern regarding security and privacy issues in Indian content.

Shilpi Khandelwal (2013) in his research title on "E-Banking factors of adoption in India", presented that the last decade has witnessed a drastic change in the economic and banking environment all over the world. This paper is focused on what are the drivers that drive consumers towards adoption of E-Banking. How consumers have accepted internet banking and how to improve the usage rate were the focus of research area in this study.

Jay Shree Chavan (2013) in research paper "Internet Banking-Benefits and challenges in an Emerging Economy." This study presents New Information technology has taken imperative place in the future expansion of financial services. Online E-Banking has a lot of benefits which add value to customer's satisfaction in terms of better quality of service offerings and at the same time enable the banks gain more competitive gain over other competitors. This paper discusses same challenges in an emerging economy.

Kothari (2007) the Survey also estimates around 2.4 million E-commerce users, which included internet banking users. An estimated 4.6 million Indian users are availing Internet banking services as of 2007.

Chiemeke et al. (2006) this study conducted an empirical investigation on adoption of E-Banking in Nigeria. The study identified the major inhibiting factors to internet banking adoption in Nigeria such as insecurity, inadequate operational facilities including telecommunications facilities and electricity supply and made recommendations on how Nigeria banks can narrow the digital divide.

Issues and Challenges of E-Banking

• Traditional banking Habits
• Security is one of the most significant challenges for online Banking marketers.
• Transaction more difficult an online bank.
• Technical Issues.

Role of E-Banking in Growth of India

E-Banking is growing faster in India. E-Banking provides number of services via news and advanced electronic channels. It is difficult to measure the extent of such services, but an effort has been made by classifying these services into ATMs, Internet and Mobile services. E-Banking provides a number of services at the doorstep of customers which is otherwise not possible. These services are provided through bank websites.

A Banking industry plays a significant role in supporting economic development through financial services. Indian banks have adopted innovative E-Banking technologies and E-Banking services in recent years. All banks have invested in expanding and improving the information Technology systems and a number of new E-Banking services have been developed.

Research Methodology and Data Collection

This study investigates the role of E-Banking in India and its issues and challenges.

Objective of the Study

• The main objective of the study is to investigate the role of E-Banking in Indian economy growth.
• To analyze the challenges and risk factor involved in E-Banking.
• The opportunity to increase E-Banking awareness.
• Identifying the most used internet banking services.

Data Collections

Primary and secondary data both are collected by the researcher.
Sample Size: 50
Area of study: Udaipur and Nathdwara

Analysis

The number of internet users in India will reach 500 million by June 2018. At the end of December, 2017, India had 481 million users growing 11.34% from 2016.

Internet User Demographic Profile
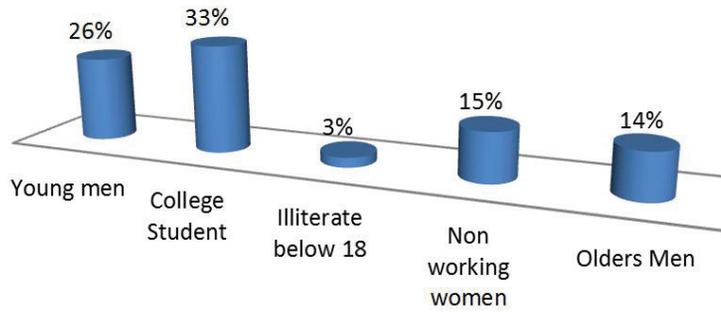
Do You Use Any E-Banking Services?
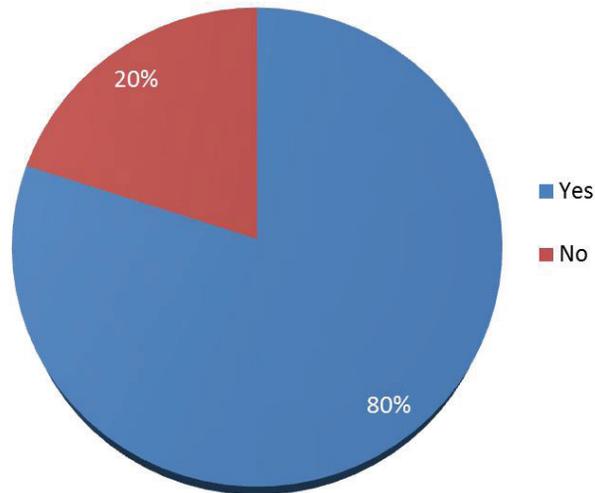
How Often do You Use E-Banking Services?
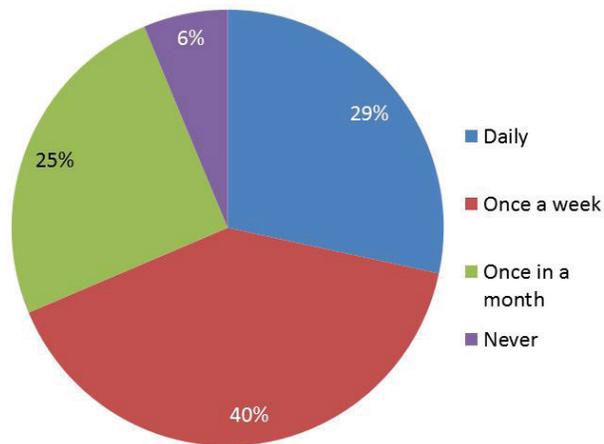
Which of the following E-Banking Services do You Use?

Service	Percentage
online shopping	72.80%
payment of card	47.80%
transfer of funds	63.00%
net banking	64.10%
mobile banking	62%
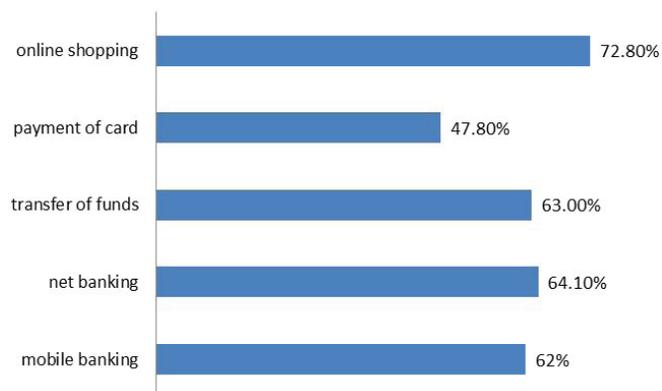
What do You Think are the Advantages of E-Banking?

Advantage	Percentage
Time securing	95.70%
Cashless Tranaction	84.80%
Security	41.30%
Flexibility	67.40%
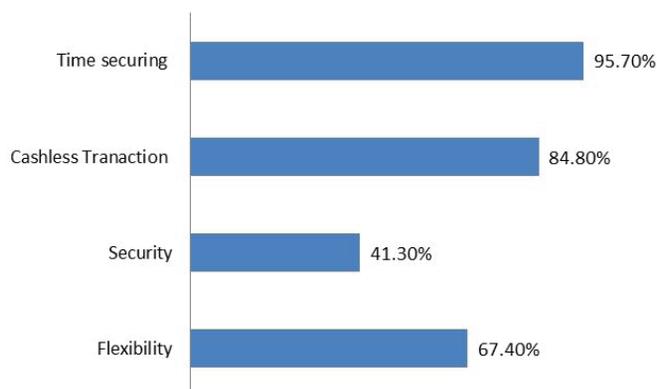
According to you, what are the challenges of E-Banking?

Challenge	Percentage
Awareness	57.60%
Safty and security	65.20%
Compatibility	29.30%
Usage	32.60%
Network issues	2.20%
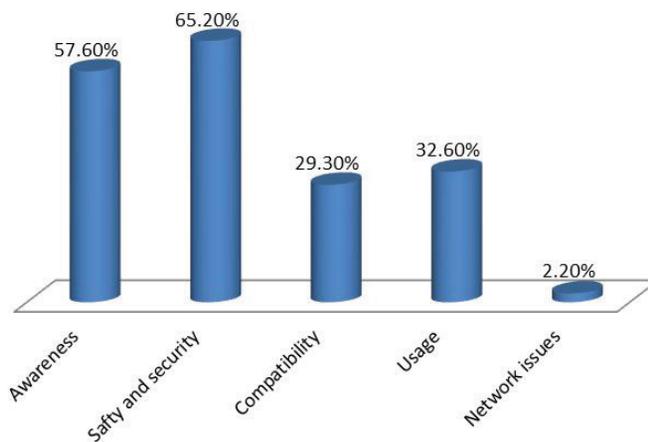
Conclusion

The Banking industry plays a significant role in supporting economic development through efficient financial services. Almost all banks have invested in expanding and improving the information technology systems and a number of new E-Banking Services have been developed. In the past few years, the Indian banking sector has facing many challenges and many opportunities are available with the banks. Many financial innovations like, ATMs, credit Cards, RTGS, debit cards, mobile Banking etc. have completely changed the face of Indian Banking. Mostly young people especially college student use internet very much. 80% of the respondents use E-Banking services and most of the respondents use E-Banking for online shopping, fund transfer, net banking and mobile Banking. According to the respondents E-Banking is time saving and people easily avoid to carry the cash by using cashless transactions .Most of the respondents face the challenges of safety and security during the use of E-Banking and lack of awareness among respondents regarding net banking and mobile Banking. But still there is a need to have more innovative solutions so that the challenges can be solved and opportunities can be availed efficiently by the Indian Banks.

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Indian Government Scheme to Uplift Economics during COVID-19 Pandemic

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Abstract

Due to the COVID-19 pandemic, about 90% of countries of total countries have faced recession and experienced a contraction in per capita GDP. COVID-19 was firstly identified in Wuhan city of China in 2019 and as we know it is a communicable disease that gradually spread in most countries. This virus has posed an unprecedented challenge for the policymakers in India and other countries also. In India, during the pandemic, early lockdown is done that has a deep impact on our economy. To uplift the economy, the government has launched various schemes that strike on major issues of the economy. This study throws light upon steps taken by the Indian government to uplift the economy. This paper covers the scheme of government related to agriculture, business, helping poor people, unemployment, health issues, and safety from COVID-19 pandemic and Atmanirbhar Bharat Mission, e-Sanjeevani OPD, Ayushman Bharat Jan Arogya Yojana, etc are few main policies that play a major role. This study is purely based on information gathered from the secondary source.

Keywords: *COVID-19 Pandemic, Indian Government, Scheme, Uplift Economy.*

Introduction

About 90% of countries of total countries have faced recession and experienced a contraction in per capita gross domestic product during the pandemic period. COVID-19 was firstly identified in Wuhan city of China in 2019 and as we know it is a communicable disease that gradually spread in most countries. By the end of February 2020, the infection had spread to over 54 countries, infected more than 85,403, and resulted in the death of around three thousand. World Health Organization title this outbreak a pandemic on March 11, 2020. 9.6 crore people have been infected and growing at an average rate of 3.3% per day within the year 2020.

During this pandemic period, India which is a developing country works on the humane principle advocated in Mahabharta 'Saving a life that is in jeopardy is the origin of the dharma.' So India applied early and stringent lockdown in the country because India recognized that GDP growth and economic growth can be recovered but losses of lives can't be recovered.

COVID-19 pandemic affects both demand and supply. On-demand side Indian policies focused purely on necessities. On the supply side, India has done structural reforms at the

initial stage. These reforms focus on strengthening the potential of the primary and secondary sectors to the economy to create a job. A recession would have been uncertain of dealing with a pandemic that had no cure. This is because households voluntarily took precautions that affected demand, especially for non-essential items. The lockdown holds up this response to the pandemic. The public health measures which are adopted to cease the spread of this disease need immediate economic costs as they led to the almost full interruption of economic activity, restrain investment and consumption, and also restricted labor supply and production. Therefore, COVID-19 led the world to the situation of saving 'lives' as the steps are taken to flatten the infection curve and sharpened the macroeconomic recession curve.

Features of Indian Economy

As we know, India is a developing country and its economy has the following features like Low Per Capita Income. Almost one-third of the population is below the poverty line. Another feature is the poor quality of human beings. The average intake of food of an individual in India is 2500 calories per day whereas in developed countries it is 3500 calories. India has ranked 131 ranks that is poor status in Human Development Index (HDI) in the world. The third feature of the Indian economy is the misdistribution of Income and Wealth. In India, the poorest 10 percent of the population gets a 3.1 percent share in national income. As against it, the richest 10 percent of people enjoy a 31 percent share in national income. Inequality in asset distribution is the main cause of the unequal distribution of Income, Education, and health facilities to the people. The fourth feature is Heavy Population Pressure. India is the second-largest populated country in the world supporting 18 percent of the world population with a meager 2.4 percent of the world area. The need for food, shelter, medicines, schooling, etc. is used to maintain a rapidly growing population. Thus, a rising population imposes excessive pressure on natural resources which are particularly non-renewable resources, which are suffering rapid exploitation and depletion. This rapid growth of population creates a higher supply of labor than its demand leading to unemployment. The fifth feature is the agrarian economy. In India, nearly 50 percent of the total workforce is engaged in agriculture and its contribution to national income is 17 percent. Heavy dependence on monsoon, outdated techniques of production, a predominance of subsistence farming, perpetual debt of the farmers is some of the important factors that explain the backwardness and low productivity of Indian Agriculture. The sixth feature is the prevalence of chronic unemployment. In India, unemployment is structural and is the result of a deficiency of capital. Due to the high level of poverty in our country, the markets for industrial products are small and provide little incentive to industrialists to expand their activities. So it leads to few new job opportunities, on the other hand in the Agriculture sector of the Indian economy a much large number of laborers are engaged in production than are reality needed. At present 6 percent of the labor force in India remained unemployed. Massive unemployment implies huge wastage of manpower. Another feature is technological backwardness. Due to backward technology our industries fail to compete with the product of foreign countries in the International market.

So our balance of payment, adversely affected. It is sure that due to the modern dynamic age of LPG and; due to the Global Effects, the year 2020 will bring new challenges for the Indian economy.

Objectives

To highlight the steps taken by the Indian government to uplift the economy during the COVID-19 Pandemic.

Methodology

The paper is descriptive in nature and purely based on secondary data. Information from articles, journals, research papers has been considered for this paper. Data from government websites, newspaper reports have been used in the paper.

COVID-19 and India's Healthcare Policy

To enable India to effectively respond to future pandemics health infrastructure must be agile and health policy must not become beholden to 'saliency bias.' Any country's health status depends on both health infrastructure and human resources for health like doctors, nurses, etc. As per previous studies, there is a positive correlation between the availability of a health workforce and health outcomes.

Major Steps taken during the time of pandemic in the health sector are:

- e-Sanjeevani OPD: e-Sanjeevani OPD launched in April 2020. It is a patient to doctor teleconsultation system. During the pandemic period, it has recorded almost a million consultations. Growth is seen in Practo online consultation.
- Telemedicine: During the lockdown in India, the ministry of health and family welfare issues the guidelines related to telemedicine in 2020. There is a huge growth has been seen in the adoption of telemedicine in India since COVID-19 outbreak. Relative importance based on non-communicable versus communicable diseases is the basis to make a key portfolio decision making for healthcare policy. 71 percent of global deaths and about 65 percent of deaths in India are caused by non-communicable diseases (NCDs). Through better sanitation and drinking water facilities communicable diseases can be prevented, which the Swachh Bharat and the Har Ghar Jal Abhiyan campaigns are focusing on.

Agriculture Sector

This pandemic also impacted the farming activities as the COVID-19 induced lockdown that influenced the movement of farm inputs including farm machinery from one place to another. Lockdown commenced in the whole country as the harvesting season for the Rabi crops started and create further adversity for the sector. During the lockdown, the migration of agricultural laborers from working place to their native places created a shortage of farm laborers. India's agricultural system shows its resilience in such adversities. Agriculture and its allied sectors

played a vital role in sliding the performance of other sectors, knocking a growth rate of 3.4 percent at constant prices during 2020-21. Continuous supply of agriculture commodities has been maintained especially staples like rice, wheat, pulses, and vegetables, etc., thereby enabling food security against all adversities that arose due to COVID-19. Various initiatives have been taken by the Government of India under the Atma Nirbhar Bharat Abhiyan, to further strengthen and support the agricultural sector.

- **Agri Infrastructure Fund 1 Lakh Crores:** For funding agriculture infrastructure projects at farm-gate & aggregation points financing will be provided and for making financially viable post-harvest management infrastructure.
- **Formalization of Micro Food Enterprises (MFE) 10,000 Crores Scheme:** Aiding 2 lakh MFEs who need technical up-gradation to attain FSSAI food standards, build brands, and support marketing.
- **For Fisherman through Pradhan Mantri Matsya Sampada Yojana (PMMSY) of 20,000 Crores:** It aims at integrated, sustainable, and inclusive development of marine and inland fisheries by developing infrastructure such as fishing harbors, cold chains, markets, etc.
- **National Animal Disease Control Programme:** It targets Foot and Mouth Disease (FMD) and Brucellosis by ensuring 100 percent vaccination of cattle, buffalo, sheep, goat, and pig population.
- **15,000 Crores for Animal Husbandry Infrastructure Development Fund:** It is used to aid private investment in dairy processing, improved cattle feed infrastructure, and enable value addition.
- **"Operation Greens"** run by the Ministry of Food Processing Industries (MOFPI) from Top to Total to be extended from tomatoes, onion, and potatoes to all fruits and vegetables.
- **Agriculture pricing, Agriculture Marketing, and Quality Assurance, Reforms in Essential Commodities Act:** These reforms want to remove agricultural commodities such as cereals, pulses, oilseeds, etc. from the list of essential commodities and also aim to reform agricultural marketing.
- **PM Garib Kalyan Ann Yojana:** Ensuring food and nutritional security to around 80 crores ration cardholders is the aim of this scheme who were affected due to the COVID-19 induced national lockdown.
- **One Nation One Ration Card Scheme:** Migrant workers and their family members access PDS benefits from any fair price shop in the country under this scheme.

Pradhan Mantri Fasal Bima Yojana (PMFBY) is a major step to provide an overall risk solution at the lowest constant premium across the country for farmers. Complete cropping cycle from before sowing to post-harvest and covers all the losses arising out of prevented sowing and mid-season adversities under this scheme, as an edge-to-edge risk reduction mechanism for farmers. The scheme has completed five successful years of implementation on 13th January 2021. To improve constantly, the scheme was made voluntary for all farmers, post its rehabilitation in February 2020. For providing the benefits to the farmers, states have also been provided flexibility to rationalize the sum insured. In a Year, this Scheme covers

over 5.5 crore farmer applications. Claims worth Re 90,000 crores have been already paid out under the Scheme as of 12th January 2021. The claim has been settled speedily and directly into the farmer accounts with the help of Aadhar seeding.

PM-Kisan

The Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) Yojana is a scheme launched by the central government in India. Rs 6,000 per year further divided into three equal installments will be provided to marginal and small farmers' families those having up to 2 hectares of landholding. The fund will be directly transferred into the bank accounts of the beneficiaries. More than 1.10 lakh crore have reached the account of farmers, ever since this scheme started. Under the scheme, in the bank account of 9 crore farmer families in India, an amount of 18000 crores has been deposited directly in December 2020.

PM – Jan Arogya Yojana

In 2018, the central government of India launched Pradhan Mantri Jan Arogya Yojana (PM-JAY) to facilitate healthcare facilities to the most unsafe sections. For high frequency, low-cost care such as dialysis and continued to be utilized without disturbance PM-JAY is being used significantly even during the COVID-19 pandemic and the lockdown.

PM-JAY enhanced health insurance coverage. In the states which implemented PM-JAY, their proportion of households with health insurance increased by 54 percent, and the states which did not implement PM-JAY falling by 10 percent, across all the states in India. Similarly, in Bihar, Assam, and Sikkim the proportion of households that had health insurance increased by 89 percent from 2015-16 to 2019-20 while it decreased by 12 percent in West Bengal over the same period.

PM-JAY: Status and Progress So Far

National Health Authority (2019) released the status of implementation as per the latest annual report of PM-JAY is as follows:
- This scheme was implemented by UTs and 32 states
- 13.48 crore E-cards have been issued
- It has provided INR 7,490 crore for treatments (1.55 crores hospital admission)
- It empaneled 24,215 hospitals
- On this website (mera.pmjay.gov.in) 1.5 crore users have registered.

For high frequency, low-cost care such as dialysis and continued to be utilized without any stoppage PM-JAY is being used notably even during the COVID-19 pandemic and the lockdown.

Industrial Sector and COVID-19

Specific policies have been made by the Govt. for every part of the Indian society and Indian Economy. Intensive financial inclusion has been done of deprived sections & areas of the

society by using the maximum & balanced use of Information Communication & Technology. Make in India, Start-up Programs, Skill Development Schemes & Mudra Loan, etc., have increased the ease of doing business in India. The role of Micro, Small, and Medium Enterprises (MSMEs) has increased significantly in the Indian Economy. A lot of new Amendments and Enactments in the legislative area have been made like Companies Act, Insolvency Act, various laws in Banking and Insurance sector, etc. to make Indian business sector strong and updated to the modern sophisticated global dynamic business environment and to push Indian Economy towards the status of Global Leadership.

Atmanirbhar Bharat Scheme

Atmanirbhar Bharat is the vision of the GOI of making India a self-reliant nation. The announcements under the Atmanirbhar Bharat Abhiyan were made in three channels. The key measures about industry and infrastructure are summarized below:

To Fight Against COVID-19, Credit Support and Relief to MSMEs

1. *Collateral-Free Automatic Loans for Businesses, including MSMEs of 3 Lakh Crores:* In the form of a fully guaranteed emergency credit line, it facilitates additional funding of up to 3 lakh crores, as a relief measure. Emergency Credit Line Guarantee Scheme (ECLGS) has been formulated for the MSMEs. The borrowers with up to 25 crores outstanding and 100 crores turnover are eligible. This scheme provides 100 percent credit guarantee cover to Banks and NBFCs on principal and interest. No guarantee fee, no fresh collateral is required.

2. *Subordinate Debt for Stressed MSMEs, 20,000 Crores:* Provision made for 20,000 crores subordinate debt for the MSMEs which are NPA so rare stressed. 4,000 crores are provided to Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) by the government. Banks will provide the subordinate debt to promoters to those MSMEs which have 15 percent of the existing stake and a maximum of 75 lakhs.

3. *Equity Infusion through MSME Fund of Funds up to 50,000 Crores:* Government to set up a Fund of Funds with a corpus of 10,000 crores that will provide equity funding support for the MSMEs. A mother and a few daughter funds operate the funds of funds. Equity funding will be provided for usable MSMEs. This scheme will help the MSMEs to expand their size and capacity and will also encourage them to get listed on stock exchanges.

4. *Global Tenders to be Refused up to 200 Crores:* General Financial Rules (GFR) of the government amended to dismiss global tender inquiries in government procurement of goods and services of the value of fewer than 200 crores. This is a step in support of the Make in India initiative and will promote MSMEs to grow.

5. *Other Measures for MSMEs:* e-Market linkage for MSMEs to act as is a placement for trade fairs and exhibitions. Receivables of MSME from the Government and the CPSEs are to be released in 45 days. These measures help to solve the problems of marketing and liquidity.

6. *Refund of Income Tax:* Approximately 8.2 lakh small businesses worth 5,204 crores were refunded and refunds of Income-tax have been issued to help the MSMEs to carry on their business activities without layoffs and pay cuts in these challenging times.

7. *Relief of 1,500 Crores to MUDRA-Shishu Loans:* The government of India provides interest subvention of 2 percent to quick payees for a period of 12 months. Small businesses under MUDRA to be benefited.

8. *Making Doing Business Easier including MSMEs:* The Government announced measures for making doing business easier which include:
   (a) Raising of the minimum entry fees to initiate insolvency proceedings to 1 crore from 1 lakhs (which largely insulates the MSMEs)
   (b) Special insolvency resolution framework for the MSMEs under Section 240A of the Code,
   (c) Adjournment of new initiation of insolvency proceedings for up to one year depending upon the pandemic situation.
   (d) empowering the Central Government to exclude COVID-19 related debt from the definition of "default" under the Code to trigger insolvency proceedings.

Power Sector Packages

Liquidity injection of 90,000 crores for DISCOMs.

Real Estate

The extension of registration and completion date of real estate projects under the Real Estate (Regulation and Development) Act (RERA). The advice was given to UTs, States, and their regulatory authorities by the Ministry of Housing and Urban Affairs for the following effect:

1. Under RERA, as an event of 'Force Majeure' treats COVID-19.
2. For all registered projects expiring on or after 25th March 2020, extend the registration and completion date suo-moto by 6 months without the need for individual applications.
3. Regulatory Authorities may extend this for another period of up to 3 months if needed
4. With revised timelines fresh 'Project Registration Certificates' are automatically issued.
5. Under RERA, timelines are extended for various statutory compliance concurrently. These measures will de-stress real estate developers and ensure completion of projects so that Homebuyers can get delivery of their booked houses within new timelines.

For New and Self Reliant India, Public Sector Enterprise Policy

Government to announce a new rational policy—where all sectors are open to the private sector except few areas where public sector enterprises will play a vital role in defined areas.

• It will be notified that the presence of Public sector enterprises are required in the list of strategic sectors in the public interest
• Private sector will also be allowed but at least one enterprise will remain in the public sector, in strategic sectors.

- Public sector enterprises will be privatized in other sectors (feasibility is the basis for timing, etc.)
- Several enterprises in strategic sectors will ordinarily be only one to four in strategic sectors, others will be privatized/merged/brought under holding companies.

Atmanirbhar Bharat 2.0 (second channel of measures) provided 25,000 crores as additional capital expenditure to the Ministry of Road Transport and Ministry of Defence.

Atmanirbhar Bharat 3.0 (third channel of measures) initiatives that impact the industrial sector include:

- For boosting Atmanirbhar manufacturing production-linked incentives of 1.46 lakh crores for 10 achiever Sectors
- Additional outlay for PM Awaas Yojana of Re 18,000 crores (PMAY) – Support for construction & infrastructure – relaxation of Earnest Money Deposit (EMD) & performance security on Government tenders in the urban area.
- Platform for infra debt financing of Re 1.10 lakh crores – Budget of 6,000 crores equity infusion in National Investment and Infrastructure Fund (NIIF) Debt Platform and 10,200 crores additional budget outlay will be provided towards capital and industrial expenditure for industrial incentives, industrial infrastructure, domestic defense equipment, and green energy.

Insurance Sector

Due to the COVID-19 pandemic, some important regulatory measures are undertaken which are as follows:

- KYC process has been simplified with the permission granted for 54 insurers to undertake Paperless KYC process through Aadhaar Authentication Services UIDAI.
- Corona Rakshak policy is a standard benefit-based policy and Corona Kavach Policy is a standard health policy issued the guidelines for offering an indemnity basis.

Conclusion

The novel Coronavirus that has been declared as a pandemic by World Health Organization (WHO) is not only harming the lives of people across the world but also putting the economy under immense pressure with a huge number of small and medium scales businesses shutting down. The damage caused by this Pandemic is not confined to limited segments but almost every sector is getting influenced by it, although the intensity of impact may vary from sector to sector. To overcome this pandemic effect government has started various schemes like Atmanirbhar Bharat, PM-Kisan Yojana, Pradhan Mantri Jan Aarogya Yojana, e-Sanjeevani OPD, Corona Kavach policy, Corona Rakshak policy, etc. are major policies. In this Aatma Nirbhar Bharat Abhiyan is a step taken by the government to make agriculture and farmers self-reliant alongside introducing the much-awaited reforms for boosting this segment. e-Sanjeevani is started for the health care sector and impressive growth has been seen in

adopting telemedicine in India during COVID-19 pandemic. Any country's health status depends on health infrastructure and human resources for health like doctors, nurses, etc. As per the study, there is a positive correlation between the availability of a health workforce and health outcomes. During this pandemic period, India which is a developing country works on the humane principle advocated in Mahabharta 'Saving a life that is in jeopardy is the origin of the dharma.'

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Exploring the Impact of New Market Trends on Investor Sentiments

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Abstract

To bring transparency in stock market at global level, many regulatory changes were introduced. Due to these regulatory changes, pressure created on firms to do something innovative and creative and to enhance customer service so that they can ensure cost effectiveness, efficient compliance and to improve pricing decisions in bond securities trading. To smoothen the operational process of capital market, market players are opting artificial intelligence so that they can derive intelligent solutions.

This research work probes the impact of New Market Trends on investors sentiments. This paper study the impact of Artificial intelligence and COVID-19 on stock market as well as on investor sentiments. This paperinvestigates the correlation between New Market Trends and their impact on stock market by using google data on COVID related searches and Sentiment Index. Tweeter data has also been used for predicting movement in stock market. Tweeter data has used for sentiment analysis as well. The result of this proposal offers a compressive vision of impact of Artificial intelligence and COVID-19 on sentiments of investors in stock market

***Keywords:** COVID-19 Sentiment, Artificial Intelligence, Google Trends, Daily News Sentiment Index*

Introduction

In 2019, At global level, many regulatory changes were introduced in capital market industry by government to protect the investors and provide them transparent information so that they would be able to take right decisions regarding investment. These types of changes were created pressure on firms to enhance customer service, specially within this competitive era. Customer is king of today's market; their satisfaction and engagement have been a critical issue for the capital market industry. To smoothen the operational process of capital market, market players are opting artificial intelligence so that they can derive intelligent solutions. Artificial Intelligence helping firms to bring transparency, improvise operational efficiency and for managing the risk.

The COVID-19 is most disastrous and expensivepandemic of 2020. COVID-19 pandemic is quite different from other epidemics that have been faced in past such as Ebola, SARS etc. The SARS was coming in 2003 and Ebola was from 2014 to 2016 but these epidemics

were not that much expensive like COVID-19. The coronavirus has worldwide transmission because of close integration at international level and at second stage, its transmission through carries without symptoms.

Artificial intelligence deeply impacts investor sentiments and helps them to take investment decisions in an efficient way. Artificial Intelligence allow any investor to tailored his or her investment on behalf of personal benchmark. Today, chat agents are available through whom everything could be possible on distance basis. Chat agents are robotic advisors, who provide valuable advice to investors 24*7. Chat agent help investors in taking right investment decisions or help in choosing right option among wide range of investment products on behalf of investor's personal profile.

When coronavirus started spreading rapidly at larger scale, people become aware and they started search on google regarding COVID cases increment and decrement. People becomes sensitive towards news and twitter. People even had created post on Facebook and Instagram so that they can aware others also about this dangerous and life harming pandemic. Usually, some people don't take interest in news but during this pandemic time they started watching news. Google has played a crucial role in informing people about current status of COVID cases. People more often searches on google about COVID cases, homemade remedies for boosting immunity and precautions that should be taken at time of this pandemic. Google and information regarding this crisis also affect the decision of investors in stock market and asset prices. People preference were changed. They started prefer short term investment rather than long term decision unless COVID ends or even stable up to some extents.

This research paper studies an association between COVID-19 and its impact on investor sentiments and relationship between Artificial Intelligence and its impact on investor sentiments. For predicting stock market movement, extensive research has been done on sentiment analysis by using twitter data and BSE Sensex data.

Literature Review

The scope of sentiment analysis is wider. It is used in many areas such as product recommendation, surveillance, politics and healthcare. Social media where sentiments of people such as feelings, emotions, attitude and opinions are expressed in large number has played a key role in making judgement about investors opinion.

Bharathi and Geetha predicted stock market value by combining SENSEX points of the Indian stock market and really simple syndication feeds. They claim that sentiment analysis of RSS news feeds has an impact on stock market values. Their experimental study has shown improvement of 14.43% accuracy prediction when compared to mainly average stock level indicator.

Bollen et al., used twitter data to investigate the correlation between Dow Jones Industrial Index and collective mood of public. They showed that there is significant correlation between public mood and Dow Jones Industrial Index. They used very unclear neutral network for this prediction.

Mittal and Goel used questionnaire method for creating profile of public mood and predicting the trends of Dow Jones Industrial Index. They showed not only a strong correlation between financial news and their impact to the movement of stock prices, but also that the analysis of social network post can help to predict them.

Zhang established the correlation between tweets on tweeter and stock prices of Dow Jones Index. He found the negative correlation between them. If tweets on tweeter are negative, stock prices will increase and vice-versa.

Lima et al. improved prediction which was done by Zhang by using stock vector machine in which all public sentiment attributes were considered. They explained that positive public mood indicated whenever positive tweets exceeded than the negative tweets regarding stock market.

Data and Methodology

The present study is descriptive and secondary sources has been used for data collection. This study uses closing prices provides by "BSE SEBSEX 50", over the period from 20th January 2020 to 20th may 2021 (The index data is available at https://www.bseindia.com/Indices/IndexArchiveData.html) and total number of cases in each month from 20th January 2020 to 20th May 2021 (The data is available at https://en.m.wikipedia.org/wiki/Timeline_of_the_COVID19_pandemic_in_India_(January%E2%80% 93May_2020) and other different websites are also used to collect the data for the study. The study uses statistical technique such as correlation.

Objective

To study the impact of COVID-19 on security market with special reference to BSE SENSEX.

Hypothesis

The null hypothesis has been framed for the present study is as follows:
- H_{01}: There is no significant impact of COVID-19 cases on BSE SENSEX prices for the period from January 2020 to May 2021.
- H_{02}: There is significant impact of COVID-19 cases on BSE SENSEX prices for the period from January 2020 to May 2021.

Analysis of Data

Table 1

Month	Close Price	COVID Cases
Jan-20	12533.2	0
Feb-20	11728.36	3
Mar-20	9000.99	220

Month	Close Price	COVID Cases
Apr-20	10326.33	17442
May-20	10013.16	89094
Jun-20	10768.19	288298
Jul-20	11618.98	722995
Aug-20	11927.59	1718882
Sep-20	11820.78	2563694
Oct-20	12196.08	2196444
Nov-20	13552.6	1407302
Dec-20	14640.61	1026858
Jan-21	14287.7	564437
Feb-21	15188.93	381727
Mar-21	15372.5	577897
Apr-21	15322.41	3765805
May-21	16161.71	10451351

Source: https://en.m.wikipedia.org/wiki/Timeline_of_the_COVID19_pandemic_in_India_(January%E2%80%93May_2020)

It has been shown from the Table 1 that from month Jan 2020 to May 2021, as COVID cases increase, share prices are also increases.

Correlation

Table 2

		Close	COVID Cases
Close	Pearson Correlation	1	.523*
	Sig. (2-tailed)	–	.031
	N	17	17
COVID Cases	Pearson Correlation	.523*	1
	Sig. (2-tailed)	.031	–
	N	17	17

* Correlation is significant at the 0.05 level (2-tailed).
Source: SPSS

Table 2 highlights the relationship between closing prices of stock exchange and COVID cases during the studied period, i.e. Jan 2020 to May 2021 and concludes that p value > 0.05, therefore, the null hypothesis is accepted, i.e. There is a significant relationship between COVID cases and closing prices of stock exchange for the period Jan 2020 to May 2021. The Pearson correlation between COVID cases and closing prices of stock exchange is 0.523, which indicates the moderate positive correlation between both of them.

Findings and Conclusion

The present paper showed that after increment of COVID cases, share prices are rises. COVID affect investor sentiments, they start making investment in those areas which are rising during COVID time. Stock prices moved positively with COVID cases. The study also found no significant impact of COVID cases on stock prices and also find moderate positive correlation between two of them.

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An Analysis of Resources Mobilize by Mutual Fund Industry

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Abstract

Indian Mutual Fund Industry is the fastest growing sector of the Indian Financial Markets. In Indian capital market Mutual fund entered in 1964. This industry contribute vital role in the growth of Indian economy by resources mobilise. This sector has many special vehicles to carry the saving of small and household's to invest in the capital market by the variety of security through the pools of saving of a particular company. Mutual fund provides the facility of diversification of portfolio and minimise the risk, by collecting the surplus money of investors and invest it into the stock & debt market, in various Govt. & private company scheme. This paper attempts to analyse resource mobilization by mutual fund, growth of Mutual Fund Company and make an attempt to investigate the dynamics relationship between the net sales and net purchases of mutual funds.

Keywords: *Resources Mobilise, Debt, Equity, Private Sector, Public Sector.*

Introduction

A Mutual fund is a company that collect the money from investors, called collective pool of money and invest the pool money are diversified into various securities i.e. bonds, share, stocks, option, futures currencies and short term debt, etc., the combination of all these security called portfolio and every investor get the return benefits or loss equal their per portion of their investment and expenses are shared in the expense ratio. This fund are operated by the Money managers, who invest the pool money in portfolio with different type of investment objective keeping in mind, i.e. risk and return with long-term growth or fixed-income. Mutual funds are open-end funds, closed-end funds, load funds and no-load funds.

Resource mobilization means the shifting of money from less useful section to the useful section. The Indian mutual fund industry has been one of the fastest rising and most rival portions of the financial sector Mutual regulated by the Securities and Exchange Board of

India (SEBI). Mutual fund is a mechanism or financial intermediary where the saving are invested in the pool of a financial institution, these financial institution invest this pool of fund in well- diversified portfolio, less risk or more return security and divided the return or profit according to proportion to their investment. In mutual fund small and medium investors who are not able to directly invest in many securities in capital market invest their small amount with the help of investment manager. Just like as shareholders mutual fund Company subscribe the units to investors, each unit shows proportionate ownership of the fund's portfolio holdings. Mutual funds investors are known as unit holders. Asset Management Companies (AMCs) or Investment Managers operates the mutual funds are known as an AMC. An AMC may float more than one fund called schemes.

According to Securities and Exchange Board of India (SEBI) Regulations, 1996 a mutual fund implies "a fund established in the form of trust to raise money through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments". With the formation of Unit Trust of India an initiative has been taken by the Government of India and the Reserve Bank in 1963 to start the mutual fund industry in India. The history of mutual funds in India can be generally divided into four phases.

- **First phase (1964–1987):** In 1st phase UTI delighted monopoly status in the mutual fund industry.
- **Second phase (1987–1993)** some public sector mutual funds set up by the public sector banks and LIC and GIC were launched.
- **Third phase (1993–2003):** In this phase government allowed private players to offer mutual fund schemes, giving Indian investors a broad choice of fund families.
- **Fourth phase:** After 2003, in fourth phase, UTI was divided into two separate entities. These are funds by structure and Funds by investment objective. Funds by structure include closed ended funds, open ended funds and interval funds. Funds by investment include growth funds, income funds, liquid funds and balanced funds etc. This study is analyzing the resource mobilise by mutual fund industry in India during the last ten years.

Resource Mobilization by Mutual Funds

The Mutual fund industries are very popular among the Indian households and there are fast & safe growths in the resources mobilization through various schemes. Today there are many mutual funds belonging to public sector, domestic private sector and foreign private sector funds in India, offering the public to invest variety of product and scheme of national or international level. Indian mutual fund industries mobilize its majority of fund from small household saving for the benefits of the country. Gross domestic savings are calculated as GDP less final consumption expenditure. According to the World Bank, Gross domestic savings in India was 27.99% of GDP in 2019. A total of 60 mutual funds mobilized a massive amount of money from the investors. Total resources mobilized by various AMC of Mutual Funds was ₹1,45,665 crore in 2018-19.

Literature Review

To analyze "The Fall and Rise of Mutual Funds in India", Kaushal Shah & Associates (2007) attempted by virtue of an article to take the reader through the entire journey of Mutual Fund industry in India, its origin, its fall and rise throughout all these years and tried to predict what the future may hold for the Mutual Fund Investors in the long run. The researchers concluded that with the structural liberalization policies, no doubt the Indian economy is likely to return to a high growth path in a few years. Hence mutual fund organizations are needed to upgrade their skills and technology. With regard to the Mutual Fund investor researcher's view, the investor needs to adopt two crucial skills for successful investing, i.e. a sense of timing, and investment discipline – both need to be adopted at the same time.

In "Growth and Pprospects of Indian Mutual Fund Industry – A Review" B. Usha rekha (2012) attempted to review the growth and prospects of Indian Mutual Fund Industry in view of number of schemes in operation, folios existing, Fund houses, Assets under Management and factors contributing and inhibiting its growth and future prospects of Mutual fund Industry. The researcher emphasized only on secondary data sources. The data has been collected from Textbooks, reports, journals, newspapers and internet sources. The period of study was kept limited for 11 years. Researcher suggested that In order to attain sustained profitable growth, the Industry should concentrate on developing distribution networks, increasing retail participation and expanding the reach of mutual funds into rural areas by conducting awareness programs and extending financial literacy.

In "Growth of Mutual Funds in India" Lohana Poonam M. (2014) attempted to examine the growth of the mutual funds in Indian industry. Objective of this research paper was to overview of growth of Mutual Fund s in India during 2009-10 to 2013-14. She found that during last decade there is growth in assets under management more than 500 percent, in India. She also found that the total value of equity fund investments depreciated during this five years period. Debt funds are emerging as the most preferred investments option.

Need for the Study

This study is trying to conduct an attempt on dimension of resources mobilise by mutual fund, i.e. sector wise mutual fund sales and purchase (redemption) and company wise resources mobilise. A dynamic changed has been occurred during the last decay in financial market and this sector showed a phenomenal growth, this study is conducted on the behalf of published data available on the site on RBI to find out resources mobilise by this sector.

Objective of the Study

1. To analyze the growth of resource mobilize by mutual fund industry in India.
2. To analyse the public and private sector wise resource mobilisation by mutual fund industry.
3. To analysis the resource mobilization by mutual fund industry from stock market.

Nature and Collection of Data

This paper is based on secondary data from 2009-10 to 2018-19. The data required for the study has been collected from the books, magazines, various annual reports, website of RBI, and various websites of the mutual fund companies, etc.

Tools of Analysis

The various statistical techniques have been used for analyzing the collected data. These include Trend Values (Yc), AGR, Percentage (%), Co-efficient of co-relation (r), etc.

Results and Analysis

Table 1: Category-wise Total Recourses Mobilize of MF (in terms of amount)

(₹ in Crores)

Year	Private				Public			
	Amt.	%	AGR	Yc	Amt.	%	AGR	Yc
2010-11	69,22,924	78.14		-1342712	7,83,858	8.85		-858340
2011-12	56,83,744	83.34	-18	417497	5,22,453	7.66	-33.35	-318048
2012-13	59,87,889	82.39	5	2177706	6,33,350	8.71	21.23	222244
2013-14	80,49,397	82.40	34	3937915	8,02,352	8.21	26.68	762536
2014-15	91,43,962	82.48	14	5698124	19,42,297	17.52	142.08	1302828
2015-16	1,11,26,277	80.83	22	7458333	26,39,279	19.17	35.88	1843120
2016-17	1,42,47,937	80.88	28	9218542	33,67,612	19.12	27.60	2383412
2017-18	1,73,82,189	82.78	22	10978751	36,16,463	17.22	7.39	2923704
2018-19	1,96,52,989	80.56	13	12738960	47,41,374	19.44	31.11	3463996

Year	UTI				Total		
	Amt.	%	AGR	Yc	Amt.	AGR	Yc
2010-11	11,52,733	13.01		591864	88,59,515		4772680
2011-12	6,13,482	9.00	-46.78	536376	68,19,679	-23.02	6928831
2012-13	6,46,646	8.90	5.41	480888	72,67,885	6.57	9084982
2013-14	9,16,351	9.38	41.71	425400	97,68,101	34.40	11241133
2014-15	Na	Na	Na	369912	1,10,86,260	13.49	13397284
2015-16	Na	Na	Na	314424	1,37,65,555	24.17	15553435
2016-17	Na	Na	Na	258936	1,76,15,549	27.97	17709586
2017-18	Na	Na	Na	203448	2,09,98,652	19.21	19865737
2018-19	Na	Na	Na	147960	2,43,94,362	16.17	22021888

Source: RBI website

Table 1 reveals that the total resources mobilize by mutual fund in absolute as well as in relative terms over the study period from 2010-11 to 2018-19. Resources mobilize by private sector was increased over the study period, i.e. it was 69, 22,924 crores in 2010-11 and 1, 96,

52,989 crores in 2018-19. Its contribution was between 78.17% to 82.78% and AGR shows fluctuating growth rate. Its trend values show an increasing trend value. Resources mobilize by public sector was increasing, i.e. 783,858 crores in 2010-11 and 47, 41,374 crores in 2018-19. Its contribution was between 7.66% to 19.44% during the study period. Its AGR shows a higher fluctuating and negative trend, i.e.-33.35% in 2011-12 and 142.08% in 2014-15 and trend value shows an increasing trend over the study period. The growth and contribution of UTI in terms of amount & Percentage was fluctuating till 2013-14 after that there was no resources mobilize by UTI sector.

The overall total resources mobilize by all three sector was increasing in terms of money with increasing trend value, but its AGR was fluctuating and negative also i.e. it was -23.02% in 2011-12 and 34.40% in 2013-14. In nutshell, the resources mobilize by private sector of mutual fund was dominating over the the public & UTI sector. So, Govt. should emphasize these sectors to increase its share in resources mobilize for achieving positive growth rate in market in future.

Table 2: Net Resources Mobilize by Mutual Fund (₹ in crore)

Year	Private				Public			
	Amt.	%	AGR	Yc	Amt.	%	AGR	Yc
2010-11	-19,215	38.89		-38081	-16,636	33.67		32496.52
2011-12	-15,446	70.13	-19.62	-12745	-3,184	14.46	-80.86	29449.39
2012-13	67,911	88.73	-539.68	12591	4,629	6.05	-245.40	26402.26
2013-14	48,838	90.81	-28.08	37927	401	0.75	-91.33	23355.13
2014-15	1,03,700	100.40	112.33	63263	-412	-0.40	-202.72	20308
2015-16	91,394	68.11	-11.87	88599	42,787	31.89	-10475.46	17260.87
2016-17	2,79,388	81.44	205.70	113935	63,661	18.56	48.79	14213.74
3017-18	2,28,471	84.06	-18.22	139271	43,326	15.94	-31.94	11166.61
2018-19	61,505	56.07	-73.08	164607	48,196	43.93	11.24	8119.48

Year	UTI				Total		
	Amt.	%	AGR	Yc	Amt.	AGR	Yc
2010-11	-13,555	27.44		-377.56	-49,406		-61583
2011-12	-3,394	15.41	-74.96	-516.67	-22,024	-55.42	-26061
2012-13	3,999	5.22	-217.81	-655.78	76,539	-447.53	9461
2013-14	4,543	8.45	13.60	-794.89	53,783	-29.73	44983
2014-15	Na	Na	Na	-934	1,03,288	92.05	80505
2015-16	Na	Na	Na	-1073.11	1,34,181	29.91	116027
2016-17	Na	Na	Na	-1212.22	3,43,049	155.66	151549
2017-18	Na	Na	Na	-1351.33	2,71,797	-20.77	187071
2018-19	Na	Na	Na	-1490.44	1,09,701	-59.64	222593

Source: RBI website

Table 2 shows that the net resources mobilize by mutual fund in absolute as well as in relative terms over the study period from 2010-11 to 2018-19. Net resources mobilize by private sector was fluctuating and negative also over the study period, i.e. it was -19215 crores in 2010-11 and 279,338 crores in 2016-17. Its contribution was between 38.39% to 100.40% and AGR shows highly fluctuating and negative growth rate, i.e. it was -539.68% in 2012-13 & 205.70% in 2012-13. Its trend values show an increasing trend value. Net resources mobilize by public sector was highly fluctuating and negative in terms of amount, i.e. -16,636 crores in 2010-11 and 63,661 crores in 2016-17. Its contribution was between -0.40% to 43.93% during the study period. Its AGR shows a higher fluctuating and negative trend, i.e. -10475.46% in 2015-16 and 48.79% in 2016-17 and trend value shows a fluctuating trend over the study period. The growth and contribution of UTI in terms of amount & Percentage was fluctuating and negative till 2013-14 after that there was no resources mobilize by UTI sector. Its trend value shows fluctuating trend.

The overall net resources mobilize by all three sector was fluctuating and negative in terms of money with increasing trend value, its AGR was also higher fluctuating and negative also, i.e. it was -447.53% in 2012-13 and 155.66% in 2016-17. In nutshell, the net resources mobilize by private sector of mutual fund industry was dominating over the public & UTI sector. So, these sector should try to make appropriate step to increase their net resources mobilize.

Table 3: Total Fund Raised Through Stock Market by Mutual Fund (₹ in crore)

Year	Gross Purchase			Gross Sale			Net Purchase/Sale		
	Amt.	AGR	Yc	Amt.	AGR	Yc	Amt.	AGR	Yc
2010-11	9,19,060		-24028	6,90,183		-88912	2,28,879		64884
2011-12	12,48,897	35.89	188964	9,15,434	33	102337	3,33,463	45.69	86627
2012-13	16,37,150	31.09	401956	11,86,440	30	293586	4,50,711	35.16	108370
2013-14	16,50,219	0.80	614948	11,28,197	-5	484835	5,22,023	15.82	130113
2014-15	19,48,565	18.08	827940	13,20,825	17	676084	6,27,741	20.25	151856
2015-16	17,79,010	-8.70	1040932	13,36,577	1	867333	4,42,433	-29.52	173599
2016-17	19,82,812	11.46	1253924	16,06,399	20	1058582	3,76,412	-14.92	195342
2017-18	24,92,240	25.69	1466916	19,79,755	23	1249831	5,12,485	36.15	217085
2018-19	29,76,407	19.43	1679908	24,98,603	26	1441080	4,77,804	-6.77	238828
r	0.98								

Source: RBI website

Table 3 shows the total resources mobilize by mutual fund through stock market (Debt or Equity) in absolute as well as in relative terms over the study period from 2010-11 to 2018-19. The total gross purchase mobilize through stock market was increasing over the study period i.e. it was 9, 19,060 crores in 2010-11 and 29, 76,407 crores in 2018-19 except 2015-16. Its AGR shows highly fluctuating and negative growth rate i.e. it was -8.70% in 2012-13 & 35.89% in 2011-12. Its trend values show an increasing trend. The total gross sale mobilize through stock market was increasing over the study period, i.e. it was 6,90,183 crores in 2010-

11 and 24,98,603 crores in 2018-19. Its AGR shows highly fluctuating and negative growth rate, i.e. it was -5% in 2013-14 & 33% in 2011-12. Its trend values show an increasing trend value. There is high degree of positive correlation among the gross purchase and gross sale.

In nutshell, gross purchase was more than that of gross sale of mutual fund while mobilize fund from stock market. Overall, gross resources mobilize by mutual fund through stock market was fluctuating and decreased in the last in the study period with fluctuating growth rate. So, it is suggested that, in resources mobilization, Mutual Fund Company should take appropriate action to enhance the Net Purchase/Sale through stock market with positive growth rate in future.

Table 4: Fund Raised Through Equity (₹ in crore)

Year	Gross Purchase			Gross Sale			Net Purchase/Sale		
	Amt.	AGR	Yc	Amt.	AGR	Yc	Amt.	AGR	Yc
2010-11	1,54,919		-106324	1,74,893		-356395	-19,975		-41983
2011-12	1,32,137	-14.71	-31052	1,33,494	-23.67	-174403	-1,358	-93.20	-23537
2012-13	1,13,758	-13.91	44220	1,36,507	2.26	7589	-22,749	1575.66	-5091
2013-14	1,12,131	-1.43	119492	1,33,356	-2.31	189581	-21,224	-6.70	13355
2014-15	2,31,409	106.37	194764	1,90,687	42.99	371573	40,722	-291.87	31801
2015-16	2,81,334	21.57	270036	2,15,191	12.85	553565	66,143	62.42	50247
2016-17	3,76,874	33.96	345308	3,20,316	48.85	735557	56,559	-14.49	68693
2017-18	6,67,009	76.98	420580	5,25,240	63.98	917549	1,41,769	150.66	87139
2018-19	7,08,991	6.29	495852	6,21,112	18.25	1099541	87,879	-38.01	105585
r	0.99								

Source: RBI website

Table 4 revels the total resources mobilize by mutual fund through stock market via Equity fund in absolute as well as in relative terms over the study period from 2010-11 to 2018-19. The total gross purchase through stock market was decreasing till 2013-14 (i.e. 112131 crore) after that it was starting increasing and reached on 708991 crore in 2018-19. Its AGR shows highly fluctuating and negative growth rate, i.e. it was -14.71% in 2011-12 & 106.37% in 2014-15. Its trend values show an increasing trend. The total gross sale mobilize through stock market by mutual fund was fluctuating and decreasing in terms of value till 2013-14, i.e. 1,74,893 crore to 133356 crore after that it was starting increasing. Its AGR shows highly fluctuating and negative growth rate, i.e. it was -23.67% in 2011-12 & 63.98% in 2017-18. Its trend values show an increasing trend value. There is high degree of positive correlation among the gross purchase and gross sale while raising fund through equity.

Overall, resources mobilize by mutual fund through stock market via equity fund was highly fluctuating and negative in the study period; AGR was also fluctuating. The resources mobilize through equity fund by mutual fund industry gross purchase of mutual fund units was more than that of gross sale. So, it can suggested that, in resources mobilization, Mutual Fund Company should take appropriate step to increase the Net Purchase/Sale through equity fund with positive growth rate of in future resources mobilize.

Table 5: Fund Raised Through Debt (₹ crore)

Year	Gross Purchase			Gross Sale			Net Purchase/Sale		
	Amt.	AGR	Yc	Amt.	AGR	Yc	Amt.	AGR	Yc
2010-11	7,64,142		82296	5,15,290		-24571	2,28,879		64884
2011-12	11,16,760	46.15	220016	7,81,940	51.75	109852	3,33,463	45.69	86627
2012-13	15,23,393	36.41	357736	10,49,934	34.27	244275	4,50,711	35.16	108370
2013-14	15,38,087	0.96	495456	9,94,842	-5.25	378698	5,22,023	15.82	130113
2014-15	17,17,155	11.64	633176	11,30,138	13.60	513121	6,27,741	20.25	151856
2015-16	14,97,676	-12.78	770896	11,21,386	-0.77	647544	4,42,433	-29.52	173599
2016-17	16,05,937	7.23	908616	12,86,084	14.69	781967	3,76,412	-14.92	195342
2017-18	18,25,231	13.66	1046336	14,54,515	13.10	916390	5,12,485	36.15	217085
2018-19	22,67,416	24.23	1184056	18,77,490	29.08	1050813	4,77,804	-6.77	238828
r	0.97								

Source: RBI website

Table 5 shows the total resources mobilize by mutual fund through stock market via debt in absolute as well as in relative terms over the study period from 2010-11 to 2018-19. The total gross purchase through stock market was increasing, i.e. 7,64,142 crore in 2010-11 and 22,67,416 crore in 2018-19, except 2015-16 where it was decreased. Its AGR shows highly fluctuating and negative growth rate, i.e. it was -12.78% in 2015-16 & 46.15% in 2011-12. Its trend values show an increasing trend. The total gross sale mobilize through stock market by mutual fund was fluctuating in terms of value, i.e. it was 515,290 crore in 2010-11 and 18,77,490 crore in 2018-19. Its AGR shows highly fluctuating and negative growth rate, i.e. it was -5.25% in 2013-14 & 51.75% in 2011-12. Its trend values show an increasing trend. There is high degree of positive correlation among the gross purchase and gross sale while raising fund through debt.

Overall, resources mobilize by mutual fund through stock market via debt fund was highly fluctuating and negative over the study period; AGR was also fluctuating and negative. So, it can suggested that, in resources mobilization, Mutual Fund Company should take appropriate step to increase the Net Purchase/Sale through debt fund with positive growth rate of in future resources mobilize.

Finding and Suggestions

On the basis of above analysis, it is found that the total resources mobilize by Private sector mutual fund industry dominating over the public and UTI sector. Resources mobilize by mutual fund industry through Debt fund dominate over equity fund while raised through stock market & gross purchase of unit was dominating the gross sale.

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Flow of Financial Resources to the Commercial Sector in India

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Abstract

Diversified financial sector plays a vital role in growth of existing financial services as well as new entities in this sector. Financial resources mobilization in commercial sector comprises broadly-Adjusted Non-Food Bank Credit and Flow from Non-Banks. Adjusted Non-Food Bank Credit have two components namely Non-Food Credit & Non-SLR Investment by Schedule Commercial Banks. Domestic and Foreign Source are the main components of financial flows from non-Banks. Sub-components of Domestic sources are: Public & rights issues by non-financial entities; Commercial Papers subscribed by non-banks; Net Credit given by housing finance companies; private placements by non-financial entities; net investment of LIC in corporate debt and aggregate financial accommodation provided by RBI regulated – AIFIs, NABARD, NHB, SIDBI & EXIM Bank. Foreign Sources components includes Americana Depository Receipts/ Global Depository Receipts; Foreign Currency Convertible Bonds/ External Commercial Borrowings ; Short-term borrowing from out of India and FDI in India.

Major flow of resources obtained from non-banks, i.e. 52.31% and CAGR is 3.87% in component wise in overall resources mobilization whereas in adjusted non-food bank credit contribution of non-food bank credit recorded to be 92.72 % and CAGR 2.13%. Flow from non-bank as domestic resources presents 61.63% and CAGR found negative while CAGR of foreign resources was positive. Contribution of gross private placement by Non-Financial Entities observed 29.13% in flow from domestic sources. The ratio of FDI was obtained 78.88% in total flow from foreign sources. Trend value presents increasing trend of all the components of flow of financial resources to commercial sector in India exceptcommercial papers subscribed by non-banks.

Keywords: Flow of Sources, Components, GAGR and Trend Values.

Introduction

Sustainable development can be achieved only by efficiently mobilization and transformation of resources into productive activities. Financial system plays a vital role for link between

savings and investment. For sustainable development coordination of different agencies within them and with government not enough but there must also be coordination between the public & private sectors components. There is legitimate concern to ensure that a particular level (in absolute figures as well as in relative terms) of domestic as well as foreign savings are allocated to investment in commercial sector in a developing country in such a manner that is efficient and desirable in economic development.

Finance is the most important component for economic growth. India has a multitudinous financial services sector consists of banking; capital market; insurance; non-banking financial companies (NBFCs); co-operatives; mutual funds and other financial entities. In the Indian banking system Bandhan bank and Payment banks recently entered. Banking sector is dominating in flow of financial resources to commercial sector in India. For betterment and proper regulation of banking sector The GOI has launched various reforms. There is no doubt that India is one of the world's most striking capital markets. It is anticipated that India will reach on the 4th rank till 2028 in the matter of private wealth market in the world.

Review of Literature

Narayana (2000) found that sectorial and regional inequalities in the deployment of commercial credit in India are very serious. After nationalisation of banks, banking network shows a rapid expansion into semi-urban and rural areas, and their share in aggregate credit deployment into priority sector lending (agriculture); SSI and trade & transport increased. In the emerging business of personal loan and professional services, new private banks and foreign banks are increasing their presence.

Mohua Roy (2005) found that till 2005 public sector lending is constant to agriculture and Small Scale Industries and presents a decline trend. He also observed that due to wilful default in agriculture & public sector lending, NPA of this sector is increasing.

Ahmed Ud-din Jaynal (2010) found in his research that agricultural advances and SSI are getting less attention in comparison to trade and services. Priority Sector lending recovery performance is not at satisfactory level and due to this NPA of PSL higher than non-PSL sector. So, they prefer to lending money to commercial sector.

Ghosh (2011) concluded in his study that non-performing assets of public and private sector banks are increasing due to lending of priority sector. This is the main reason of giving preference to commercial sector for providing financial assistance in comparison to priority sector.

Kaur Jasmindeep, Silony (2011) had reviewed that priority sector lending of private banks grew faster than public banks after post reforms. The study also conclude that pre-reform main focus of priority sector lending was on agriculture sector but after 2002-03 public and private banks focused on service sector, because this sector emerge as a leading factor for economic development. Non-Performing Assets of public banks in was higher than private sector banks lending to priority sector.

Rajput Namita (2012) conclude that profitability of banks are badly affected by NPA because income on NPA account cannot be booked but funding cost & provisions are charged on profit.

Patidar Suresh, Kataria Ashwini (2012) had analysed that priority sector advances of PSL of public and private banks increased in study period. It had happened due to mandatory target fixed by RBI for lending to priority sector. They also observed that PSL had significant impact over NPA.

Deepak Kumar (2013) in his study found that credit-deposit ratio is an indicator of progress for commercial banks. Banks should try to increase it by opening new branches into unbanked area and relaxing some stringent credit norms.

Goyal Neha, Agrawal Rachna and Aggarwal Renu (2015) in their paper concluded that overall target of priority sector lending was achieved by the commercial banks but sub-target of agriculture sector not achieved. So, there is a need to inquire the reasons about it.

Classification of Flow of Financial Resources to the Commercial Sector in India

Public & rights issues by non-financial entities

Commercial Papers subscribed by non-banks

Net Credit given by housing finance companies

Private placements by non-financial entities

Aggregate financial accommodation by RBI regulated AIFIs, NABARD, NHB, SIDBI & EXIM Bank

net investment of LIC in corporate debt

Foreign Currency Convertible Bonds/ External Commercial Borrowings

Americana Depository Receipts/ Global Depository Receipts; Issues excluding banks and financial institutions

Short-term borrowing from out of India

FDI in India

Objectives of the Study

The main objectives of the study are as under:

1. To analysis overall which component of flow of financial resources to commercial sector is dominating.
2. To assess contribution of Non-Food credit and Non-SLR Investment by SCBs in Adjusted Non-Food Bank Credit.
3. To assess various components of flow of financial resources from non-Banks in commercial sector.

Collection and Analysing of Data

To analysis objectives of the study, data's were collected for the period 2009-10 to 2019-20 from various publications of RBI; SEBI; BSE; NSE which are available on the concerns web-site. Trend Values; Annual Growth Rate; percentage, Compound Annual Growth Rate etc. statistical techniques have been used for analysing the data.

Results and Analysis

Table 1 exhibits aggregate flow of financial resources to commercial sector via adjusted non-food bank credit and flow from non-banks from 2009-10 to 2019-20. In total flow of resources, flow from non-banks is dominating with share of 52.31% and CAGR 3.87% in aggregate. AGR of both components is fluctuation and even negative also in some years while trend shows an increasing trend during the study period. So, both components try to maintain a constant AGR. It can be inferred that RBI should try to increase ANFB contribution in total flow of resources in commercial sector.

Table 1: Aggregate Flow of Financial Resource to Commercial Sector: Component-wise (₹ crore)

Year	Adjusted Non-Food Bank Credit			Flow from Non-Banks			Aggregate Flow of Resources	
	Amt.	*Share in %*	*Trend*	*Amt.*	*Share in %*	*Trend*	*Amt.*	*Trend*
2009-10	478122	45.63	588377	569674	54.37	503513	1047796	1091891
2019-20	581209	40.20	850697	864615	59.80	1082543	1445824	1933241
MEAN	47.69			52.31			100	
CAGR	1.79%			3.87%			2.97%	

Note: 1. Data for 2019-20 are Provisional; 2. Figures have been re-casted since 2013-14 onwards due to inclusion of data on deposit taking NBFCs
Source: RBI, SEBI, BSE, NSE, Merchant Banks, LIC and NHB.

Table 2 presents flow of financial resources from ANFB credit as Non-Food credit and non-SLR Investment by SCBs for the study period. Non-food credit component is dominating with 92.72% share and CAGR 2.13% in aggregate, while share of Non-SLR investment by

SCBs was only 7.28 and its CAGR was – 196%. AGR of both components was fluctuating and negative in some years, but have an increasing trend. So, it can be concluded that in total ANFB credit, non-food credit plays a vital role and another component, i.e. Non-SLR investment by SCBs contribution is very low. So, SCBs should make a plan for increasing their share.

Table 2: Flow of Financial Resources from Adjusted Non-Food Bank Credit: Component-wise (₹ Crore)

Year	Non-Food Credit			Non-SLR Investment by SCBs			Adjusted Non-Food Bank Credit	
	Amt.	*Share in %*	*Trend*	*Amt.*	*Share in %*	*Trend*	*Amt.*	*Trend*
2009-10	466960	97.67	558592	11162	2.33	29785	478122	588377
2019-20	588985	101.34	775012	-7775	-1.34	75685	581209	850697
MEAN	92.72			7.28			100	
CAGR	2.13%			(-)196 %			1.79%	

Table 3 shows that the in aggregate flow of financial resources to commercial sector from Non-banks, contribution of domestic sources was 61.83 but its CAGR was only 0.78% negative. It is also noted that its annual growth rate was negative except the year 2012-13, 2014-15, 2016-17 and 2017-18. It presents an increasing trend for the study period. Share of foreign sources is 38.17 with CAGR of 8.58%. Its AGR was fluctuating but positive accept the year 2011-12 and 2013-14. It presents an increasing trend. So, it can be inferred that domestic source is the main component in total flow from non-banks to commercial sector. But this component should make a plan for its positive annual growth rate.

Table 3: Flow of Financial Resources to Commercial Sector from Non-Banks: Component-wise (₹ crore)

Year	Domestic Sources			Foreign Sources			Total Flow from Non-Banks	
	Amt.	*Share in %*	*Trend*	*Amt.*	*Share in %*	*Trend*	*Amt.*	*Trend*
2009-10	349908	61.42	319046	219767	38.58	184472	569674	503513
2019-20	321100	37.14	676126	543515	62.86	406412	864615	1082543
MEAN	61.83			38.17			100	
CAGR	-0.78%			8.58%			3.87%	

Table 4 despite share of public and right issue by non-financial entities was 6.23 with 6.47% CAGR in total flow from domestic sources. Its AGR was highly fluctuating, i.e. -58.97% in 2016-17 to 502.87 in 2019-20,but its trend presents an increasing trend. Gross private placement by non-financial entities contribution in total flow from domestic source was 29.13 with 5.87% CAGR in aggregate period of study. Its AGR was fluctuating and negative in some years of the study period. Its trend value shows an increasing trend. Net issuance of CPs subscribed by non-bank share was very low, i.e. 1.47 with highly negative CAGR, i.e. -217.4%. Its AGR was also highly fluctuating, i.e. 303.36% in 2014-15 to -636.27% in 2018-19. Its

trend value also presents negative trend. Share of net credit by housing financing company as component of flow from domestic sources was 17.29% with -10.35% CAGR in aggregate period of study. Its AGR was fluctuating but positive expect the year 2013-14; 2018-19 and 2019-20. Its trend value presents an increasing trend. Contribution of total accommodation by four RBI regulated AIFIs, i.e. NABARD; NHB; SIDBI and EXAM Bank was 12.39 with 8.41 CAGR in aggregate period of study. These AIFIs, AGR was fluctuating negative in some year. Its trend was increasing. Share of systematically important NBFCs was 23.93 with negative CAGR, i.e. -12.73% in total study period. Its AGR was highly fluctuating, i.e. 133.05% ub 2014-15 to -89.23% in 2019-20. Trend of this component presents an increasing trend. LIC, as component of domestic source of flow of resources, share was 9.56 with 4.54% CAGR for the whole study period. Its AGR was fluctuating even negative also in some years of the study period. Trend value of LIC presents an increasing trend. It can be observed that component

Table 4: Flow of Financial Resources to Commercial Sector from Domestic Sources: Component-wise (₹ crore)

Year	Public and Rights Issues by Non-financial Entities			Gross Private Placements by Non-financial Entities			Net Issuance of CPs Subscribed to by Non-banks		
	Amt.	Share in %	Trend	Amt.	Share in %	Trend	Amt.	Share in %	Trend
2009-10	31956	9.13	16975	126604	36.18	72234	26147	7.47	32931
2019-20	63689	19.83	35165	237062	73.83	194494	-152722	-47.56	3281
MEAN	6.23			29.13			1.47		
CAGR	6.47%			5.87%			-217.4%		

Cont...

Year	Net Credit by Housing Finance Companies			Total Accommodation by 4 RBI Regulated AIFIs – NABARD, NHB, SIDBI and EXIM Bank			Systematically Important Non-deposit taking NBFCs and Deposit taking NBFCs (net of bank credit)		
	Amt.	Share in %	Trend	Amt.	Share in %	Trend	Amt.	Share in %	Trend
2009-10	28500	8.14	46961	33800	9.66	610425	60700	17.35	84940
2019-20	8573	2.67	140911	82160	25.59	671215	13572	4.23	170600
MEAN	17.29			12.39			23.93		
CAGR	-10.35%			8.41%			-12.73%		

Cont...

Year	LIC's Net Investment in Corporate Debt, Infrastructure and Social Sector			Total Domestic Sources	
	Amt.	Share in %	Trend	Amt.	Trend
2009-10	42200	12.06	37140	349908	319046
2019-20	68766	21.42	43030	321100	676126
MEAN	9.56			100	
CAGR	4.54%			-0.78%	

wise flow of resources from domestic sources, Gross private placement by non-financial entities is dominating followed by Systematically important NBFCs; net credit by housing finance company; RBI regulated AIFIs; LIC net investment in corporate debt, etc.; Public and right issue by non-financial entities and net issuance of CPs subscribed by non-banks.

Table 5 presents share of external commercial borrowings/FCCB was 9.22 with 26.16% CAGR in total financial assistant from foreign source. It's AGR was very highly fluctuating, i.e. 350.62% in 2010-11 to -2937.75 in2015-16. Its trend value shows an increasing trend. ADR/GDR issue portion inflow from foreign sources was very low, i.e. 1.48% with 100% negative CAGR. Its AGR was also negative during the study period except the year 2014-15. It present negative trend. Contribution of show term credit from abroad was 10.41% in aggregate period with negative CAGR, i.e. -187.17%. AGR was highly fluctuating and negative except the years 2010-11, 2012-13; 2015-16 and 2017-18. Its trend values also present a negative trend. Share of FDI in India in total flow of resources from foreign sources was very high i.e., 78.88% with 8.75% CAGR. Its AGR was fluctuating and even negative also in some years of the study years. its trend values present an increasing trend. So, it can be inferred that in various components of flow from foreign sources FDI is dominating followed by short term credit from abroad; external commercial borrowings/FCCI and ADR/GDR issues.

Table 5: Flow of Financial Resource to Commercial Sector from Foreign Sources: Component-wise (₹ crore)

Year	External Commercial Borrowings / FCCB			ADR/GDR Issues Excluding Banks and Financial Institutions		
	Amt.	*Share in %*	*Trend*	*Amt.*	*Share in %*	*Trend*
2009-10	11971	5.45	16809	15100	6.87	8997
2019-20	154263	28.38	47039	0	0.00	-2143
MEAN	9.22			1.48		
CAGR	26.16%			-100%		

Cont...

Year	Short-term Credit from Abroad			Foreign Direct Investment to India			Total Foreign Sources	
	Amt.	*Share in %*	*Trend*	*Amt.*	*Share in %*	*Trend*	*Amt.*	*Trend*
2009-10	34876	15.87	45060	157819	71.81	113606	219767	184472
2019-20	-7704	-1.42	15990	396955	73.03	345526	543515	406412
MEAN	10.41			78.88			100	
CAGR	-187.17			8.75			8.58	

Conclusions

In net sell, aggregate flow of financial resources to commercial sector in India, flow from non-banks is dominating with share of 52.31%. RBI should try to increase ANFB contribution in total flow of resources in commercial sector. In total ANFB credit, Non-food credit plays a

vital role and another component, i.e. Non-SLR investment by SCBs contribution is very low. Domestic source is the main component in total flow from non-banks to commercial sector in Indian economy. Component wise flow of resources from domestic sources, Gross private placement by non-financial entities is dominating followed by Systematically important NBFCs; net credit by housing finance company; RBI regulated AIFIs; LIC net investment in corporate debt, etc.; Public and right issue by non-financial entities and net issuance of CPs subscribed by non-banks while in foreign sources FDI is dominating followed by short term credit from abroad; external commercial borrowings/FCCI and ADR/GDR issues.

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Overconfidence Bias in Investors' Investment Decision Making: Evidence from India

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Abstract

This paper aims to exmaine the influence of overconfidence bias on investment decision making. This paper selects the 490 individual investors who invest in security market. Further, this study deployed exploratory factor analysis to validate the internal consistency of the constructs and variables. In addition, we also deployed multiple regression analysis to investigate influence of overconfidence bias on investment decision making. The findings of study suggest that overconfidence bias positively impacts the individual investors' investment decision making. Our research has several implications for individual investors, advisors, regulators, and policymakers. The findings of this study enhances the rationality of investment decisions to increase stock market efficiency.

Keywords: *Overconfidence Bias, Investment Decision Making, India.*

Introduction

Rational finance theories are often assumed the rationality of individual, informationally efficient and maximization of profit (Fama, 1970). These theories centre on objective market conditions however regularly incapable to elucidate chaotic and abnormal occurrences in the real market conditions (Huang et al., 2016). These theories documented that man focuses only on the maximization of investment returns and minimizes of investment risks. Rational finance is based on mainstays of EUT was given by Bernoulli (1738, 1954), Von Neumann and Morgenstern (1944), MPT was given by Markowitz (1952), APT given by Ross (1976a, 1976b), CAPM is given by Sharpe, Lintner, Black (1964, 1965 and 1972) and Mossin (1966), OPT offered by Black, Scholes and Merton (1973) and, EMT proposed by Fama (1970). However, large number of empirical studies found that investors do not behave rationally while making decisions. With this view, in 1980s a new concept, i.e. behavioural finance has emerged in the area of finance and economics (Kumar and Goyal, 2016). The most famous work of Thaler & Barberis (2002) categories behavioural finance into two building blocks: (i) cognitive psychology, and (ii) limits to arbitrage. Cognitive psychology refers to the how people think, perceive and remember while limits to arbitrage is the arbitrage opportunity that appears in the market and arbitrageurs may not be able to make profit from market dislocations because of their irrational behaviour (Kumar and Goyal, 2016).

Behavioural finance literature suggests that many behavioural biases cause investors towards irrationality. Previous studies suggest that overconfidence bias is one of the most prevalent biases in the stock market. Overconfidence bias is well established in behavioural finance that makes investors too confident about their pre-acquired knowledge and abilities and ignores the risk related to risky investments (Kumar and Goyal, 2015). Odean (1999) analyzed the trading logs of discount brokerage accounts and documented that overconfidence causes excess trading. Additionally, Odean (1999) provided that excess trading decline the realized gains because of the excess transaction cost. Overconfidence exists when the investors are very confident of his knowledge and abilities (Bouteska and Regaieg, 2018). The investors always tend to give overweight to their private information compared to public information that is available to all investors (Bouteska and Regaieg, 2018). Nikolic and Yan (2014) stated that overconfident investors likely to overestimate the quality of their private information and underestimate the associated risk with financial assets that cause high irrationality in investment decision making. Therefore, this article attempts to examine the impact of overconfidence bias on irrational investment decision making. The rest of article is organized as follows. Section 2 discusses the relevant literature. In Section 3, we describe the research methods which used analyze the empirical results. Further, the empirical results of the article are discussed in Section 4. Section 5 concludes the findings of the article.

Literature Review

Daniel et al. (1998) proposed a theory on the stock market under and overreactions using the overconfidence and self-attribution biases. The authors proposed in this theory-building study that investors overreact to their private information and tend to underreact to available public information. Barber and Odean (2001) analyzed trading records of more than 35,000 households who opened accounts at a brokerage enterprise in the USA and documented that females are less overconfident to males. They proposed two broad hypotheses (i) male investors will trade excessively than female investors, (ii) and men will reduce their portfolio performance by excessive trading. In the context of France, Abbes et al. (2009) studied the link between overconfidence and market anomalies. They argue that overconfident investors believe that the market does not sufficiently evaluate public information to its private information. The result confirmed that overconfident investors indulge in excessive trade. In addition, Adams et al. (1995), Benos and Tzafestas (1997) and Camerer and Lovallo (1999) conducted experimental studies to investigate the presence of overconfidence bias across the emerging and advanced stock markets. Therefore, we propose significant influence of overconfidence bias on investment decision making (see Figure 1).

Methodology

Target Population, Sampling and Data Collection

Target population of this article was individual investors who have capacity and willingness to invest in securities. These individuals are perfect target population to examine the influence

of confidence bias on irrational investment decision making. Thenafter, we need to select the target respondents. MacCallum et al. (1999) "a sample size of between 100 and 200 observations is acceptable provided communalities are high, factors are well determined, and convergence to a proper solution is achieved". Therefore, we choose the university students who study PG courses at state and private university in the boundary of state of Haryana as respondents of the study. Thenafter, we contacted 700 individuals investors to fill the structured questionnaires using snowball sampling technique. Of the 700, 498 questionnaires were returned by respondents. Of the 498, 8 questionnaires were discarded due to incomplete and poor quality. Hence, the results of this article utilized the responses of 490 individual investors.

Measurement

As, the main aim of this article was to examine the relationship between confidence bias and investment decision making, therefore, this study need to measure confidence bias and investment decision making. The scale of overconfidence bias was adapted from study conducted by De Bondt and Thaler (1995) and Barber and Odean (2001). Next, the investment decision making was measure using modified scale developed by Scott and Bruce (1995). All responses corresponding to items were recorded on five point Likert's scale from "strongly disagree to strongly agree".

Statistical Tests

Our study utilized exploratory factor analysis to validate the internal consistency of the constructs and variables. In addition, we also deployed multiple regression analysis to investigate the relationship between confidence bias and investment decision making.

Figure 1: Proposed Research Model

Empirical Results and Discussion

Demographical Characteristics

Table 1 presents the demographical characteristics of surveyed investors. The results show that 63.27% of respondents were males (n = 310) followed by 36.73% of females (n = 180). Then, our results indicate that majority of respondents were in the age group of 40-60 years followed by respondents of age group of 26-40 years. Our sample shows that 46.53% and 40.41% of respondents were post-graduates and graduates, respectively, which implied that

majority of surveyed respondents were hold highest education degree. Next, the results provide that 71.22% of respondents earn more than Rs. 10,00,000 per year followed by 19.59% of respondents who earn Rs. 5,00,001–10,00,000 annually.

Table 1: Demographical Characteristics of Sample

Demographical Variables	Criteria	Frequency	Percentage
Gender	Male	310	63.27
	Female	180	36.73
Age (years)	<25	55	11.22
	26-40	190	38.78
	40-60	223	45.51
	>60	22	04.49
Educational Qualification	Upto 12th	40	08.16
	Graduation	198	40.41
	Post-Graduation	228	46.53
	Other	24	04.90
Occupation	Business	254	51.84
	Service	179	36.53
	Other	57	11.63
Income (annual income in Rupee)	<5,00,000	45	09.18
	5,00,001-10,00,000	96	19.59
	>10,00,000	349	71.22

Note: N=490.

Factor Analysis

Table 2 shows the outcome of factor analysis. Prior to analyzing data, we deployed Exploratory Factor Analysis (EFA) using Statistical Package for Social Sciences (SPSS) version 24.0 to identify the underlying factors as per rules suggested by Gerbing and Anderson (1988). For extracting factors, we deployed principle component analysis (PCA), and varimax rotation with Kaiser Normalization was also applied. The value of KMO was found 0.809, which was more than the threshold of 0.6 for sample adequacy and Bartlett's test of sphericity was also significant ($p < 0.001$).

Further, the results of factor analysis show that investment decision making and overconfidence bias explain 83.322% variance. In addition, reliability of variables also examine using cronbach's alpha. The value of cronbach's alpha was found, respectively, 0.967, and 0.817 corresponding to investment decision making and overconfidence bias which was more than the threshold of 0.70 for reliability of variables. Then, we used regression analysis approach for data analysis.

Table 2: Internal Consistency of Variables

Variables	Code Assigned	Factor Loadings	Cronbach's Alpha
Investment decision making (IDM)	IDM3	.965	0.967
	IDM2	.952	
	IDM4	.944	
	IDM1	.937	
	IDM5	.906	
Overconfidence bias (OCB)	OCB1	.929	0.817
	OCB2	.893	
	OCB3	.738	

Notes: Total explained variance = 83.322%; KMO measure = 0.809; BTS (p < 0.000).

Results of Correlations and Regression Analysis

Table 3 presents the correlations between overconfidence bias and investment decision making. The results indicate positive relationship between overconfidence bias and investment decision making (r = 0.625, p < 0.001). As shown in Figure 1, we proposed that overconfidence bias influence investment decision making. In addition, Table 4 shows results of regression model which supported that overconfidence bias influence investment decision making (β = 0.544, p < 0.001). Furthermore, it is implied that if the value of overconfidence bias increments by 1 unit, the irrational investment decision making also increments with 0.544 units. The positive relationship between overconfidence bias and irrational investment decision making implied that the increase in overconfidence also increases the irrational investment decision making. Our results are in line with findings of Bakar and Yi (2016), Bashir et al. (2013), Chhapra et al. (2018), Gervais et al. (2001), and Waweru et al. (2008), who reported that overconfidence bias

Table 3: Correlation Matrix

Variables	IDM	OCB
IDM	1	
OCB	0.625***	1

Notes: OCB, overconfidence bias; IDM, investment decision making. *** is statistically significant at 0.001 level.
Source: The authors.

Table 4: Results of regression model

Variable	Unstandardized Coefficients	Standard Error	t-value	Standardized Coefficients
Constant	0.951	0.102	9.323***	–
Overconfidence bias (OCB)	0.544	0.071	7.661***	0.481

Notes: Dependent variable = investment decision making (IDM). R^2 = 36.22. *** is statistically significant at 0.001 level.
Source: The authors.

influence investment decisions. This suggests that "overconfident investors rely on their own abilities to make investment decisions" and "pay less attention to updated market information and maintain prior biased beliefs". Psychologically, this is implied that overconfident investors make poor investment decisions. In addition, these types of investors prefer to invest in risky assets, and trade excessively, which cause their returns negatively.
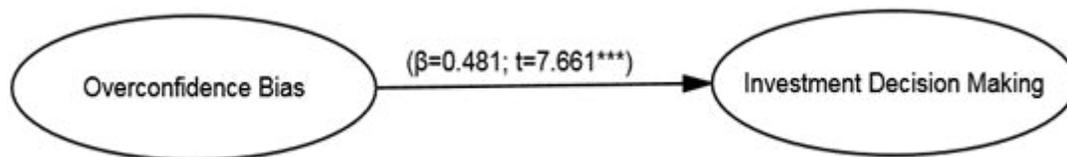

Figure 2: Standardized path coefficient

Notes: This figure shows the standardized theoretical path coefficients. *** Standardized coefficient are significant at 0.001.

Conclusion and Managerial Implications

Our study attempts to examine the effect of overconfidence bias on individual investors' investment decision making in the Indian stock market. Lack of financial awareness among individual investors make them irrational investors, therefore they are more proven to behavioural biases. Using the sample of 490 individual investors, our results confirmed that overconfidence bias positively impacts the individual investors' investment decision making. Overconfident investors rely on their own abilities to make investment decisions. They pay less attention to updated market information and maintain prior biased beliefs. Overconfident investors are inclined to make risky investments resulting in excessively trading which cause their returns negatively. Such investors overestimate the reward associated with risky investment and often lead to the wrong decision (Odean, 1999). Investors suffered from overconfidence take the full credit for positive outcomes and blame the others for negative outcomes. Furthermore, such investors do not rely on others' recommendations to diversify the portfolio. Therefore, they earn lower returns than those of the market, on average.

Our research has several implications for individual investors, advisors, regulators, and policymakers. This study highlights the effect of overconfidence bias on investment decision making in the stock market. Hence, our study enhances the rationality of investment decisions to increase stock market efficiency. Overconfidence bias may incline investors to invest in risky assets that result in excessive market volatility. Access to easy and better quality information always empower investors to make informed financial decisions. Investors should be informed about the market conditions and risk associated with their investment.

Acknowledgement

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Annexure A: Questionnaire

Section A

Socio-Economic Profile of Investor (tick)

1. **Gender:**
   Male ○
   Female ○

2. **Age (years):**
   Less than 20 ○
   20-30 ○
   30-40 ○
   40-50 ○
   50-60 ○
   Above 60 ○

3. **Educational Qualification:**
   Up to secondary ○
   Higher secondary ○
   Graduation ○
   Post-Graduation ○
   Other ○

4. **Occupation:**
   Business ○
   Service ○
   Other ○

5. **Monthly Household Income (Rupee):**
   < 3,00,000 ○
   3,00,000-10,00,000 ○
   > 10,00,000 ○

6. **Investment Experience (years)**
   1-3 ○
   3-9 ○
   9-15 ○
   Greater the 15 ○

Section C

This section of questionnaire has been developed to measure brand image towards personal care products; please specify (√) your opinion on each of them:

Strongly disagree (SD) = 1; Disagree (D) = 2; Neutral (N) = 3; Agree (A) = 4; Strongly Agree (SA) = 5.

Code	Items	SD	D	N	A	SA
OCB1	I trade frequently than other people.					
OCB2	I feel more confident in my own investment opinion over the opinion of my colleagues or friends.					
OCB3	I know the best time to enter and to exit my investment position from the market.					

Section D

This section of questionnaire has been developed to measure brand image towards personal care products; please specify (√) your opinion on each of them:

Strongly disagree (SD) = 1; Disagree (D) = 2; Neutral (N) = 3; Agree (A) = 4; Strongly Agree (SA) = 5.

Code	Items	SD	D	N	A	SA
IDM1	When making an investment, I trust my inner feelings and reactions.					
IDM2	I generally make investments that feel right to me.					
IDM3	When making investments, I rely upon my instincts.					
IDM4	When I make an investment, it is more important for me to feel the investment is right than have a rational reason for it.					
IDM5	When I make Investment, I tend to rely on my intuition.					

Problems and Prospects of Insurance Sector during COVID-19 Crisis

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Abstract

The corona virus pandemic has brought a lot of bad experiences. It reflects that everything is not in the control of human beings. The people are getting ill and dying. Closure of school, colleges and other educational institutes, overloaded healthcare system, unemployment, bankruptcy, stock markets collapse and billions spending on bailouts and medical aid are some of its dark sides. COVID-19 has impacts on almost sectors and industries in India but insurance sector is one of deeply affected sectors and it creates both problems and prospects for this sector. Some changes have come in insurance sector consequently and insurance providers are making a lot of efforts to cope with these changes & opportunities. Insurance sector face low cash flow due to decline in premium amount in different insurance segment and it has been digitalized entirely for the purchase and renewal of the insurance policies using their official website. The sale of insurance plans has increased vividly over the last few years as people realized the importance of financial backup for medical and other emergencies. During times of economic burden on the industries, the insurance sector has made its way out and evolved according to requirements of the customers. Now COVID-19 specific health insurance products are being offered by health providers along with regular health insurance products. Insurers are making best efforts to cope with all changes & opportunities. The authors in this research paper focus on problems and prospects of insurance sector in India during COVID-19 pandemic.

Keywords: *COVID-19, Opportunities, Pandemic, Insurance Sector, Problems, etc.*

Introduction

COVID-19 has impacts on many sectors and industries in India but insurance sector is one of the affected sectors. Some changes and challenges have come in insurance sector due to COVID-19 and insurance providers are making a lot of efforts to cope with these changes. Insurance sector has been digitalized entirely for the purchase and renewal of the insurance policies using their official website. The sale of insurance plans has increased vividly over the last few years as people realized the importance of financial backup for medical and other emergencies. During times of economic burden on the industries, the insurance sector has

made its way out and evolved according to requirements of the customers. Now COVID-19 specific health insurance products are being offered by health providers along with regular health insurance products. The pandemic has lead industries to change the way they operate and the insurance industry is no exception. Due to COVID-19 all activities from selling new plans to setting claims, companies take maximum help from their digital infrastructure.

IRDA has mandated the health insurers to include COVID-19 covers in their regular health insurance plans for the policyholders. Since, the treatment of corona virus had not been included under the active products, so claims made by the customers were additional burdens for insurers, especially when not treated at the government hospitals. The insurers have to reorganize their finance structure as the number of claims for other diseases increased because people suffering from critical diseases like diabetes, respiratory disorder, heart diseases etc. are more prone to get sick with corona virus. Also, extension in the grace period of 30 days for renewal, the health insurance providers can face some serious liquidity challenges. Due to more claims during, insurance companies have to estimate the chances of rise in claims. Insurance industry is dependent on some businesses like automobile, transportation, hotels, infrastructure, etc., to a large extent so problems in these businesses because of crisis create additional adverse results.

The insurance industry is related with economic growth but COVID-19 crisis has significantly impacted the insurers across the globe and industry setting up new rules of work and moving towards digitalization. Lower profits and growth of insurance companies are some of direct impacts that force insurers to reduce costs and to give performance efficiently. Shifting in customer preferences is indirect effects on the insurance sector.

COVID-19 which started as a health crisis has now taken financial strength of the economy. As Indian economy crashing and multiple sectors facing a major financial hit, the insurance industry has become a vital part of the new phase of the economy. India is in one of 15 adversly COVID-19 exaggerated economies. A McKinsey report estimates that the national income regresses to pre-COVID level either in Quarter-4 of 2022 or in the Quarter-3 of 2022. Global insurance index decreased by 22.6% and share prices declined by 25.9% due to COVID-19.

Impacts of COVID-19 on Different Insurance Segment in India

Automobile Insurance

The automobile sector, contribute to 35% of the overall total insurance premium but this sector showed decline in premium during the crisis. The pandemic and the resultant lockdown affected automobile industry leading to reduction in revenue for the insurance industry. One of the innovative approaches to solve this problem is the "Pay-as-you-drive" model. There is culture of work-from-home policy, so drastic reduction in the number of motor vehicles on Indian roads result reduction in the number of kilometers driven on national level. Thus, insurance customers can avail of an insurance policy at a discounted rate under the "pay-

as-you-drive" model. The car owners insure their vehicles for only the kilometers that they expect to drive against average distance. The customers are revolving to digital & contactless mode of transactions from buying of products to other services due to social distancing.

Health Insurance

IRDAI made compulsory for insurers to start offering "Corona Kavach – an indemnity based health plan and Corona Rakshak, a fixed benefit health insurance policy" to the public. These policies cover hospital and medical expenses of COVID-19 patients. India was underinsured country in case of health insurance coverage. But with Government flagship programme such as 'Ayushman Bharat' whose purpose is to insure the people who are below poverty line, the gap between the number insured and uninsured person has been bridged but only 18% of the urban population and 14% of the rural population have private insurance plans. Now customers demand for innovative customized/specialized health products with facility of online transactions.

Life insurance

Life insurance mainly protects future financial security of people. As a result, life insurance is related with the income of people, their business performance and net assets. During COVID pandemic, need and interest for one's coverage enhanced. Pure life plan's demand is very high during crisis. Life insurance companies are also providing pure health insurance products having coverage against COVID-19. During this difficult time people understand about the benefits of life insurance. They prefer to purchase single premium policies, term plans & pure risk insurance plans and consequently life insurance premium is reflecting growing trend.

General Insurance

It evaluates the assets, businesses and overall financial activities & efficiency. It is benchmarked and linked with the GDP of a country to measure the insurance penetration and density. General Insurance industry is reliant on the performances of different industries and individual businesses. So with the lockdown which hit almost business sectors, the General Insurance market has subsequently suffered. The overall sector is believed to look up as the global economy stabilizes by 2022.

Impacts of COVID-19 on Insurance Sector in India

COVID-19 pandemic has increased claims for insurance companies, but the new after COVID-19 environment promise opportunities for growth. The impacts of COVID-19 on the insurance sector are as follow:

- Customer behaviors have changed drastically. No direct sales are demanded by customers. Due to high unemployment rates they re-assess their spending patterns.

- Due to social distancing and low mobility from one place to another distance covered by people in kilometers reduced at large scale.
- The pandemic has also impacted Indian business operations very badly. 91% of Indian businesses will be impacted by the pandemic. But if this pandemic's adverse consequences are not covered in insurance plans it will destroy the basis soul of insurance.
- Marine and aviation insurance sector bear losses due to decreased travel, low mobility so profits of insurance companies from these sub-sectors also suffer a lot.
- The claims for motor insurance have come down to 5% of the normal claims due to the lockdown and social distancing.
- There is approximately 30% and 15% decline in Life insurance and non-life insurance sector respectively.
- Insurance companies are introducing and launching custom based specialized insurance products to fulfill the needs of customer.
- Insurance companies are offering indemnity based health insurance product also called medical insurance policies which compensate the insured against hospitalized expenses.
- Health insurance policies demand has increased by 30-40% seeking coverage against COVID-19 virus that has affected many people in India and worldwide.
- Public insurance companies roll out Rs. 50 lakh under tailor made comprehensive personal accident cover for public health care providers in case of accidental death due to COVID-19.
- Coverage offered to 22.12 lakh private health care members, public and community health care workers for that premium ranges between Rs. 200 to Rs. 2,500 only.
- Motor insurance portfolio remains down because of low renewals and fewer sales of new cars from April to August 2020. But after that in September, October and coming following months the production and sale of new vehicles is enhancing.
- There were low claims against personal accident insurance cover due to low movement of people & their vehicles.
- Lower renewal of personal accident insurance policies was reported.
- Investment-linked products experienced a decline in demand due to stock market variations.
- People want to increase their insurance cover during this uncertainty period lead to boost in demand for life and health insurance products.
- Decline in travelling beat the airline industry and leads to decrease in the travel insurance segment.
- Now people did not like to lock their money for long periods in different investment schemes.
- There are adverse impacts of pandemic on travel, health and hospitality industries.
- Many insurers have built up emergency cover to meet out adverse conditions.
- Due to digitalization of so many functions and services the business of cyber security is enhancing day by day in present scenario.

Methods to Cope Changes in Insurance Sector

Some common measures adopted/taken by insurance companies to keep their momentum to maximum extent:

- **Development of Health Products:** To meet out the growing and exclusive needs of the policyholders, the health insurance providers have made some developments/modifications and transformations in health insurance products. Some insurers have launched separate additional unique benefits while others have included these covers under the regular health insurance covers to cater the needs of the customers and various features such as short waiting period, wide coverage, expenses for protective apparatus, etc. have been included in all the basic health insurance covers.

- **Expansion in Sales:** People realized during COVID-19 the importance of financial backups for medical & other emergencies and so more and more people are investing in insurance policies for themselves available for them by choosing an appropriate insurance policy.

- **Reserve Supplies:** Due to the economic slowdown on account of global pandemic, the government of India has reduced the repo rates and bond interests, which can be potentially helpful in maintaining the reserves, credit risks, liquidity risks, solvency, profitability etc.

- **Premium Payments in Installments:** During COVID-19 crisis, the health insurance providers give the alternate to customers to pay their premium payments in installments. This helps the policyholders in avoiding the collapse of their finances as it makes the health insurance plans more affordable and covers a health plan with high sum assured. The premium can be paid in quarterly, half-yearly, also monthly and annually in installments.

- **Digitalization of Insurance Sector:** The health insurance providers have started online KYC (Know Your Customers) for their customers where there is no need for physical signatures and office documentations. These changes have made things easy and accessible for the customers and solve the complaints & grievances very quickly and efficiently.

Organized webinars

Many brokers have organized webinars on cyber security policies, its claim, conditions etc. Companies increased the sum assured for life insurance policies. Some companies are giving advance commissions to their agents. Insurers are reducing their operating costs and focusing on cyber security controls because of high digital operations. Many insurers have started opening branches with reduced capacity and social distancing to handle problems specifically related to COVID-19.

How to Rise Up Against the Challenges

The COVID-19 gives birth to both immediate and potential challenges for the insurance industry in near future. Insurance companies are taking required measures to ensure a smooth handover of the industry into the post COVID world. Insurers encouraging their customers to

connect digitally and supporting their agents financially in this uncertain time by providing them advance commissions/salary. Due to digitization in the coming days the digital customers of the industry can expect only better choices and smoother delivery systems.

• Conventionally, the insurance industry has been employee-centric. But after digitalization there will be an impact on its vast employee bases in future. However, a vast majority of the business will require face-to-face communication. As a result, companies need to ensure that their agents have access not only to safety equipment in the office but also have data and applications to do work from home safely.

• The insurance industry helps other industries and hence, cannot overlook any risks to its own existence. They must plan the business continuity in according with some future disturbances like natural disasters, environmental issues, geographic & political crises, resulting instability of global regulations, etc.

• The industry has to prepare itself for reduced cash flows due to low premium. It needs to carefully monitor decreased yield from investment portfolio.

Conclusion

COVID-19 impacted insurance sector to a large extent with so many changes and creates both problems and prospects for this sector. It can be concluded that for moving ahead the insurance industry must learn from the past and choose solutions with a preference for a realistic and fast approach rather than looking for perfect solutions to meet out the future industry challenges efficiently. Industry experts should build a healthy and flexible frame of operations as insurers have to adopt new normal. The global pandemic has brought in a lot of changes in different sectors across the country, one of which is the insurance sector. Insurance sector has transformed positively in a lot of aspects but at the same time it faced some challenges also, but it continues to serve its policyholders with modesty and sincerity for keeping its growth momentum.

Prospects and Problems of Housing Finance in India

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Abstract

Housing Finance is a high flying sector these days and is tipped to grow at a phenomenal 36% P.a. Banks and financial institutions have brought sea changes in their strategies and there is shift from sellers market to buyers market. Liberal assessment motivators by the government, low and serious loan costs for housing finance have made this area as super hot area. Keeping in view the importance of housing finance in solving the housing problem an attempt has been made to identify the main problems and challenges issued by this sector. A look has additionally been given to the future possibilities of this area.

***Keywords:** Housing, Housing Finance, Housing Finance Companies (HFCs), National Housing Bank.*

Introduction

Housing is one of the essential requirements of humanity as far as wellbeing, security, confidence, societal position, social character, fulfillment and accomplishment. Development in this area is viewed as one of the markers, which has a reflection on the wellbeing of a specific economy. Today, for India to accomplish adjusted financial development, it is fundamental requirement to boost the area of housing finance sector. Since Independence development in the Indian populace has disturbed the issue of housing for Indian resident's .According to the census of Indian Government in 2001, about 742 million of population out of 1027 million was living in rural areas and 285 million was living in the urban areas. At present 31.6% of the population is accounted for urban area whereas it was 25.7% under 1991 census. So there is rise of 5.9% in the Urban population. There are 27 urban communities with more than 1,000,000 populace. This quick urbanization has lead to an enormous number of destitute families, fast development of ghettos and unapproved provinces, widespread theory and lacking accessibility of water disinfection and essential offices. This has additionally carried alongside it lopsidedly more appeal for making this sector upper in the market.

Scenario of Indian Housing

Deficiency of housing has persevered since freedom. However the public authority of India has put forth certain attempts to control this issue in various 5-year designs yet except if private and public area put forth coordinated and pioneering attempts mutually, this issue can't be tackled. One might say that joint endeavors have given this issue a solvent shape.

Government Initiatives in Housing and Urban Development

Government of India has taken series of Initiatives for the development of Housing and urban infrastructure. The National Housing and Habitat Policy 1998 give emphasis to "housing for all" before the end of 2007. The Government is taking actions to transform the housing sector into an engine of growth of the economy through various policies and a number of initiatives including the expansion of benefits u/s 80 I to huge housing projects, scrapping of Urban Land Ceiling Act, increasing rebates for home loans, lower interest rates, securitization of housing loan, etc.

Transformation of Indian Housing Finance System

Until 1970 the main focus of Indian government was on agriculture and industry and housing was not included in the priority sector. In the 1970s, a number of housing boards at state-level were incorporated with the Housing and Urban Development Corporation (HUDCO) which was acting as an apex body, provided finance and technical support to all these state boards. Larger part of the working class populace had to back housing finance by acquiring from casual sources and their amassed investment funds. After the commencement of the liberalization cycle in India, the Government took a number of measures to advance housing finance from the conventional area and offer the assignment of providing housing finance with the private area.In the year 1987 National Housing Bank was incorporated by the Indian government as the controlling body to formalize housing finance which was one of the most outstanding steps in this direction. This sector now a day has emerged as growth sector in these days and is tipped to grow at a phenomenal 39% p.a. Till the seventies housing was a basic problem. No proper consideration was given to this problem by the government. This sector plays a role of key sector in shaping the economy of any country. Combined contribution of housing sector in GDP is 15 to 18%, Out of which 3 to 5 % of residential investment and 12 to 13% of consumption spending. Housing sector recognized as a profitable sector due to increase in the net asset value year after year.

Initiatives Taken by Central Government for Urban Housing

1. **Housing for All Mission by 2022:** The "Pradhan Mantri Awas Yojana (PMAY) - Housing for all (Urban) Mission" will be executed during 2015-22. It will provide crucial help to housing agencies with the help of States and UTs for giving houses to every single entitled family/recipients falling under the EWS/LIG classes, who don't possess an ideal house

anyplace in India, by 2022. The "Housing for All" Mission was propelled in consistence with this target of the Government and with the endorsement of the able expert. The Mission looks to deal with the housing prerequisites of the poor people lives in urban area, including rural tenants, through the accompanying projects:

- Slum recovery of rural inhabitants with the involvement of private engineers utilizing land as an asset.
- Promotion of reasonable housing for the more fragile segment through credit-connected endowment.
- Affordable housing in association with general society and private parts.
- For getting achievement of the plan the Government has, thusly, put the attention on creative innovations, green structure and the utilization of quake safe advances in the Housing for All Plan.

2. **Rajiv Awas Yojna:** "Rajiv Awas Yojana" was a Centrally Sponsored Scheme, which kept running from 2013-2014. The plan expected to make India ghetto free by 2022 by giving individuals haven or housing, to make a Mortgage Risk Guarantee Fund to empower arrangement of credit to Economically Weaker Sections (EWS) and LIG families and to urge the States to receive strategies that will make a ghetto free India on 'entire City approach'.

3. **"National Urban Livelihoods Mission":** NULM centers on sorting out the Urban Poor in their solid grass root level establishments, making open doors for aptitude improvement prompting market-based work, and helping them to set up independent work adventures by guaranteeing simple access to credit. The Mission is gone for furnishing cover outfitted with basic administrations to the urban destitute in a staged way under the plan of Shelter for Urban Homeless (SUH).

4. **Smart Cities Mission:** About 31 percent of India's present populace lives in urban regions and contributes 63 percent of India's GDP (Census 2011). With expanding urbanization, urban territories are relied upon to home 40 percent of India's populace and contribute 75 percent of India's GDP by 2030. The Smart Cities activity will improve the personal satisfaction and draw in individuals and ventures to the city. (Service of Housing and Urban Poverty Alleviation, CRGFTLIH-Guidelines)

5. **Indira Awas Yojana (IAY)** It is the greatest and most far reaching housing program at any point taken up in the nation. It is a lead plan to give monetary help to all BPL family units in provincial regions for the development of a home unit.. The target of the plan is to basically help the flimsier segments in country regions that have a place with the BPL class by conceding monetary help for the development of Pucca house. 8.29 lakhs houses were built as on December 31, 2014 under IAY.

Revolution of Housing Finance in India

1. **First Phase:** Up to 1970's it was the first phase, when only government schemes for housing was in India.

2. **Second phase (from 1970 to 1980):** In the year 1970 HUDCO was established as first public sector housing finance company and after that in 1977 HDFC was established as first private sector housing finance company.

3. **Third phase (from 1980 to 1990):** In the year 1988 NHB was set as a regulatory and supervisory body of housing finance companies. In 1989 LIC housing finance Ltd. was set by LIC.

4. **Forth phase (from 1990 to 2000):** In the year 1990 GIC housing finance was established by GIC. Also in 1991 government of India liberalized the interest rates of home loan in India.

5. **Fifth phase (from 2000 to till date):** from the year 2009 to 2011 many of the foreign banks and micro finance institution were allowed to enter in the housing sector in India. Now the number of HFC's has increased up to 91.

Housing Finance – Emerging Difficulties

Developing centralization of individuals in urban zones has brought about an expansion in the quantity of individuals living in poor urban area of the country". "According to a report submitted by a technical committee to the Ministry of Housing and Urban Poverty Alleviation (MHUPA)" "India's urban housing shortage is estimated at nearly 18.78 million households in 2012, Besides those living in obsolescent houses, 80 percent of these households are living in congested houses and are in requirement of new houses. The report also highlights that nearly one million households are living in no serviceable katcha houses, while over half a million households are in homeless conditions".

Housing shortage in urban areas is principally possessed by the EWS and LIG categories. Developers of real estate as well as private competitor principally selected the high income group due to getting gain from these projects. Majority of the people belongs to EWS and LIG could not afford such housing built across urban India. However, high costs of land, obsolescence of building by laws, strict norms of licensing, delay in approval of project made the housing project cost higher. Traditionally, government of India took hard steps to provide housing to weaker section of society at low cost. But now a day, government has taken various initiatives and policies to serve the affordable housing policies to EWS and LIG. Government also launched a scheme called "Jawaharlal Nehru National Urban Renewal Mission" (JNNURM) in 2005 and composed the "National Urban Housing and Habitat Policy" in December 2007 to deal with the challenges of essential housing and growth of slums in Urban area.

Housing Finance – Future Prospects

A. **Digital Presence:** As computerized stage has been spreading over the domains of India, more individuals are getting into the virtual universe. With expanded innovation use and better computerized infiltration, HFC's can develop more than ever. The 'Computerized

India' activity is evaluated to build the rate of web utilization in India by providing reasonable innovative gadgets to provincial territories. Hence an open door is being manufactured gradually for the HFC's to enter into a more noteworthy group of spectators.

B. **Expanding Demand for Lands in Outer Edge:** As the metropolitan territories are continuously getting over populated, many of the individuals are happy to live in rural areas where harmony wins. So as to continue satisfying the customer needs, more manufacturers are creating ventures in rural zones. Such a circumstance can result as a development pointer for the HFCs, as more individuals are presented to the need of sufficient home credits.

C. **Developing Population:** It is assessed that the complete populace of India would override that of China by 2030. In the forthcoming years, along these lines developing populace would be tended to with satisfactory housing offices. Along these lines, requirement for monetary help would be felt like at no other time.

D. **Expansion of Smart Cities:** A list of 100 smart cities has been published by the governments that are to be developed in the coming years. Billions of dollars have also allotted for the expansion of such projects. When cities would be built, demand for accommodation is about to rise. Thus, a scope of growth can be noticed in housing finance sector.

Conclusion

It can be concluded from the above analysis that lack of sufficient fund, inadequate laws, unhealthy competition among the institutions and conventional thinking are the main problem through which the sector is suffering from. Government and companies needs to take some hard steps to overcome from these problems. There is a need of joint efforts on the part of government, housing finance companies and regulatory agencies to chalk out comprehensive action plan to meet the challenges of housing finance so that housing need of every common man can be fulfilled.

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SECTION 3

MARKETING AND ENTREPRENEURSHIP: SUCCESS STORIES AND DEBACLES

Women Entrepreneurs and their Sustainability: A Descriptive Analysis of their Problems and Prospects with Special Reference to Madhubani Painting Cluster Bihar

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Abstract

Women entrepreneur play a vital role in improving the welfare of the family as well as national economy. The paper is an attempt to throw the light on the problems of women entrepreneurs in the madhubani painting cluster and suggestions for the growth of women entrepreneurs and how they are practising their traditional art form in running their business and becoming self-dependent and sustaining their livelihood in the society.

Women entrepreneurs must be moulded and practiced with entrepreneurial traits and skills to meet the opportunities and challenges in the local and national level with the madhubani art form so that they have their own identity and marketing channel and be competent enough to sustain in society. The study is mainly based on the secondary data

Keyword: *Women Entrepreneur, Problems, Prospects, Madhubani Cluster.*

Introduction

India is a land of art and craft that has preserved its ancient culture. The madhubani district in Bihar is the famously known for its madhubani painting. The origin of madhubani painting goes ways back to the era when the king of Mithila, Raja janak ji who is the father of goodness Sita maa. During the Sita maa wedding to the lord Rama, the king asked the mithilanchal native to celebrate the happiness together and decorate the whole village in a unique style. The artist come together and painted the wall of the whole village with geometric pattern and made some portrait of the rituals of wedding, birth and celebration took place in the whole village. Since then, it has been passed down from generation to generation among the mithilanchal women. The women artist in madhubani village jitwarpur, feels happy and enjoyable while doing painting on walls, floors (courtyard or entrance of the house), movable object, canvas, they make gods, goddesses, animal, and mythological characters. The women artisans use her fingers, twigs, matchsticks, pen nibs, cotton, natural dyes, and pigments extracted source like for yellow: turmeric, black: lamp or kajal, Blue: indigo, Green: Seem leaves, Red: kusum

flower etc and striking features are 2D representation, double line boarder, floral pattern, hint expression, bold use of colour, bulging eyes. Today Madhubani painting is recognised by all over the world not just for rich colour or design but also the deeply stories portrait.

Literature Review

Savita Kumari & Kumari Shipra (2020) in the article - Personal constraints faced by Empowering women entrepreneurs involve in Mithila painting as per article review the problems of empowering women entrepreneur involve in mithila painting and the socio economic variables characteristics of artist Age, Caste, education, occupation, Family type, Entrepreneurial orientation and the result of the study showed that rural artist hardly ever controls production resources live, land, credit, economic, financial, market approach and technological condition

Ms Sweety Gupta, and Ms Aanchal Aggarwal (2015) in this article – Opportunities and challenges faced by Women Entrepreneurs in India reviews Women in the current period should be create awareness about her own identity so that they contribute in economic growth and development of the country, the problems are lack of technical skills, access to capital, lack of management, access to capital, access to network, financing, efforts to balance work and family, stiff competition, lack of exposure to the world of business. The state needed proper measure for improvement of women entrepreneur as they are facing challenge complete change in attitudes and society mindset. The women entrepreneurs setting up new enterprise.

Yusairah Ahmad & Dr. Mohammed Anees (2012), Issues of the Lucknow Chikan Handicraft Industry in the article light upon about the challenges faces by the artisans and problems of entrepreneurs like Activities done in scattered locations, Export dwindling, a piece of month to complete the work, unawareness of marketing tools, wastage of garments etc. The chikan craft industry is an unorganized industry and artisans also faces a lot of issues like under paid, middlemen pay less, medical issues, illiteracy, spare 7-8 hrs. of time ignorance of workplace, very low standards of living, No vocational training or skill enhancement training. Strategies should be measures by both central and state government problems faced by both entrepreneurs and artisans.

Objective of the Study

1. To examine the problems and challenges faced by the women entrepreneurs in the madhubani painting cluster, Bihar
2. To provide suggestion for the improvement for the functioning of women enterprise.

Research Finding

In general studies has been taken place for the empowerment of women entrepreneurs and the challenges and opportunities faces by women entrepreneur which majorly are lack of technical skills, access to capital, lack of managerial skill, access to capital, access to network,

financing, efforts to balance work and family, competition, workplace, literacy, standard of living, infrastructure, technology, etc.

The impact of the COVID-19 pandemic has affected both artisan and the women entrepreneurs in madhubani painting cluster as they are not getting platforms for their artwork selling as government lacking behind in organizing exhibitions and industrial fair. In the detraction of marketing channels, women entrepreneur finds themselves trapped in the clutches of middlemen.

Research Methodology

The study is purely based on the secondary data. The primary focus is to understand the women entrepreneur problems in madhubani painting cluster and their traditional art form through the help of various sources such as journals, newspaper reports, websites, books, etc.

Women Entrepreneur in Madhubani Painting Cluster: Women Entrepreneurs, SHG and artisans in village of Madhubani region who often share a similar social, and cultural background in her home itself collectively paint this painting on movable object like Saree, Mobile cover, Bags, Jacket, Dupatta, T-Shirt, Bed cover, Ties, Cap, Diary, etc., and gave to the middlemen or trader who further gave to the local shops, and from there the interested customer buy these painting. But the drawback is that These traders or middlemen took advantage of the women entrepreneur and they chop a good profit margin as these women entrepreneur lacking the marketing channel and their product accessibility.

The rural women entrepreneur who goes to her workshop after finishing their household work or some of them in home herself make a space for work, as they are not allowed to move outside from home Also, they are not allowed to move out of the village for business.

From here Middlemen or Agents came in frame took advantage of their product and chop good profit margin even the government is not showing interest in buying the local entrepreneur and artist painting. Earlier, the Ministry of Textiles used to organise a several exhibitions throughout the year. However, such exhibitions were not doing well under current regime. And due to COVID-19 the rural women entrepreneur in madhubani region facing lots of huddles in sustainability of their business and livelihood of artist working under themselves.

Both at the Centre and the state government have failed in setting up the industry. It suffered the double whammy of demonetisation and the ongoing lockdown. The monthly turnover of this cottage industry was between Rs 25 lakhs and Rs 30 lakhs pre-lockdown. Even though the Madhubani paintings contribute a major chunk of Bihar's foreign exchange, it does not have a marketing channel. The number of exhibitions has gone down drastically (25% of earlier), and only selected artists are invited to set up stalls. Except for few like Dilli Haat, there is no dedicated market for the artwork. The industry still does not have a government stock house. In the name of financial assistance, few artists were given a loan of Rs 50,000 under by the Micro Units Development & Refinance Agency Ltd under the Pradhan Mantri MUDRA Yojana (PMMY). An NGO working for welfare of artists. At least

70% of the families in Jitwarpur depend on the art form for a livelihood. Out of them, close to half are not even able to write their own names. It is why artisans have found it difficult to start online business as they unaware about technology and who to get access of it.

A several of local institutions and the Jeevika (Bihar Rural Livelihood Promotion Society) along with 185 SHG started in production of facemask, in this pandemic which given an opportunity to women entrepreneur to think out of box and aspire other to practice entrepreneur's activity.

As world is changing and the women entrepreneur stepping up with the madhubani painting art for starting up business whether online and offline business and becoming self – dependent and sustaining their livelihood in the society and generating employment to the poor artisans. There are some of famous women entrepreneur who worked in women empowerment and uplift the painting and the artisans in a national as well international level.

Ihitashri Shandilya (Founder, Mithil Aasmita), Usha Jha (Petal craft founder) and Ruchi Jha (Director of iMithila Handicrafts and Handlooms Private Ltd) are some of women leading the business and set an example to other rural women entrepreneur to step up out from the four boundaries with madhubani painting products as an independent career option.

Women as Entrepreneurs in Bihar

Women in business is a recent phenomenon in India. Emergence of women entrepreneurs in the economy is an indicator of women's economic independence and their improved social status. "When woman moves forward the family moves, the village moves, and the nation moves." These words of Pandit Jawaharlal Nehru are often repeated because it is an accepted truth. Employment gives economic status to women. Economic status paves the way of social status. Entrepreneurship is a promising area for growing women's work participation, as it can offer opportunities for women from diverse contexts and with different capacities, within prevailing social norms. According to the Global Entrepreneurship Monitor Report (2018-19). India ranks 5th in the world in terms of having a suitable environment for entrepreneurship. While this is promising, the status women's entrepreneurship in the country remains worrying. The Mastercard Index of Women Entrepreneurs ranked India a low 52nd out of 57 countries when it came to women entrepreneurs' ability to capitalise on opportunities offered by their local environments. Through landmark policies like 35% reservation for women in government jobs, and the focus on women's collectives under JEEVIKA, it is hoped that women and girls in Bihar will be able to achieve their potential and fulfil their aspirations.

In 2018, the Government of Bihar released the first edition of the Gender Report Card, which provided an overall snapshot of the progress Bihar has made with reference to women's empowerment. The 2019 edition of the Bihar Gender Report Card is more focused in its scope, highlighting women's work preparedness and work participation in the state. This edition also underscores certain enabling conditions that are essential for women's economic empowerment.

The majority women entrepreneur establishments in Bihar are self-financed. Only 5% received financial assistance from the government, while just 1% borrowed from formal financial institutions. Donations or Transfers from other agencies (including non-profits) constitute 42% of the financing for women entrepreneur businesses.

Given this, there is ample scope to improve women's access to formal financing methods, through platforms like the Micro Unit Development and Refinance Agency (MUDRA), for instance. Further, addressing gendered barriers like social norms and discriminatory property and inheritance laws is also crucial.
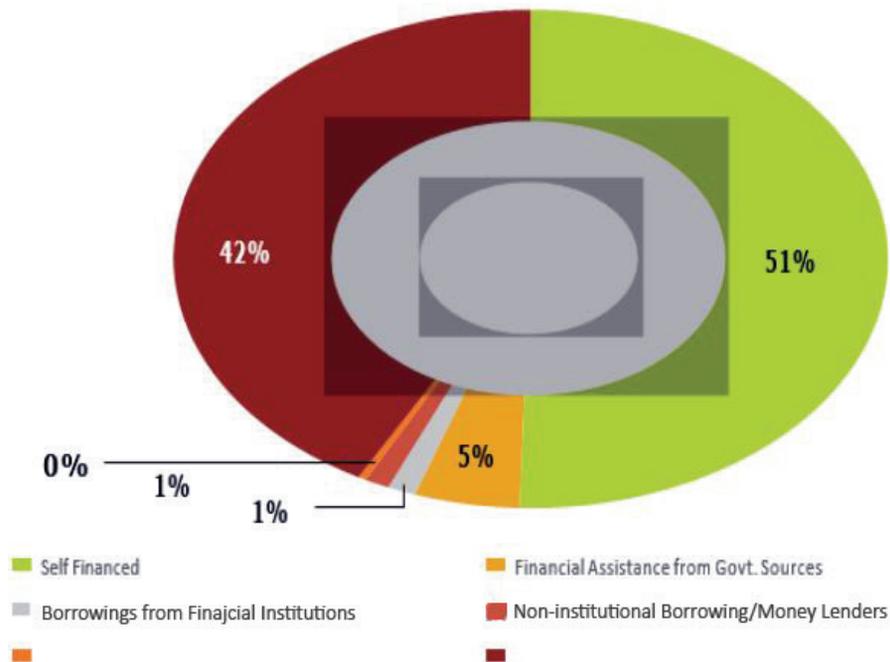

Figure 1: Women Entrepreneur Established in Bihar

Major Problems Faces by the Women Entrepreneurs in India

1. **Lack of Education and Awareness:** Most of the women are illiterate around 60% because women are not allowed to cross four walls as mentality of many people is that women should be work at home rather than study.
2. **Balance Between Family and Work:** A women knows very well her responsibility and she want to spend all her time with her family and in parallel women manage her business
3. **Inadequate Marketing Facility:** Most of the women entrepreneur depends on middlemen for marketing of their product as they are lacking market awareness for women market is a chakravyuh
4. **Shortage of Finance and Row Material:** Finance is one of the major huddles for successful business because of less credit worthiness and poor connectivity of road and storage of row material.

5. **Tough Competition:** Women entrepreneur faces tough competition from large organization who indulge in same product line as they are into mainly women prefer handicraft, tailoring, beauty parlour services in India as they can be able to handle both

6. **Limited Mobility:** Due to security concern women are not able to go outside as there is taboos arresting the rural women entrepreneur works within four walls.

Suggestions for Improvement

1. Financial institute and both central and state Government should provide special assistance and incentives for encouraging women entrepreneurship.

2. Management Training programmes should be conducted in a local platform to encourage women artisans to enter in the entrepreneur's business through Government Programmes.

3. Many women artisans cum entrepreneur are not aware about available entrepreneurial development schemes offering by different types of incentives and assistance.

4. More research is to be conducted to identify the problem which is being faced by both the artisans who are into the business.

5. Enterprise should be set up in each district for upgrading level of activities of both women entrepreneur. Women industrial estate shall be setup in each District for upgrading level of activities of women entrepreneurs.

6. Wide range of advertisement and publicity should be given about the financial, exhibitions of handicraft products and other encouragement that are offered by the Government.

7. There is an eerie need to create knowledge about the technology access and marketing channel for product accessibility in the market.

Conclusion

The women entrepreneur of madhubani painting majorly belong to rural area and they are sustaining themselves by practicing the entrepreneurship activity with the product of madhubani painting in the national and international level. Madhubani painting cluster comes in major cluster and strategies need to be formulated by the government and non-government organization to the existence problems faced by women entrepreneur in Bihar. The women entrepreneurs in Bihar economy are gradually increasing and women entrepreneur becoming self-independent and sustaining their livelihood in the society.

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Knowledge-Based Approach Foster Solar Energy Devices

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Abstract

This paper develops the concept of knowledge- based development of solar energy devices. Due to advances in technology, changes in the market, health effects and energy security led to produce new alternatives. Solar energy can bridge the gap of demand and supply of power and fulfill the energy needs of India. Few industries come forward for manufacturing solar energy devices. Lack of ongoing insight into solar energy device operation reduces the significant benefits and prevent visibility. The knowledge plays a crucial role in development of solar energy devices through knowledge intensive activity. For developing new business areas there is a need of knowledge- based approach that can reduce knowledge gap between countries and find balance between traditional and modern technology. The aim of this paper provides the integration of knowledge- based users, knowledge communication and innovation, knowledge management, and knowledge society that can foster the development of solar energy devices.

***Keywords:** Knowledge-Based Development, Knowledge: Society, Communication, Management.*

Introduction

Knowledge plays crucial role in development and reshaping the world's economy. The evolution of solar energy devices achieved remarkable position in terms of cost reduction, technology advancement, installation and customized services. Knowledge societies and knowledge- based development can play a key role in transforming the conventional energy into non- conventional energy. According to Hans-Dieter Evers (2003) in the current phase of economic transformation, knowledge has taken its place as the most important factor of production. In today's world knowledge is becoming essential for successful and competitive environment. Society and industry focus on knowledge-oriented approach and rely on experts for innovation and technical change. Knowledge based development understand the product dimension through customer preferences, search for new knowledge and through collaboration and managerial functions implement the knowledge into practicalities (Laszlo, K.C. & Laszlo, A., 2007). Suggested three purposes of knowledge-based development, i.e. economic prosperity, human development and social and environmental sustainability. Zhang

et al. (2009) examine the product development strategy as breakthrough focus, platform focus and incremental focus, knowledge utilization as mediator and product innovation as outcome. Laszlo, K.C. & Laszlo, A. (2007) stated knowledge-based development is a powerful strategy for economic growth and nation to participate in the knowledge economy. Knowledge economy foster the development of knowledge through economic, institutional and regulatory environment.

The investment in solar energy devices are financially viable and also conserve power and environmental awareness. Though deficiency of power in India is increasing rapidly in such a scenario solar energy serves an affordable and efficient source of electricity. Now -a- days many people prefer solar energy devices because the attitude and preference of consumers are moving towards renewable source of energy. Many of our industries have also come forward in making the best quality of solar energy devices. But in developing country people still need to realize the importance of solar technology and also the industry and government faces many hurdles regarding the cost reduction, technological advancement, installation, skills requirement, and customized services. We can overcome from these challenges by approaching knowledge-based development and knowledge society.

Review of Literature

Dubina, I.N., Carayannis, E.G., & Campbell, D. (2011) define the "creativity economy" and interrelates knowledge, innovation and creativity on one hand and knowledge economy and knowledge society on the other hand. The advancement of knowledge society and knowledge economy influence the knowledge, innovation and creativity for further progress.

Sengar et al. (2017) stated that solar energy education and skill development can we enhance by going through school curriculum with simple theory explanation of scientific principles and for practical understanding experiments should be involved. In higher education advanced knowledge of solar energy devices equipped with designing, innovating new solar system as per need of local communities. For skill development beside the government action plan, industries and academic institution local community involvement is also essential for promoting solar energy technologies in developing country.

Hoegl, M., & Schulze, A. (2005) stated that the purpose for which knowledge is being managed need to be examine for selection of knowledge management methods. When the purpose is examined in terms of knowledge creation in new product development, company can deploy large knowledge management methods for new product development. Researcher determine knowledge management methods that affect different modes of knowledge creation i.e., socialization, externalization, combination and internalization. Knowledge management methods offer a great improvement in new product development process.

Fain et al. (2010) several institutions engaged in knowledge-based economy for product innovation and development. Beside the triple helix model of institutional relations proposed by several researcher for new product development, i.e. industry, university and government, fourfold helix relations also tested and claim that user and society are also equal partner in

product innovation process. User is put into the center of innovative relations and where society as a whole binding all the actors together.

Lee, M.C. (2010) suggested the integration of innovation management, i.e. market adoption model, product life cycle, technological innovation, readiness and knowledge management, i.e. diffusion, creation, transfer, application. Researcher found out that by apply the knowledge innovation as a tool we can integrate the new product development strategy and new product development performance.

Zavarko et al. (2017) stated that due to fostering of renewable energy and sustainability, large organization faces huge challenges of innovation management in energy sector. There is a need to find balance between traditional, current technologies and research and development investment on renewables. For developing new business areas there is a need of knowledge management system that find balance between traditional and new technologies and identifies those management tools that can facilitate the innovation process and organization change.

Objectives of Study

It is found that reasonable amount of research has been done on subject of knowledge-based development in various fields but knowledge-based approach is also necessary in change and sustainable competitive environment and should apply in development of solar energy devices. As power consumption is increasing rapidly and usage of fossil fuels also become serious problem. In that case development of solar energy devices pave a new path in energy generation. The paper prime objective is to integrate the knowledge-based approach on solar energy devices and suggest that there is a need to develop knowledge society in India to reduce the knowledge gap between country and knowledge-based nation.

Development of Solar Energy Devices

- Knowledge society
- Knowledge-based development
  - Knowledge-based consumer
  - Knowledge communication and innovation
  - Knowledge management
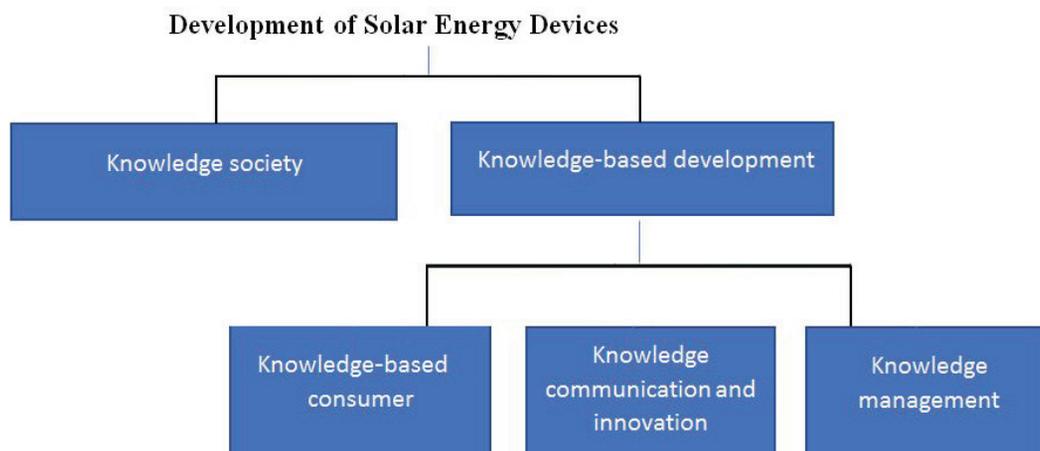
Knowledge-based Consumer Attitude

As conventional energy resources are extinct to certain level, companies moving towards renewable sources of energy as an alternative source of energy. According to (Bang et al.,

2000) consumers report high level of concern for renewable energy but have relatively low level of knowledge about renewable energy. Venkatraman (2014) stated that the customer attitude towards solar energy devices is influenced by many factors but major factors are changing of trends, educational qualification of customer and standard of living. Aklin et al. (2018) stated that entrepreneurial attitude and knowledge of users as compare to past fuel expenditures, risk acceptance and community trust are strong predictors regarding technology adoption decisions. When business that offer value added product and services and take into consideration psychological and behavioural characteristics of consumers seem to succeed in a competitive energy future. Bang et al. (2000) stated that when consumers are more knowledgeable and aware of the relative advantage of renewable energy than he is more willing to pay premium for it. Organization for innovative measures need to communicate with users and should investigate the relationship between consumer centric devices and consumer decision making. The explicit knowledge information supports the company in marketing and sales strategy.

Knowledge Communication and Innovation

Efficient transfer of experiences, insights, know how among different decision makers is crucial for high quality decision making and organizational action (Staub & Karahanna, 1998). Experts from various field share their views and insights for technology development. Knowledge communication is sharing of facts, events, situation, figures and development that enable technology-based communication that requires expertise knowledge. Future knowledge management should improve knowledge communication in organization of solar energy devices so that expert in this field can effectively delegate the task and enhance the quality of innovation. Therefore, it is possible to say that flow of knowledge within the company and from external sources will accelerate innovation process.

Knowledge Management

It is the process of creating, sharing, using and managing the knowledge of an organization. Knowledge management emphasis on the collaborative environment to generate knowledge and provided the management tools to meet the organization strategic goals. Knowledge management able to make quick decision that benefit the company with all the expertise of workforce. Knowledge plays a crucial role in innovation. Kohlbacher (2008) stated that knowledge play a great role in new product development and the process of its co-creation and management. Zavarko et al. (2017) analysis that when the internal and external factor changes organization identifies management tools that create innovation and organizational solutions. Lee (2010) suggested the integration of innovation management value and knowledge management towards knowledge innovation. Zavarko et al. (2017) stated that innovation and technology can only be mobilized through management functions. Knowledge management through corporate knowledge create big change in energy sector. Knowledge management can influence the demand of users by allocating the innovative devices through

performance of proper management functions. As the demand of renewables changing, uses of new techniques of devices emerged and growth of large competitive market, organization create innovation through collaboration of internal and external organizations, due to this there is a need of strategic planning, organizing and controlling of internal and external resources which is achieved only through knowledge management. Macovei & Karatas (2010) successful knowledge management can provide innovation to companies, can fulfil renewable energy targets and government also focused on innovative devices.

Knowledge Society

UNESCO has adopted the term "knowledge society". Knowledge society in which creation, dissemination, and utilization of information and knowledge has become the most important factor of production. The knowledge society stem from the production of knowledge, its transmission through education and training, its dissemination through information, its uses in technological innovation (Afgan and Carvalho, 2010). Development of knowledge society is related to sustainable growth of society (Ranjan, 2019). Culture communities and social identities are roots of knowledge in society accompany with infrastructural, technological and economic developments (UNESCO, 2005). knowledge society and its connection to related ideas of product strategy and product development create great implication on business. Knowledge society having surplus of knowledge enhance innovation or creativity and transformed into sustainable development. Knowledge society concerning the new skills and abilities integrating into development of product and services. Knowledge society is not only essential in new product development but also concern with uneven development of technologies in developing countries. When society is supported by information and communication, knowledge-based activities emerge which bring out new effort and new knowledge in product development. As man's resources are extinct to certain extent, with the knowledge and experience the new form of energy is increasing steadily. The willingness to adopt the solar energy technologies can be increases by contribution of knowledge society. Users can differ in the level of knowledge and expertise regarding complex assortment such as financial services, level of technology and marketing etc. society needs to understand the complex behaviour of users. Current generation of product development are succeeding in exchanging information to a great extent. Society needs comprehensive knowledge for solar energy devices regarding its function and performance. Knowledge society support modernization in production, function and services of solar energy devices.

Conclusion

The purpose of this study is to integrate the knowledge management, knowledge innovation and communication, knowledge-based attitude of users and knowledge society in development of solar energy devices. when knowledge-based approach used by industry for innovation, they should follow market trends, focus on customer knowledge, access internal and external source of information and they should implement the knowledge into practicalities and

communicate with experts in relevant area. As the external environment change industry can perform innovation management functions which is a basic part of knowledge-based development. For knowledge creation customer involvement is necessary and knowledge will become important source for marketing and management. Industry should also need corrective measures, further experimentation, finding further innovators to reduce the gap between consumer centric devices and consumer decision making. Therefore controlling is also essential tool in innovation and knowledge management. Beside this development of knowledge society is also crucial for growth of solar energy devices. Rajan (2019) stated that now the government of country also support to knowledge society irrespective to political and social issues For development not only at corporate level but universities and institutions should also contribute in skills development. The investment in knowledge- based innovation is linked with investment in people, education and creativity. Knowledge- based development not for any specific industry. It can be absorbed at anywhere or in business, economic and social areas.

Limitations of Study

The study focused mainly on the adoption of knowledge- based approach for development of solar energy devices. It did not test or collect all the variables of its incorporation. Therefore future research should based on investigation on government, industry and society to understand the integration of knowledge-based theory in adoption of solar energy devices.

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Wedding Tourism:
An Emerging Trend of Tourism

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Abstract

Wedding Tourism – a reputedly new shape of Tourism is inflicting a lot of pleasure in the tourism industry. In some instances it is additionally referred to as "Marriage Tourism" or "Destination Wedding". Whatever possibly the way one addresses this phenomenon, it is for certain that we can't bypass this new fashion in the tourism sector. According to the bridal magazine, Conde Nast Bridal Group's survey, globally wedding ceremony tourism has considered a increase of 400% in the previous 10 years. Globalization and a developing hobby in every other's tradition is in all likelihood one of the main motives for this trend. The human beings world over are attracted to say their "I Do" in some special way or at an individual location. Europe based totally couples are recognised to fly distant places to locations like Las Vegas, Hawaii, the Caribbean and Cyprus in order to marry. No marvel these locations rank amongst the favourites. India as a united states of america is one of the beneficiaries of this new trend. Both NRIs and foreigners are selecting an Indian wedding, with all its regular rituals and fascinating locales. The already booming Indian wedding ceremony industry, with a income of Rs. 50, zero crore per annum and a boom price of 25% per 12 months is searching for approaches to tie up with main inns and journey dealers to woo this developing traveler segment. Although, in India, it is challenging to come throughout the precise facts and figures involving this tourism sector, although we can't skip this segment. This paper is an strive to recognize this thought of wedding ceremony tourism. The paper additionally examines the viable motives for its developing recognition and its function in growing different enterprise avenues for the tour and hospitality and allied industries, such as wedding ceremony hotels and others. The scope of wedding ceremony tourism in India is additionally explored.

Keywords: Wedding Tourism, MICE Tourism, Globalization, Favourites, etc.

Introduction

Wedding Tourism in India is progressively turning into extra famous than ever before. India is a culturally prosperous usa abounding in customs and traditions. Many younger couples are increasingly more turning into involved in celebrating their weddings in proper blue Indian

style, religiously following all these customs and traditions. Grandeur and elegance spotlight Indian weddings and these kids additionally pick to grandly have fun what is one of the most essential activities in their life. The celebrations of Indian weddings are lavish and proceed for numerous days. All this opulence and attractiveness alongside with the diverse Indian customs evoke a lot of activity amongst the overseas nationals. They too cherish the want to marry in this manner which is marked by using a notable deal of opulence and flamboyance. In view of the growing reputation of Wedding Tourism in India, we, at India Profile provide a pleasant vary of Special Wedding Tour Packages. Opt for the one that is first-rate ideal to your likings, wishes and affordability and get married the way you have constantly desired - in a very grand and majestic trend following Indian traditions.

One of the most putting attribute of this nation is its cohesion in diversity. People belonging to distinctive religions, castes, creeds co exist in peaceable concord out here. They all have their one-of-a-kind way of residing and that is mirrored in numerous elements consisting of wedding. Each and each phase of the usa is marked via a special wedding ceremony tradition. Wedding Traditions in India tends to range a lot. You can choose for the one that arouses your hobby and curiosity the most. Irrespective of you desire a extremely good affair is assured due to the fact all Wedding Ceremonies in India have one attribute in frequent and that is that all of them are very are grand and ostentatious and replete with customs.

In truth it is this specific attribute which lures many human beings and compels them to suppose of Getting Married in India. The thought of beginning your new existence in this novel manner following a lot of rites and rituals is presently in amongst foreigners and it is for this purpose that Wedding Tourism in India is such a thriving industry. Every 12 months greater and greater human beings are planning Romantic Weddings in India. With the motive of making this essential day in their lives all the greater special and memorable, they are selecting one from amongst the many Exotic Wedding Venues in India to get married.

The lovely palaces, the stunning golden beaches, some thing can also be your desire of venue, we are satisfied that if you have a good time your wedding ceremony in India, it is going to be markedly exclusive in a very terrific way. Just after marriage, all newly wedded couples crave for a few days of solitude in some lovely locale the place they can spend their days in whole conjugal bliss. We advocate that you layout your Honeymoon in India. There are many captivating locations in India and you are certain to spend a stunning time in these places. You can additionally browse thru the Glossary to get conversant with the phrases keeping significance in the Indian wedding ceremony scenario. Partake of the pleasant ride of marrying in India and depart with fond recollections of days splendidly spent.

Call the 'Videshis' to Your 'Desi' Wedding! Trending Wedding Tourism in India

The Meetings and Weddings enterprise is step by step opening its doors, however with caution. Most match planners are positive about 2021. Having discovered from 2020 – the hard

classes of the pandemic which taught activities enterprise the significance of patron relations, flexibility, and compassion – tournament organizers and wedding ceremony planners are confident about what lies ahead. Destinations like Dubai, Singapore and Thailand are focusing on MICE. Safety measures have been put in vicinity to motivate influx of global vacationers into these countries. Dubai, for instance, hosted its health match even at some stage in the ongoing pandemic. The response was once overwhelming, and they had accountable fun. Weddings and occasions proceed to take location in Dubai, abiding with the social distancing and COVID-19 protocol. On the India front, MICE tourism is rising to be one of the key income spinners of journey and tourism economy. According to the latest rankings by way of International Congress and Convention Association (ICCA), India has accelerated its role substantially, when it hosted one hundred seventy five conferences in 2017 in contrast to 143 in 2016, consequently advancing its role by means of seven positions from 31 in ultimate year. India, although it has a sound infrastructure to host MICE events, there is a want for coordination and cohesiveness throughout stakeholders for seamless implementation. India has already began working on that. It's solely remember of time earlier than India emerges as the most sought-after MICE vacation spot in the world. The weddings industry, which is the focal point of our cowl story, sheds mild on what makes a vacation spot wedding-friendly. From ease of visas to nice logistics to luxurious, but budget-friendly motels that has ample manpower to cater to the wants of the staff.

If marriages are 'Made in Heaven' and with payments being paid on earth, it is no-brainer that what goes round in between is the 'Traversing Hell' section of the deal! With the pandemic notwithstanding, Indian weddings are making a sluggish return to its practicable as a rank supporter to the Indian Meeting industry. Hotels have viewed new codecs with social distancing norms taking over the celebrations. The Indian wedding ceremony occasion will be quickest MICE phase to make a return to normalcy. Wedding celebrations that had been on preserve have made an honourable return assisting venues, lodges and the tournament eco-system. The entice of the occasion, the place the wedding ceremony regalry is nonetheless a draw to get married, will usually be a top benefactor for the wedding ceremony planner market! With visitor lists being curtailed and tour choices limited, the digital systems did assist getting round the occasion. As plenty as you want technological know-how being partnered in to create a wedding ceremony event, it is nonetheless now not the equal as devising a get together with all the Indian wedding ceremony regalry. There is sincerely no alternative to a large fats Indian wedding!

Market Cap

Weddings in India is a mega market in its personal right, clocking USD 50 billion in turnover, which as per KPMG is solely 2nd to the United States, which does USD 70 Billion. What generally was once a get together of the union of an unsuspecting couple is nowadays one of the quickest developing segments in the occasions enterprise and for equal extraordinary reason, the wedding ceremony industry, along with spiritual journey

in India, is completely recession-free. With a populace of over a billion people, and with weddings costing some thing between Rs. 5 lakh and Rs. 5 crores, the enterprise has in no way viewed thrilling times. When you throw in choices such as Destination Weddings, Pre-Wedding Photography, Entertainment, Honeymoons, the generation of journey sellers getting into into this phase is all however natural. India Inc., which typically cries itself hoarse on falling income and the impending slow-down, does no longer have any qualms on unleashing its megabucks to create an trip that befits the bragging rights that comes alongside with. Destination weddings have created an have an impact on on the Indian hospitality and journey industry, which was once seldom viewed before. Hotel chains now provide branded advertising and marketing propositions and choices with applications thrown in for top measure.

What Makes a 'Wedding Destination?

1. **Easy and Cheap Visas:** The bulk of the Indian Wedding market is distinctly cost-driven. The rule is simple: the greater the price of visas, the decrease the vacation spot preference. Preference for visa on arrival/e-Visas/Group Visas. Long visa approval time over 7 days will assist you continue to be uncompetitive. When free visas are thrown in, the wide variety will swell! There used to be one wedding ceremony crew from Kolkata, which took over 20 helpers to elevate the baggage of guests! The greater the variety of files for the visas, the much less popular the vacation spot gets. Credit to the US Consulates in India, they occasionally provide Group Visa interviews for Indians. Indians would be possibly the solely patron somewhere in the world, wherein, if no longer for the cumbersome visa methods can sincerely layout and execute an tournament in Europe on a week's notice!

2. **Direct Flights and Connectivity:** Three to 4 hours of flight time are ideal, however no longer a compulsion! If you are searching at larger team actions from India, the greater the related cities are with the destination, greater possibilities of one bagging the event. Multiple airline embarkation factors are nice, however in no way underestimate the electricity of an Indian wedding ceremony group, the place at one instance, a planner had to constitution three aircrafts to ferry marriage visitors from Kolkata to Port Louis in Mauritius, paying three instances the common fare!

    If the criterion is now not one of a 'Big Fat Indian' wedding, there are more than one boutique alternatives for quaint locations in high-priced and special European warm spots. There are preferences such as the city of 'Verona', a quaint little arty city positioned in the Northern Italy, which has received reputation as town of Romeo and Juliette! So plenty for Shakespearean love for selecting out a vacation spot to venue his masterpiece! Closer home, locations such as Bahrain have taken advertising for vacation spot weddings to a new degree of detailing and hand-holding. Weddings carry greater than a mere statistic to a destination. A profitable wedding ceremony will ultimately supply an trip that will stop up a lifetime of word-of-mouth marketing!

3. **Indian Food:** There is a developing market for an up market, luxurious, boutique wedding. Even in this case, it need to be mentioned to encompass a vegetarian and Jain menu. The Indian luxurious market is predominantly vegetarian, with over 80% of the pinnacle five hundred richest human beings in the us of a belonging to communities that can relish, suffer and nurture vegetarianism! I be aware assembly a South African DMC, who had began working with the Indian market, remarking that for the first time, he got here throughout a time period referred to as 'non-vegetarian'. If catering to a South Indian wedding, don't forget about to provide curd Rice, and you'll win them over for life! Well, simply some meals for thought!

4. **What is about Indians and their Meals Preference?** Well, it is what it is...Indian meals is obligatory for large groups, even though some will genuinely strive the neighborhood fare. Get your list of Indian eating places out, communicate with the wedding ceremony motel on getting Indian food. Educate them about desire for Indian food, Jain Food, Indian meals (not Asian Vegetarian). Also, discover possibilities for Indian cooks to fly down to assist cater for the group. At most Indian mega weddings, having an Indian Maharaj being flown down is nearly certain! The one large gala dinner can be raucous affair, walking late into the night time on a heady combine of noise, tune and limitless alcohol.

5. **Hotels and Event Infrastructure:** Paramount! Indians not often selected some thing much less than a four-star hotel. Preference is given to accommodations with desirable ratings, provider requirements and above all, flexibility. With massive groups, get equipped for requests for triple sharing, late-check outs (it can range from 30 minutes to 12 hours!) and last-minute cancellations/additions, etc. In Room-dining and baggage offerings are expected! The request is easy – Best in the 'value-for-money' deal-class. India is possibly the world largest last-minute market and one's capacity to adapt would solely decorate your potential to win over. Indians cherish useful help over the stiff upper-lip severe professionalism.

6. **What's in for the Tour Agent?** When the event needs undivided bliss, can journey marketers be a long way behind? The tour agent trait of bringing ride on the desk is priceless, when as a vacation spot wedding ceremony client, you do now not favor to go away a lot to chance. Getting recommendation on pleasant quotes and costs, with inputs on baggage allowances and visa advise, a journey agent need to be a first port of call. As a journey agent, being phase of the Wedding Organizing Committee and phase of the exercise, it is a incredible chance for referral corporations as most mega vacation spot weddings are pretty partial to having to put in a top phrase for the humble tour agent. You additionally get to e book the honeymoons as well. One does no longer absolutely be aware of with this huge fats Indian wedding, as one tour agent was once requested to draft a three month honeymoon itinerary throughout 4 continents and ten countries.

7. **What's in for the Hotels?** What does it take to function your tournament areas amid your glowing motel brand? If your Event associated Food & Beverage make contributions

extra than 30% of your turnover, get a branding strategy! The resort manufacturers carry with it; 'standards and complete recall', however the proper special company identification for your tournament house and the 'Experience 'will make it stand out amid hardened competition. Creating special company identities and focal point for Event areas will additionally take on branded inns particularly in the 4 and 5 superstar segment.

Hotel biggies such as the Marriott and Taj have already obtained on to the 'Wedding Destination' bandwagon. Somehow, inns round the world have constantly been reluctant for a radical shift in branding strategy. But in an era, the place opposition receives fierce and specialization takes over, it is in no way too late to support branding requirements on person income centres, such as match spaces, fitness clubs, one may be tempted to add Laundry offerings to the list! Creating and managing an 'Event Space brand' will carry in match standards, accelerated visitor feedback, and better occupancies. Creating special company identities and center of attention for match areas will additionally assist take on branded hotels, in particular in the 4 and 5 stand segments. It is no longer some distance in advance that, with the multiplied needs with regard to technology, superior purchaser requirements, the technology of specialised corporations managing match areas is now not a ways behind! Outsourced Venue Management is a depend of time.

With made-to-order wedding-related events created out of skinny air or a six-day lengthy meticulously designed wedding, resorts in India in no way had it this good. The Indian hospitality industry's special income trait is the place Food & Beverage contributes greater to the income kitty than the phase is credited for. The conferences enterprise seldom goes challenged with the discerning Indian discovering extra events to celebrate. Events to have a good time wedding ceremony and anniversaries, birthdays, kitty parties, household and friend's get-togethers, naming ceremonies and of course, the massive fats Indian wedding ceremony all carry cheer to the table!

8. **Safety:** Weddings will now not be the identical again, so equipment up to the world of branded face-masks, sanitizers and social distancing, at least until the venerable vaccine achieves its favored result.

9. **All About the Wedding Planner:** As the complete tournament enterprise has developed from being a one-stock multi-event supervisor to now of a niche, specialised function of being a 'wedding planner,' it is no longer a necessity that massive names deal with massive fats weddings. It is nonetheless about remedy stages and transactions that are nonetheless relationship-driven. The wonderful Indian wedding ceremony warfare has simply begun its climb up the price chain, with worldwide planners all set to take the plunge into the Big Fat Indian Wedding market! As lots as the virus has deflated organizations and spirits, it can't hit similarly nadir, so equipment up for the trip of a lifetime.

Conclusion

The Indian wedding ceremony enterprise is the second-largest in the world, simply in the back of the U.S. market. The whole price of the Indian enterprise is an estimated $50

billion, in contrast to the $70 billion in the United States. 1 For many analysts, that capacity the international Indian wedding ceremony enterprise is steadfast, it's recession-proof. In India, the common character will spend 20% of their complete wealth at the time of the wedding ceremony on functions, needs, or wedding-related items. The wedding ceremony planning market in India is predicted to hit USD 2.25 billion by way of the 12 months 2020. Wedding planners cost up to 15% of the wedding ceremony finances as their session fee. The vacation spot wedding ceremony market in India has witnessed a sturdy enlarge in style and revenues in the current years. The Wedding Tourism Report information by way of Majestic Research Services and Solutions Ltd India reviews that the wedding ceremony market (actual tournament and associated spend) in India is pegged at USD 15 billion of which about USD four billion is thru vacation spot weddings and the figures are projected to develop at a superb rate. In the above context the enterprise has lately sprouted offshoots that are rapidly proving to be significant, so a good deal so that they have cloth influence on micro economies of cities and states. The predominant style in Indian weddings is to modernize barring brushing off the time-honoured traditions. Spending has shifted from jewelry which may additionally in no way be worn once more to journeys that all and sundry can experience, i.e. a vacation spot wedding.

Destinations such as Udaipur, Goa, Kerala, Manali and the Andaman Islands are constantly excessive on demand. Thanks to massively promising growth, nascent markets have additionally evolved. The Himalayan belt states mainly Uttaranchal, the seven sisters in the East, heritage cities such as Khajurao and Mysore are now on the map and in truth including to the pie. These new markets and customized is capable experiences provide upward jostle to a new set of customers. We are now beginning to see a clean section emerge whereby an indispensable element of the wedding ceremony is social responsibility. Couples nowadays desire to make contributions in the direction of endeavors, assist and have interaction in motives including a "Do good, Feel good" component to the occasion, pertinent to the more recent venues. Millennials with an inherent experience-based shopping for sample are the new selection makers. Coupled with the middle-class increase in expendable income, low-cost airfare and lodging, weddings these days are about personalisation, consequently growing a manufacturer new segment. At the identical time, usual markets, i.e. Udaipur and Jaipur proceed to rule the royal wedding ceremony genre, with sustainable increase predicted. Kerala is usually famous due to its big again water lagoons as a scenic backdrop; wellbeing right here is the hook for weddings and that suggests no signs and symptoms of slowing down.

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Impact of Social Media on Marketing Management

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Abstract

In our study we examine social media has a great way to evaluate many different each platform through a single-source of communication. Social media shows his potential to be compared in terms of the loyalty of users and many customers, as well self development thoughts ideas comprising engagement with each other. Today's Business ethic has its Landscape and that is characterized by many Social media Proliferation. The Juncture for the businesses is to remain exist where customers exist. How all business has to engage with the purchasers have changes remarkably, and promptly as thanks to social media marketing management. Social Media had taken into account in concert of the top and foremost E-commerce models within the present times. Online community yield biggest assessable platform for many of individuals within aim of meaningful, as what customer's interests and wishes still as affecting their purchasing decisions. Right now fact is the shoppers exist on many e-commerce networking websites where they prefer to share their knowledge. Before showing purchasing decision, customers firstly check reviews, declaration, policies, and many set questions to ask from influencers either direct or indirect way. Modifying some sort of e-commerce retail tools through E-marketing could be essential model for all occupation, factory where trends constantly change like fashionable accessories, customers taste choice and handicrafts. Respondents and business will need to interact, educate with their present and future consumer where they like as to speak which is through online community platforms like, WhatsApp, Youtube, Twitter, Google, Facebook, Instagram, etc.

Keywords: *Social Media, Customers Orientation, Customer Satisfaction, Changed Style of Purchasing.*

Introduction

Social media has a great platform to provide approachable benefits to consumers with the aim of knowing individual curiosity and all wishes furthermore they deploying their buying decisions in the field of social media. Therefore, E-communication are calculated mutually in trendy electrical market tools which are separated from many other means of older and present market, therefore E-market strategy via social media now a days is the accelerated level of broadcasting platform of any knowledge, even cheapest also. Only social media channel where the patron can collect information and element of interesting goods and services comfortably with the chance of ending the buying & sales platform with not knowing the

buyer's ideas, as they wish to visit goods and items market. Social media provides platform that transforms the communication and interaction of users throughout the globe. These days-Social through social media many youth generation getting effected in many aspects of human intercommunication, thereby this form of communication impact business moreover. Now-a- days Social media transmission- internet surfing websites for blogging, through which users create direct online groups to share knowledge, personal information through messages, videos, ideas. E-communication presently owes its place, scientifically named **Multi-User-Dimension** which was a real-time essential world with playing games, online wordings.

Social media consumption in India rapidly increasing, Surfing users in amount increased in India, i.e/ reached around 560 million users. Alerted social media giants users in India grew to around 326 million and India is amongst highest in three countries in terms of the every single persons using Facebook, Instagram, whereas Twitter, Instagram rapidly going on increased user base of over 55 million. The increased numbers of Mobile holders is additionally seen as a main important platform in social media. Around 85% Facebook surfer in India access from their mobile phones, tablets. Estimated in India, there will be 840 million total Internet users (60% of population) by 2022, up from 357 million (27% of population) in 2017. Social networking web have grown one among the multiple platform for marketers to succeed in costumer to help within the buying of product or service. According to the report Social media marketing India survey study, by Ernst and young, 75% of India's online population is digital consumers.

Objective of Study

- The aims of research paper to spot the consequences of using social website for buying higher cognitive process for costumer through the different subsequent aim or either purpose.
- To look for the extant of social media networking that help customer in purchasing decision.
- To look at the extant, of social media that support consumer in purchasing higher cognitive products.
- To check the gap between consumer expectations from social media and its performance.
- To review the space within customer demand from social media and its presentation.
- As to spot the impact of social platform as a marketing instrument during a business on buying decisions.
- To look at the appliance of a inner structure through an oversized investigative empirical study get into field work to elucidate the social media channels Facebook, Twitter and YouTube that have a vast impression on buying decision.

Rational of Study

Participants within the virtual democracy, i.e. the social networking which accomplished to share experience and memories with their own society but in an online only form just to assure

their social essential. India is encountering a resonance within the Electronic component sector. Though statistics shows that social media generally and Facebook specifically, is here to remain and frequented by many purchasers, not many India companies are investing their resources during this low-cost advertising medium.

The explanations were delved into and it had been found that this can be thanks to lack of understanding of this powerful medium. Academic research was also scarce during this area within the Indian contract context.

Hence, this study was conducted to get an insight into the factors of social platform, the effects of internet community on relationship E-Marketing variables and on how the content to the Facebook page has got to be created so on engage the purchasers in social media and induce trust, commitment, bonding and perceived responsibility within the customers. The importance of this study can be understood by looking at the development pace of the information technology in today's era along with the communication along with the impact on consumers purchasing capacity.

Hypothesis for Study

- H_{01}: There is no significant impact of social network marketing on purchasing decision of customer.
- H_{02}: There is no significant impact of social network marketing on stages of purchasing customer.

Research Methodology

The learning relies on illustrative research approach. A questionnaire has designed, to understand different purpose of view of applicant regarding the extent of social network that helps customers in purchasing decision. First and Foremost table of the questioner accommodate information concerning demographics and usage pattern of social networking of the candidate. Second part has sequence of close ended indirect questions which are endorsed to influence the social networking in making customer buying a product and expectations from such mass media. The observer was conducted online through social networking sites and responses of 300 social networks or internet users were collected. The information data was put over Google docs and therefore the connection was sent to users to fill the information through various social networking sites like Linkedin, Facebook, Twitter, etc. Therefore the sampling technique used was non-probability convenience sampling. We exercised Multivariate analysis of testing of hypothesis in both assumptions either possible or not-possible.

Review of Literature

Bruno Schivinski, Dariusz Dabrowski (2013): In the past years specially in the last decade brand management has shown its capability in two different forms which is ,disappearance

of name veritable and having the expanded impact of customers of wide range on brand communications. Mentioned aim is to check the results of many other social networking communications.

Ayda Darban, Wei Li (2014): The aim of the learner is to look at the consequences of online social media, the writers are attempting to search out which steps do online through social platform which control customer buying decision when it involves food retailers.

Monica Ramsunder (2011): The research study which look into impact of social media marketing on a customer's buying decision within the South African tire industry addresses traditional marketing strategies, the consumer' s purchase decision journey and social media marketing strategy. The exploration instruments employed in this learning was a questionnaire which was designed specifically for the aim of this research studies. The questionnaire was supported the literature review and specifically addressed that the most purpose of social media is connectivity; the flexibility to satisfy new comer, generate new contacts and develop networks and generate new consumers and business associates.

Higgins (2006): Review engagement because the second source of occurrence beyond the hedonic source of experience resulting from a motivational force to create or not make something happen, during this case, the motivational force is that the social media marketing.

Results and Analysis

Mentioned below fig. Table 1: It reflects the response of the users for use of internet for various purposes. The table indicates that around 95% internet users visit the social media platform. This indicates a strong impression of social media on the mental health of the users of the internet. Around 50% users uses internet only for other purposes which includes use of social networking websites largely. Only 40% users have been found using the internet only for their official purpose. The results indicates that now-a-days sue of social media has increased at the vast level and thus will also impact the way of marketing from the ancient methods like TV promos or newspaper advertisement.

S. No.	Question Asked in Questionnaire	Yes		No		Total	
		N	%	N	%	N	%
1	Use of Internet for E-Commerce websites directly	250	76	50	24	300	100
2	Use of internet for office work	40	70	260	30	300	100
3	Use of internet for surfing social media	280	95	20	5	300	100
4	Use of internet for other purposes	150	50	150	50	300	100

Mentioned below, Fig. Table No. 2: It indicates the response of various internet users in taking their purchase decisions using internet and Social media websites. As we can see around 93% of the users are keen to see advertisement on social networking websites to take their decisions of purchasing. Around 85% of the user uses social media advertisement as reference for purchasing house hold goods. Almost on average 65% users uses social media for taking a decision in regard to purchase anything as evident from item number 3 to 6.

S. No.	Question Asked in Questionnaire	Yes		No		Total	
		N	%	N	%	N	%
1	See advertisement on social media like Instagram, Facebook	280	93	20	7	300	100
2	Refers from various website before purchasing	200	75	100	25	300	100
3	Refers social media for purchasing house hold goods	250	85	50	15	300	100
4	Refers social media for purchasing Electronic goods	100	30	200	70	300	100
5	Refers social media for purchasing clothes, Apparels	260	80	40	20	300	100
6	Refers social media for purchasing other items	150	50	150	50	300	100

Since the above findings clearly reflect that use of social media plays a new way of learning in today's marketing world for making an advertisement of the product of the companies and even the buyer or consumers is also willing to go for easy marketing products the information for which is available at one click such as on mobile phone. The above data has shown that how maximum users are will to avail social media as best source of product view and review for taking their decisions. Marketing management has made it absolutely possible to fulfil the needs of the consumer through social media advertisement.

Conclusions and Recommendations

In this present era situation is more crucial for a settled work station as it use engagement marketing principles to plan for prospering engaging their rule prospects and consumers earlier, during and after their buying cycle, where the knowledge for this commitment is high-quality and appropriate information. Marketer's job to supply this knowledge in variant a fashion their just might be casted in an exceedingly positive light; Accordingly variant growth and scale of social platform we'd been tried to purchase or either get services and products through the social networking. As this source is growing in no time and control huge potential but remain in its developing stage in India. Although, it's time for the businesses to create fruitful strategies and execute them to win greater execute of business. Through this wide- medium and become the innovative firm of coming future. The different advantage of study results:

• In increasing significance is running towards using the social platform for marketing the commodity because as these social networking sites attracts a large bundle of the society.
• Organizing field researchers as to realize the forceful of social media in every single stage of buying decision platform and also observed that the basic impact of every individual website in these different levels.

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Post-COVID Transformation in the Marketing Strategies of Banks and NBFC's

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Abstract

The COVID-19 pandemic worsened the problems of non-banking financial firms (NBFCs). The decrease in non-banking loan growth, which began in the second part of fiscal 2019, continued in fiscal 2020, initially with the economic slowdown, and then, more aggressively, with the pandemic. While the impact of the economic downturn should be gradual and time-consuming, the impact of the pandemic was rapid and weakening. There are repercussions throughout the industry, but some sectors are more severely affected than others. The Reserve Bank of India (RBI) has authorised lenders to extend the lending moratorium till 31 August to temporarily alleviate borrowers' difficulties. In the absence of such a moratorium on non-bank capital markets borrowing, however, the main issue for most non-banks is maintaining sufficient liquidity to make repayments in the short term. Another issue is to ensure that asset quality stays under control, such as keeping constant touch with and assisting borrowers during this extraordinary crisis. It is obvious that NBFCs would need to adjust their strategy to address the shifting post-pandemic economic environment.

Keywords: *COVID-19, India's Economy, Indian Banks, NBFCs, NPAs, Lockdown.*

Introduction

Banks and NBFCs form an important economic foundation and are the key sectors where digital services and usage have increased significantly. While digital technology is not new to the business, the pandemic has expedited digital technologies, having far-reaching consequences for the future not just of the banking industry but also of the broader financial ecosystem.

The NPCI was crucial to the development of a digital payment ecosystem in India. Through FASTags it was possible to implement new and effective measures, like UPI, IMPS, Bharat Bill Pay, and the ETC (electronic toll collection). Indian Fin Techs and digital payments businesses have also made considerable development and are now offering a broad variety of integrated, user-friendly solutions that utilise state-of-the-art technology and implement new business models. Increasing mobile internet usage, low-cost data plans and the move from off-line to online purchasing further boost digital technologies.

Indian Banking Sector

Let me first give you a background on India's banking industry along with NBFCs before I touch on the actual problem of this paper.

A bank is a major agency that takes deposits and provides money for individuals, businesses and governments. Banks across the world are considered credible. When someone deposits money, regardless of amount, in the bank, the individual knows that money is safe in the bank compared to other nations. Banks also provide diverse services like loan facilities, fixed deposit programmes, debit and credit card facilities, etc. The almost 200-year-old Indian banking sector has expanded and modernised since the reforms started in 1991. "The sector has now developed into the present INR 81 trillion in size. KPMG's (2017) research predicted Indian Banking would become the fifth biggest banking sector in the world in 2020 and the third largest in 2025. In India, there are three kinds of banks according to the structure of ownership.

These are:

- state or public banks,
- commercial banks and
- international banks.

There are presently a total of 34 banks in India, 12 of which are public sector banks and 22 of which are private sector banks. State Bank of India (SBI) is recognised, together with six partners, as a distinct set of Scheduled Banks (SBI Act 1955 and SBI Subsidiary Banks Law 1959). Ten nationalised banks, seven SBIs and affiliates, with government ownership of over 50 percent, are Public Sector Banks (PSBs). Control of PSB around 2/3 of the entire business. The banks dominate India's economy and contribute significantly to employment in India. Unfortunately, over the last five years, several of India's banks' performance metrics have shown downward or negative trends. This is true for PSBs since they seem to be more inefficient than their peer groupings. In 2019, private sector pairs recorded profits, but PSBs accounted for 80 percent of non-performing assets with a Rs 7.4 billion bad loan book, and PSBs also reported large losses. More than 90% of bank fraud instances occurred with PSBs".

Non-Banking Financial Companies (NBFCs)

NBFCs in the Indian financial ecosystem have been constantly increasing in importance and exposure. The credit intensity, "as indicated by NBFC's GDP credit ratio, has steadily increased to a higher level in 2018-19 before the pandemic moderated in 2019-20. The credit of the NBFCs as a percentage of SCB's non-food credit increased more rapidly, particularly between 2014 and 2019.

Asset/liability structures, systemic significance, and the operations they do may be categorised as NBFCs. NBFCs are split into liability structures between deposit-taking NBFCs (NBFCs-D), which take and keep public deposits, and NBFCs (NBFCs-ND), which finance markets and banks. NBFCs having an asset size or more of €500 crore are categorised

as non-deposit NBFCs which are systemically significant (NBFCs-ND-SI). As from 16 July 2020, 64 NBFCs-D and 292 NBFCs-ND-SI were compared with 88 and 263 at the end of March 2019, respectively".

Impact of COVID-19 on NBFC

Liquidity Issues Faced by NBFCs

The NBFC sector faces more liquidity difficulties as a result of COVID-19's side effects. Earlier, no clarification was found as to whether the three-month moratorium applies to loans received from banks by NBFCs or not.

NBFCs would repay banks' loans when their inflows were affected since they gave their clients a three-month moratorium on conditions of loans as recommended by the Reserve Bank of India.

It implies that, originally, the banks that make use of loans from the NBFC and HFC, like any other borrower, did not allow for a moratorium period, and thus, in total, it has been noted that NBFCs have Rs 1.75 trillion in debt obligations to banks.

As a result of the coronavirus effect on the NBFCs, commercial-paper firms are on the brink of a liquidity crunch, with a value of Rs.1.6 lakh crore and non-convertible debentures of Rs. 87,000, which they may redeem to receive inflows and reimburse the current loan from the bank.

Steps taken by NBFC's

A quarter of the rated non-bank lenders are below investment grade and are not able to use the individual liquidity window. ICRA has said that among the 250 non-bank lenders, about 40 are lower than investments. Data from the Microfinance Institutions Network (MFIN) simultaneously revealed that 25 percent of its members fell into the trash category.

Large institutions may profit from the RBI's Rs 1 lakh crore targeted, long-term (TLTRO) funding, while others will probably suffer a constraint.

Impact of COVID-19 on Banking System

"The COVID-19 epidemic and subsequent lock-up have endangered the economies of many countries. The complete shutdown of firms has resulted in a substantial decline in cash flow and a severe risk to banking operations. In India, the Reserve Bank of India (RBI) and the government have taken precautionary measures to minimise this risk by reducing repo, reverse repo and the cash reserve ratio".

In the post-COVID era, however, the banks will confront a variety of micro and macro difficulties.

- **"Uncontrolled NPA growth and low NIM:** The Financial Stability Report for the RBI states that, by September, the gross NPA (non-performing assets) would increase to 9.9%, the highest in developing countries (China's NPA is 1.8%). Under addition, five banks are still in the PCA framework, and new entrants like Yes Bank have stepped up the crisis."

- **"Rise in service charges":** Banks' operating earnings have been falling in India for a long time. Now that companies are badly affected, interest income will have a big blow. Limited increases in other sectors are expected to raise banks' locker rent, demand for service, digital transactions and criminal charges. However, more and more individuals are anticipated to review their bank accounts that have been mostly inactive as government funding and assistance is distributed via this route.
- **"Aftermath of COVID-19 EMI moratorium":** RBI stated that consumers may postpone repayment of EMI loans to maintain cash flow by three months if needed. This will automatically prolong the lending term by three months, but always lead to additional interest costs. This particularly applies to those customers who are at the start of a loan cycle since EMIs have a higher interest in the original loan period. However, the good news for individuals who use the moratorium is that this temporary financial respite will not affect their credit value and their loans are not categorised as non-performing assets.
- **"Fate of differentiated banks":** Only lately, new types of banking have been discovered in the financial industry, including Payment Banks and Small Finance Banks (SFBs). These banks were already full of difficulties with limited supplies and a thin income stream. In the aftermath of COVID-19, SFBs carry the bulk of their customer base lockout (vegetable vendors, carpenters, etc.) on their asset and recovery.
- **"Growth of digital banking":** The increasing use of digital banking is one obvious effect of COVID-19. Both banks and government regularly urge that consumers avoid physical banking as part of the battle against the epidemic. Digital solutions are in high demand and the amount of online transactions in the post-COVID era may even grow because of the convenience that customern and banks have to provide these services. Digital bank transformation will also take centre stage by increasing investment in instances of deep learning to address the NPA problem.
- **Disenchantment of bank employees:** In our nation there are over ten lakh bank staff who require assistance and security in the form of updated pay. Unfortunately, such intentions have been tempered by the current circumstances.

    The legal ecosystem does not help the NPAs recover. Government agencies really use them to implement social programmes such as MSME/MUDRA funding. This must be dealt with promptly.
- **"Long-Term Scenario – Institutional Banking/Securities Services":** Consolidation of the industry resulting from the COVID-19 issue may speed up the process. M&A may establish one or more "super suppliers" that can integrate from the front office to back the full institutional service value chain. All of this will make the process of tokenisation, which develops in a virtually completely independent but parallel manner, capable of upgrading these changing models at any stage.

Changing dynamics of Marketing Strategies of Banks and NBFC's

Marketing Strategies post COVID-19 in Banks and NBFCs:

1. Marketing Mix – The 7P's of marketing mix helps an organization to plan the strategies, streamline its action plans and marketing activities to render the services according to the customer's expectations and market conditions. These 7 elements of marketing mix are Product, Price, Place, Promotion, People, Process, Physical evidence. After the pandemic, the bank has mainly focused on 2P's, especially Promotion and Process. Process entails how the business operates, how the services get delivered to customers. In the wake of Covid, banking was determined among essential services and in fact banks appeared as an additional shoulder where you can unload your economic pressure. Banks and NBFC's have proved the process of providing services can either be automated, digitized, made contactless, completed via email or calls instead of an individual walk in the physical bank branch. Banks and NBFC's have accelerated digitalization their customer service operations.

2. The shape of the entire banking industry has changed by nothing but to go digital. A recent article in The Hindu, (a daily newspaper published in India) says overall the total digital transaction volume in 2020-21 stood at 4,371 crores, as against 3,412 crores in 2019-20, attesting to the resilience of the digital payment system in the face of the pandemic. Not only the process has been made online but also some banks have given door service to senior citizens who can neither come to banks nor they can do transactions online.

3. Moreover, talking about Promotions Banks and NBFC's have relied fully on the online marketing channel which is Internet. Banks are increasingly focusing on dialogue channels such as e-mails, calls, social media marketing. Banks are now providing services such as Renewal of gold loan via emails only. Furthermore, banks are now concentrating on CRM and making calls not to make sales in such a grievous situation but to enhance their relationships with customers. Few bank employees are reporting that they make calls just to know about the customer's well being. This way Banks are promoting Relationship marketing and emphasizing on their value proposition. Another dimension of marketing strategy which has taken higher weightage is changing their brand value according to the situation. In such a severe health crisis where people have lost their job, daily wages, food, family members and what not. What could be worse than this, but Banks has come as a rescue or savior to its customers. They are propagating a message in the society that "We are there for you". Banks and NBFC's are addressing needs by putting forth a different value proposition. By this way people can trust and rely on banks. In my view, this will help banks in the long term to retain their customer base.

Post COVID-19 Strategy, Business and Operating Model

All the sectors for business in the world are working on the strategy for maintaining and growing business in the post COVID phase. In the same scenario banking industry is also working on to cope with the post COVID scenario. A survey was conducted by "The Deloitte Center for Financial Services" for the improvement of banking industry. Some of the key points have been reviewed in this paper.

Engage in Scenario Planning

Defines potential best, worst and intermediate scenarios that may be developed from a company, its consumers and key partners throughout the crisis. Work with staff in other areas, such as HR and finance, to create the business scenarios.

Marketing must not depend on high-level corporate situations alone, but must go farther for its brand and department. Marketers must understand the particular difficulties that consumers, brands and the marketing organisation may face in each situation and identify measures to address.

▦ Already implementing   ■ Planning to implement

Operational priorities over the next 6–12 months

Reassess global plan coverage
54%   41%

Prepare more comprehensive crisis management documentation
53%   35%

Enhance existing resilience plans
49%   39%

Create better plan coordination
49%   45%

Conduct more frequent simulation exercises
49%   43%

Accelerate digital transformation of business services
48%   44%

Enable work-from-anywhere talent plan
46%   47%

Update governance and reporting mechanisms
45%   44%

Improve information systems that better enable us to respond
44%   48%

Figure 1: Banks are Implementing Plans Across Operations to Maintain Resilience
Source: The Delotte Center for Financial Services Global Outlook Survey 2020.

There are a variety of difficulties facing the banking sector in 2021, many existing but also new barriers. In the near future, uncertainty regarding the consequences of the epidemic will undoubtedly persist. But this should not prevent bank leaders from reimagining the future and making bold bets. They should institutionalize the lessons from the pandemic and build a new playbook by strengthening resilience now and accelerating the transformation in the post pandemic world.

Digital Customer Engagement: The Next Frontier

The promise of digital banking was never fully realized, largely due to customer reluctance and/or a lack of attractive digital solutions. But the pandemic turbocharged digital adoption across products and demographic segments. For instance, 44% of retail banking customers said they are using their primary bank's mobile app more often. Likewise, at Nubank, a Brazilian digital bank, the number of accounts rose by 50%, going up to a total of 30 million.

There is a similar pattern in commercial banking as well. Bank of America's business banking app witnessed a 117% growth in mobile check deposits. Similarly, digital roadshows became the norm in marketing securities.

Digital changes being considered

48% — Live interactions with bank employees via ATMs
46% — Change self-service touchscreens into contactless kiosks for transactional services
39% — Position an AI-based robot banking assistant at flagship branches
33% — Add sensor-based virtual reality/augmented reality experiences
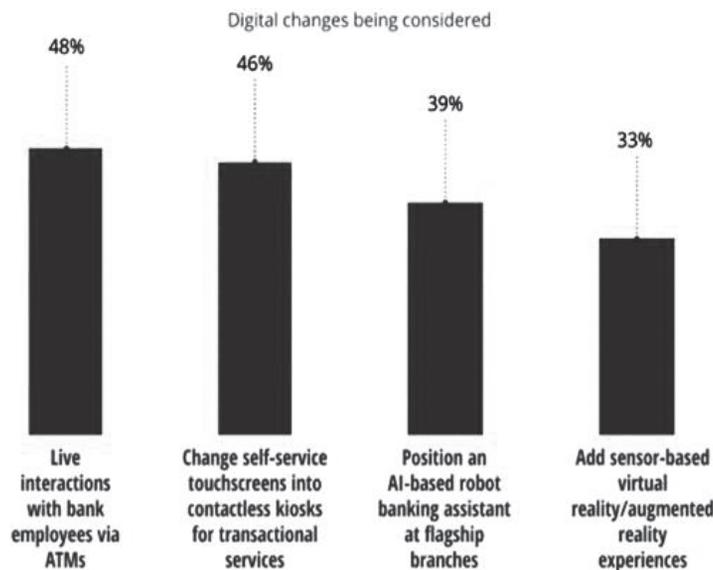
Figure 2: Some Banks will Add More Digital Capabilities to Branches Over the Next Year
Source: The Delotte Center for Financial Services Global Outlook Survey 2020.

Strengthening Resilience and Accelerating Transformation in Technology

Bank technology departments should, in the near future, strengthen their technological infrastructure to compensate today's market stress. For example, since banks have capacity limitations in workouts and credit restructuring, conversational AI solutions may offer customised client experience and enhance the efficiency of the contact centres.

Looking ahead, bank technology leaders should place bold bets on initiatives that could transform businesses, such as core systems modernization. There may not be one core systems solution that fits all, so to determine which option is best, banks should evaluate the sustainability of current platforms, their appetite for risk, and the need to innovate their offerings.

Additionally, the technology function should play a critical role in banks' structural cost transformation efforts. First, this can help ensure technologies are used deliberately to change

■ Significantly/somewhat increased   **■** Significantly/somewhat decreased

Inclination to engage in digital transformation efforts

Outsource

50%

22%

Partner

38%

30%

Build

33%

41%

Buy

29%

39%
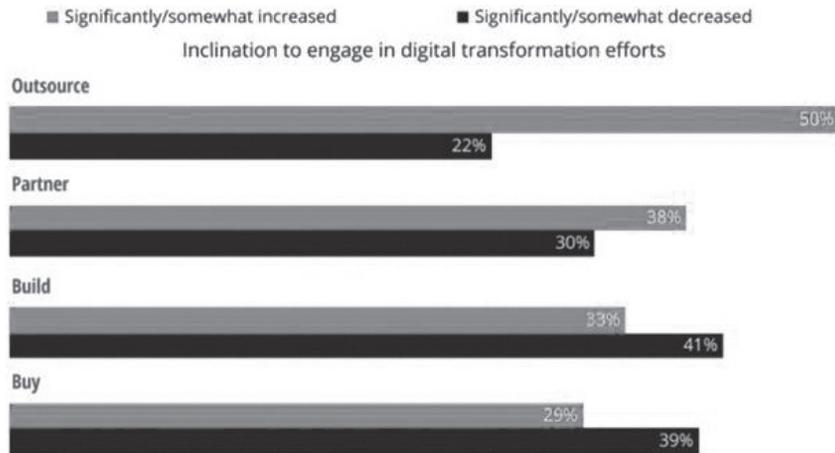
Figure 3: How Digital Transformation Efforts have Changed Due to COVID-19
Source: The Delotte Center for Financial Services Global Outlook Survey 2020.

cost structures. Second, to cut costs, banks should re examine the build-buy-outsource/offshore model for technology projects. One-half of respondents said their institutions' inclination to outsource has somewhat or significantly increased during the pandemic, while about 40% indicated a decline in their institution's intent to build or buy. Increasingly, banks can deploy managed services to cut costs for critical but less-differentiating activities.

Strengthening Resilience and Accelerating Transformation in Finance

CFOs and treasurers should continue to concentrate on maintaining liquidity and increasing capital until the present economic disturbance subsides. But banks may perhaps have difficulty

Finance respondents whose organizations plan to increase spending

71% — Cyber-security

60% — Cloud computing and storage

60% — Data privacy

51% — Data analytics

43% — Artificial intelligence (AI)

40% — Robotic process automation (RPA)

37% — Blockchain and distributed ledger technologies

29% — Digital channels
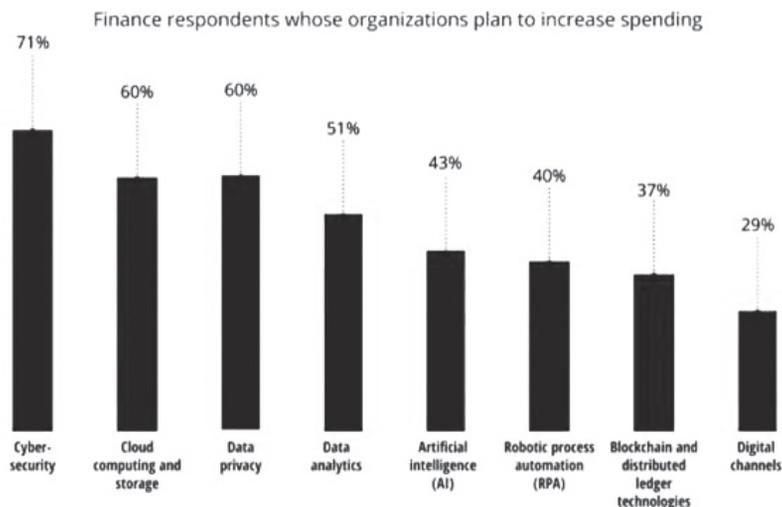
Figure 4: Banks Plan to Increase Spending on Various Technologies Over the Next Year
Source: The Delotte Center for Financial Services Global Outlook Survey 2020.

putting this money to work owing to large deposits and limited possibilities for attractive returns..

But these efforts cannot happen without establishing more robust and accurate planning and forecasting, which may include modelling the pandemic's impacts on markets, customers, and counterparties to construct a broader view of potential impacts and actionable insights. Pushing financial planning and analysis processes into business units should improve granularity and accuracy. However, using current legacy infrastructure in these endeavours may be challenging for many banks.

Cloud apps can assist with continuous roll-out and driver-based prediction planning in this respect. These technologies may potentially enhance resilience using AI by enhancing the accuracy of the cashflow prediction.

Finance also has to be given a more strategic role by aggressively developing a two-way flow of information, enabling enterprises with real time business insights and intelligent scenario planning tools.

Risk: Creating a New Risk Control Architecture

The COVID-19 epidemic has significantly changed the financial industry's risk environment on many fronts. Initial growth in asset price volatility substantially enhanced market risk, financial stability tests and risk resilience of the banks. Many institutions' virtual employment arrangements created additional operational concerns. The new criteria have focused more on existing issues such as business continuity planning and risk management".

Conclusion

In summary, the COVID-19 pandemic is unquestionably a milestone in human history that is likely to produce far-reaching paradigm changes. Banking, as a key sector, is perhaps at the forefront of these developments. Although we can only assess the impact of these disadvantages after the crisis ends, scenario planning is now much more necessary to strategically predict, plan and manage the banking industry's future.

The COVID-19 issue is expected to substantially speed up the digital transition and alter the whole economic environment. Customer behaviour and preferred interactions are changing significantly, and the digital revolution we are seeing is going to continue as they continue to develop. It is not just a question of digitalisation, but also of reviewing the whole value chain that includes not only the customer's trip, but also others, particularly the merchants. A collaborative ecosystem of digital transformation stakeholders is poised to be the game changer to provide people access to banking products and payment goods.

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Green Marketing:
Emerging Opportunities and Challenges

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Abstract

As society is becoming more aware of the natural environment companies have begun to think about the outcome of their actions or activities which would harm the environment. Green marketing provides an opportunity to keep the environment safe. It is a holistic approach where the environment is kept in mind from the starting of production till the disposal of products. This paper examines the opportunities and challenges faced by the marketers in executing the concept of green marketing in India and it also studies upcoming strategies that a company can use to market green products in India and concludes that green marketing will be a long term practice that will be advantageous for everyone in the long run.

Keywords: *Green Marketing, Environment, Strategies, Challenges, Opportunities.*

Introduction

In this modern era of technology development and changing lifestyle our environment is deteriorating day by day. Global warming, climate change, greenhouse effect, deforestation, pollution are some of the results. Our standard of living has improved, we all are living a much comfortable life but our environment is paying the price for the same. Therefore, it is the responsibility of every human being to contribute to environmental conservation.

One fine way to contribute to environmental conservation is Green Marketing. It is a holistic concept which focuses on manufacturing, promotion, selling, and disposing of the product in an ecofriendly way. Therefore a manufacturer can help society by making green products and a consumer can help society by purchasing green products and disposing of them the right way. The main aim of marketing is to satisfy the consumer but doing it at a cost of deteriorating the environment is not correct. Green marketing is a form of marketing that aims to satisfy the consumer by keeping environmental concerns as to its priority. Our mother earth is like our family and to keep it in a good condition for the coming generation becomes our responsibility and an excellent way to fulfill this responsibility is green marketing. It can be used as a means to save our environment from severe damages.

"Green marketing is the holistic management process responsible for identifying, anticipating, and satisfying the needs of customers and society, profitably and sustainably" (Baker, 2012).

Table 1: Definitions of Green Marketing

Definitions	Authors	Description
A	American Marketing Association	"Green marketing is the marketing of a product that presumed to be environmentally safe."
B	Polonsky	"All activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment."
C	Pride and Ferrell	"Green marketing, also alternatively known as environmental marketing and sustainable marketing, refers to an organization's efforts at designing, promoting, pricing, and distributing products that will not harm the Environment"

Review of Literature

Olinda (2021): Presented Green Marketing as an instrument in keeping the environment safe for future generations and that opens a new chance of growth for society, for its consumers, and the producers. Green product development is not just manufacturing environmentally friendly products but it's also implementing a new mentality that could change the whole economic and commercial system.

Ghorai and Sengupta (2021): Discussed Awareness of Green Marketing in Preventing Pollution of Environment and Concluded that Green marketing is a special tool for future generations so that they can live a healthy life in a pollution-free environment and it should not be treating as is another way of marketing but it should be pursued with greater vigor due to its environmental and social dimensions.

Anitha & Vijail (2020): Discussed Green consumerism, green product,green promotion, green price and highlighted why green marketing should be adopted emphasizing its requirement and how it can become a base for the future reseach in various strategic, tactical, and operational dimensions.

Patil (2019): Emphasized the need for green marketing as increasing environmental hazards have raised the requirement for the same and discussed various green products introduced in India and concluded by conveying that green marketing is still at the childhood stage for Indian companies and it is essential that it becomes a norm and essential part of the marketing strategy.

Sharma et al. (2015): Presented Green marketing is more appropriate for countries that are still developing; like India, It should not be a matter of choice to adapt to green marketing rather it should be compulsory for the consumers, industrial buyers, and suppliers. Government should enforce rules that are strict to save the world from pollution and its negative impacts.

Saini, (2014): Discussed the golden rules for green marketing which can be used to make a good positioning in the minds of the customers and concluded the paper by highlighting how green marketing can bring a drastic change in the world by incorporating green marketing, it

should not be taken as one additional approach to marketing but should be considered with great vigor as it has much more dimensions attached to it.

Objectives of the Study

- To study the challenges faced by the marketers in green marketing in India.
- To study the opportunities in green marketing in India.
- To study the strategies that can be adopted by the companies to implement green marketing.

Challenges in Green Marketing

- **Lack of Standards or Public Consensus:** One of green marketing's challenges is a clear understanding of what is green, there are no specific standards that clarify what claims should be done to be green and what all things should be included to constitute is as green which slows down the pace of green products. All the stakeholders whether it is consumers or marketers lack a proper consensus.
- **The Credibility of Green Products is not Trusted:** Credibility is the foundation of effective green marketing. Due to increased malpractices like greenwashing, green selling, green harvesting, green myopia consumers don't trust the credibility of the products which is becoming a major challenge for green marketers, Consumers have certain expectations with the product if a company is not able to satisfy the customer and is caught making false claims, customers start to lose the trust and it becomes difficult to build the trust again not only for the same brand but other brands as well
- **Lack of Awareness Level:** The majority of the consumers still lack 'green' knowledge and because of such low awareness towards green products organizations are still not pushing towards developing more green products nor are they working hard on green packaging. Organizations still believe that marketing aspects such as developing a proper supply chain, packaging, pricing, etc. take precedence over green marketing initiatives. (Cherian & Jacob, 2017)
- **An Excessive Amount of Green Washing:** Jay Westfield discovered the term "Greenwashing" in 1986, the term "greenwashing" has garnered wide acceptance and recognition for describing the practice of making exaggerated or overblown claims of eco-friendliness or sustainability to capture market share. (Singhal, 2021)companies try to portray themselves as environmentally friendly and concern but in reality, they use it as tactics and strategy to grab customers attention, make false claims for example a shampoo claiming to be organic contains added preservatives and chemicals which are hidden, representing the product as green but in reality, it is not environment friendly and safe.
- **Increasing Levels of Green Myopia:** Consumer purchases the product to satisfy a particular need for example a shampoo is purchased for cleaning the hairs but if that shampoo is not able to clean the hair properly why will consumers purchase it even if it is environmentally friendly when the product is not able to satisfy the consumer but it is

environment friendly it results in Green myopia it occurs when the companies focus more on the eco-friendly aspects of the product rather than customer needs, the primary purpose of the product is ignored and environmental concern and benefit are more highlighted, it is one of the reasons of green products failure.it comes across as a challenge for marketers.

- **Lacks of Willingness to Pay a Premium Price for Green Products:** Consumers are often reluctant to pay a premium price for green products especially when the consumer is not concerned about the environment at all. The important factor that helps the business to survive is money, the main factor which drives the market i.e. the cost/price of the products regarding The near majority of the population believes that they need to pay more for the products with "Green" features.

Emerging Opportunities in Green Marketing

As consumers are becoming more aware, concern about the environment will increase which will motivate companies to opt for green marketing, following are the opportunities in green marketing:

- **The Opportunity of Gaining Competitive Advantage:** Business firms use diverse strategies like lower prices, differentiated products, innovative strategies to gain an edge over their competitors. If a firm follows a proper green marketing strategy various benefits can be harnessed which can help gain an advantage over others. These advantages include positive positioning in the minds of customers, reducing cost in the long run. A high-quality product will be delivered to the consumers at an affordable price enhancing the level of customer satisfaction.
- **Opportunity for Fulfilling Corporate Social Responsibility:** Companies are using resources from the society and society is helping the business firms to grow therefore it becomes the responsibility of every company to do something better for the society and environment and green marketing provides a golden opportunity not only to serve the consumers but society as a whole. In this way the world will be a better place to live and companies will also fulfill their part of the responsibility
- **Long-Term Profitability and Sustainable Growth:** In the initial stages of business firm will have to incur more cost but in the long term profitability and sustainable growth will be the result "Products with sustainable attributes have been steadily taking more shares of store sales, from 19.7% in 2014 to 22.3% in 2017, to an anticipated 25% in 2021" (Oglinda, 2021).
- **Government Legislation and Receiving Benefits from Government:** According to national guidelines issued a Business should provide goods and services in a manner that is sustainable and safe. Companies opting for green marketing will have tax and legal benefits as well. The government provides a subsidy for industries for the purchase of clean and green technology. For example, a 30% credit can be claimed for investing in solar or wind energy.

- **Cost Reduction:** When a firm will adopt a green marketing approach they will have to reexamine all the processes whether it is production or promotion or disposal which may incur heavier costs in the starting stage of the business but later on they will end up producing more effective processes which will not only help in reducing the wastages but also will reduce the requirement of certain raw materials.

Strategies to Implement Green Marketing

- **Increasing the Awareness Level:** First of all, a consumer should be made aware of the concept of green marketing, People who are aware more about green marketing will show their Preferences' towards green Products rather than those who are not even aware of the Concept of green Products, Companies can take an initiative to inculcate awareness consumers, IKEA is a furniture brand which makes an online effort to make people aware about the product and is leading by example as it uses solar panels in most of the building's
- **Understanding Consumer Perception:** Company should understand the consumer perception otherwise it will create a gap between what consumers want and what companies are manufacturing thereby reducing the chances of good positioning of the product, especially for green marketing a company should understand, will the target market understand the issue, will they pay a premium price, will they be tilted towards green products, etc.
- **Empowering the Customer:** Empowerment in this context refers to giving out the powers to the consumers, letting them know that they have the potential to make a difference, when consumers will feel empowered they will be in a better position to make a difference and will get more tilted towards the green product.
- **Avoidance of Green Washing:** Greenwashing is all about fooling the customers, companies should avoid making false claims, exaggeration of facts should be avoided, and companies need to be more transparent in their approach, lying by omission is also a kind of greenwashing where negative aspect is not presented in front of the consumers, so to make a place in the heart of the consumer a brand is required to be transparent and honest in their claims
- **Avoidance of Green Myopia:** A product is purchased by the consumers for the underlying purpose, a company should make or promote a product which satisfies the consumer, additionally, it takes care of the Environmental Aspect, Kyra is a brand which manufactures natural skin powders, hair and Skin cleansers, they use certified products which do not harm the environment and additionally serves the purpose of Cleansing.
- **Considering the Pricing Aspect:** It is been observed that green products are a bit costlier than normal products which again act as a driving force for the customer to pull their hand back on buying the products, if the prices are higher so efforts should be made to reduce it or despite making all the efforts, the cost is high due to inclusion of high-quality ingredients, it should be made worth buying for the customers

- **Building Better Alternatives for Nongreen Products:** Consumers will opt for green products if alternatives are available in terms of use. Consumers will purchase green products if companies can make products that are better than the conventional alternatives. Consumer value performance and satisfaction from the product rather than the ecological soundness. People won't think twice if proper green alternatives at affordable prices are available.

Conclusion

Green marketing is not only concerned with the manufacturing of green products or marketing products as green, but it is also a much broader concept that includes right from the production to the disposal of an environment-friendly approach and if the right implementation of this concept is done in our industries it can positively change the environment. There will be challenges for the companies like greenwashing, green myopia, and cost aspect but if dealt with the right strategies it will be helpful for the industries in the long run and will yield results like long-term profitability with sustainability, environment conservation.it will result in a win-win situation for every stakeholder.

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A SWOT Analysis of E-Commerce in India

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Abstract

Unlike the traditional methods of doing business, E-commerce brings a revolutionary change in the ways of doing business that has made the buying and selling process more efficient and more effective also brings the buyer and seller more closer by providing tech based infrastructure to create value for the mutual benefits of both parties. E-commerce is gaining recognition among leaders, entrepreneurs and by women who wants to raise themselves in business fields. E-commerce has a bright future in India and gaining attention from all. The number of digital buyers estimated to be approximately 330 million in 2020. By 2027 e-commerce market size is estimated 200 million USD. E-commerce has strengthen the economic growth as well creating new business opportunities. In this paper efforts have made to study Strengths, Weakness, Opportunities and Threats of ecommerce in changing environment in India.

Keywords: *E-commerce, Digital Technology, SWOT, Economic Growth.*

Introduction

E-commerce refers to the electronic commerce where business transactions accomplished between buyer and seller over internet network through electronic medium. It facilitates the buying and selling of goods and services virtually more conveniently and more fastly.

Traditionally, when customer visit to the market for purchasing the best quality products at affordable price then hardly he can get compared few products due to lack of alternatives within a restricted market boundaries and it was a time consuming process. The cost of intermediaries also add cost in price and leads to high consumption cost for buyer. Their was a risk to keep cash in pocket all the time which gives rise to theft incidence. All these bottlenecks in traditional ways of doing business have been eliminated with the emerging of E-commerce Industry.

India is a high populated country where forest are cutting on large scale for the construction works thus land is very limited in the second highest populated country India. Today's skilled young generation and entrepreneurs are well aware and educated they wants to avoid the cost of setting up an infrastructure or building to start a business by adopting the use of technology and coming on e-commerce platform to start a business. E-commerce comes up with the solution of all these problems related to high cost, inventory problem, time consumption, less customer base, inefficient advertising means, limited market area etc. that were faced with traditional ways of business.

India has witnessed of rapidly growth of e-commerce over last few years. E-commerce has changed the way of doing business in India. E-commerce has reduced the role of intermediaries between buyer and seller which results in cost cutting to run a business and reduce burden of high price charges. The major reason for remarkable progress of e-commerce is the fast adoption of technology by people, increasing number of internet user, penetration of internet services and availability of many options of making digital payment etc.

E-commerce has made the process of buying and selling more comfortable and when the COVID-19 pandemic crisis make the world vulnerable for buying and selling as people are avoiding to visit outside of their home and interacting with more people. E-commerce is being looking as a most required option more than just a mean of comfort for buying and selling activities for the fulfilment of need of people. Forecast have been made that e-commerce growth will be accelerated due to COVID-19 pandemic in coming time as e-commerce is also helpful in maintaining social distance.

Market size of E-Commerce industry across India with a forecast until 2027 has shown below:

Year	Value (in billion USD)	Year	Value (in billion USD)
2014	14	2020	64
2015	20	2021	84
2017	39	2025	188
2018	50	2027	200

E-Commerce is positively impacting small and medium enterprises by supporting them to enter across their local market boundaries to sustain in competitive and changing market dynamics also in building their efficiency by giving a global reach. Number of e-commerce based start-up had registered in India over last few years and successfully operating also earning high revenue. Flipkart, Snapdeal, Paytm, Ola, BigBasket, Grofers, etc., are examples of successful and growing e-commerce enterprises. Many leaders and entrepreneurs are understanding the benefit of e-commerce business in changing environment. Both private companies and Government of India taking initiative to strengthen the e-commerce in India.

Digital technology is the core and milestone for setting the e-commerce industry. A recent report of KPMG and Google found that Indian small and medium business who adopt digital technologies based business grow profit 50% faster and their access to market is 51% higher as compared to offline business.

E-commerce is spreading its root in India in many business sector whether it is education, hotel, insurance, travel, retail, etc. Access on all these services is just few clicks away.

Research Methodology

The data used in this study is collected from the published and unpublished data available at websites. Reports were also be taken into consideration for the data. Secondary data is taken from Articles and Reports published at official website of many organisations.

Purpose

Purpose of this study is to recognise the role of E-commerce and to analyse its potential for future progress by conducting a SWOT analysis. This study is helpful to understand the importance of technology for E-commerce Industry that can cope in economic growth of India as well as the major barriers and forecast on up coming challenges for E-commerce.

SWOT Analysis

E-commerce has many Strengths that helps in growth of this industry as well as has some weaknesses which can adversely affect its growth. On the other hand E-commerce has many opportunities for its bright future and remarkable progress in India as well as it has many threats that can create barrier for E-Commerce industry. Let us understand. Here is detailed SWOT analysis of E-Commerce in India.
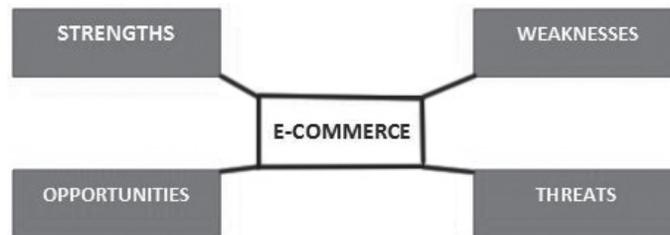
Strengths

1. **Increasing number of internet user:** The major reason of growing e-commerce industry is the penetration of internet user and internet services in India. India has internet user
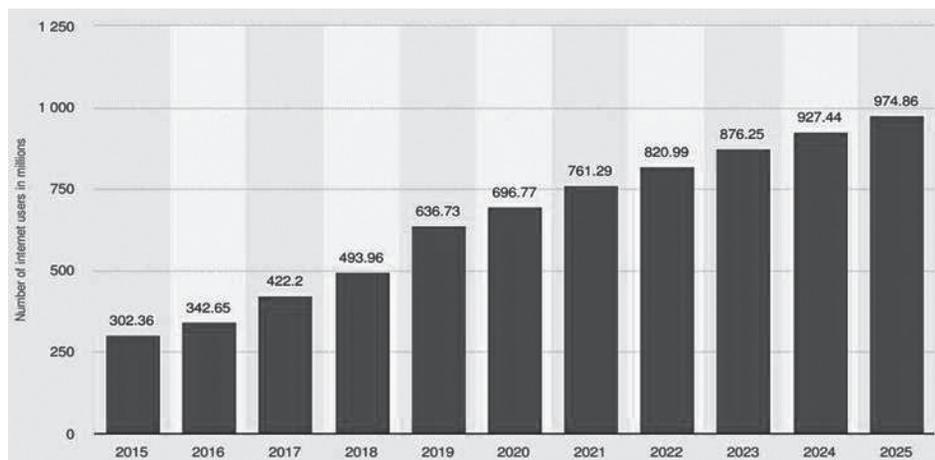

Figure 1: Number of Internet Users in India from 2015 to 2020 with a Forecast
Until 2025 (in millions)
Source: Statista; Statista Digital Market Outlook;
Additional Information: India: Statista Digital Market Outlook, 2015 to 2020

base of about 636.73 million as of 2019 which is expected to reach around 974.86 million by 2025. The number of internet subscribers has increased in urban as well as rural areas this will increase customer base and more potential customers for e-commerce business by providing a fast connectivity between buyer and seller.

In this table data is showing an upward scale of internet users in India indicates that more people will have the internet access as compared to previous years.

2. **New rules in consumer protection (e-commerce) 2019:** Government has notified new rules and regulations for E-Commerce companies under consumer protection act 2019 to cover all goods sold online and it is applicable to all electronic retailers registered in India or abroad. These will protect consumer against unfair trade practices and provide more transparency in e-commerce business. Here are mentioned some features of new policy:

   • According to new rules companies will have to display the total price along with breakup of charges.

   • It becomes mandatory for all e-commerce companies to display country of origin and expiry date of products.

   • These rules will protect consumer against unfair trade practices.

   • New rules mandate that marketplaces as well as sellers would be required to have grievances officers and grievances redressal mechanism to provide a time bound response for any complaint registered by consumer.

   • These rules do not permit any inventory e-commerce entity to falsely represent itself as a consumer and post reviews about goods and services or misrepresentation of quality or features of any goods or services as it can mislead consumer.

3. **Foreign direct investment:** Government of India has announced the hundred percent FDI in marketplace model of e-commerce. In 2019, Government of India released the Draft National E-commerce Policy with the purpose of encouraging FDI in marketplace model.

4. **Indian Government initiatives:** Since 2014, the Government of India has started various programmes namely Digital India, Make in India, Start-up India, Skill India and Innovation fund etc. All these programmes contributing for the growth of e-commerce in the country.

5. **Innovations in digital technology:** Digital technology is the core of e-commerce. Advanced high technology not just serve sellers to connect with number of customers world wide through website and smartphones over internet network but it also helps in effective management of data payment, orders, deliveries, customer relation, follow up and taking feedback. Companies are introducing innovations continuously as per changing environment. Private companies and government are investing huge amount for providing better internet connectivity and broadband network in country.

   • E-Commerce companies are adopting various new technologies like voice recognition virtual and augmented reality, artificial intelligence and machine learning to attract customers.

- More secure, fast and easy options of digital payment are available for making digital payment which enable consumer to do convenient shopping without keeping money in their pocket which is fuelling e-commerce business growth.
- Reliance to invest rupees 20,000 (US dollar 2.86 billion) in its telecom business to expand its broadband and e-commerce presence by introducing 5G service in coming time.
- In union budget of 2018-2019 Government of India allocated rupees 6,000 crore for Bharat net project to provide broadband services to ensure better internet connectivity with people living in rural areas.
- DoT (Department of Telecommunication) is also funding on a large scale for 5G project that will encourage Indian start-ups. Also number of start-ups and enterprises in India are working for 5G projects.

6. **Cost effective:** E-commerce reduced the transactional cost. In traditional methods huge investment was required on setting up of infrastructure to start a business which creates difficulty to set up a business for person who lacks sufficient capital. But e-commerce made feasible to set up a business with less capital and gives opportunities to household and women to come in business fields with their innovate ideas.

7. **24×7 times availability:** The all time availability of products and services make the shopping process more convenient as consumer can access it anytime.

8. **Fast access:** E-commerce made the shopping process hassle-free as customer has no need to visit market physically and search for products and services. All the products and services can be compared on websites with few clicks.

9. **Global market:** E-commerce provide a wide geographical coverage over market. Businesses can expand its market area. Now sellers are not limited in their local market boundaries, infact they can explore and enter in new markets worldwide.

10. **Increase customer base:** Customer is the key of success for any business. To earn more profitability it is essential to have a large number of potential customer. By E-commerce business connect with new customer fastly, anytime and anywhere and also can retain customer for future by regular follow up as when a customer visit at website and search for his interested product then this data got saved and when customer revisit then it can bring their interest back by showing product in which customer was interested.

11. **Wide range of products and services:** Customer has access over wide range of product on website. They can compare many alternative as per their likes at a single platform which used to be a will be a time consuming and cumbersome process to compare among different alternative in offline shopping.

Weaknesses

1. **Lack of trust:** All the website are not trustworthy. Many websites are fake and can hacked the data or induce virus in the devices of user. People hesitates while providing their personal and financial details online. Lack of trust is the major challenge reported

by many stakeholders in e-commerce industry as stores has no physical appearance. It has been found that supply of fake counterfeit products by merchants are also increasing which is negatively impacting customers loyalty and trust.

2. **Payment issue:** Most of the time customer leaves the website without buying the products due to problem in making payment. Payment transaction failure rate is high once the payment got failed on payment gateway then it leads dissatisfaction to customer. Although lot of options have made available to customer still it is a major concern of the inefficiency of digital payment.

3. **Inadequate knowledge:** In India having lack of technical knowledge is a major hurdle in growth of E-commerce Industry. Sellers don't have knowledge to operate business online and buyers don't possess sufficient knowledge to do online shopping.

4. **Increased competition:** As E-commerce made it feasible to start online business results in increased competition. Number of platform and websites are available to purchase online which increasing the competition.

5. **Poor internet connectivity:** Internet services are not fast at many locations specially in rural areas the reasons being it consumer leaves the website in between or face difficulty to buy online.

6. **Uncovered locations:** While purchasing products online customer face difficulty as pincode of their location is not covered at many websites for the delivery of goods if the location comes in tier 2, tier 3 and in rural areas.

7. **No physical appearance:** It is difficult to gain faith of customer without any physical appearance of products as its all a game of visual presentation. Customer don't ready to faith on quality of products easily until and unless they can personally touch the products.

8. **Poor experience can reduce conversion rate:** Once the customer lose interest on website and leaves the page due to poor representation and non working of website then it makes difficult for seller to bring their interest back. This can reduce the conversion of potential customer into sales and also reduces revenue.

Opportunities

1. **New Avenues of business due to COVID-19 pandemic:** As COVID-19 pandemic has drastically impact the economy of nation. It gives an accelerate to enter in new business sector as per the demand of prevailing situations. This crisis has made it clear that not everything cannot go in same way as it was specially when it comes to business. This crisis has compelled all business and industries to change their way of doing business and has direct the focus of business leaders to invest and start business of essential commodities and services online. People are preferring more to shop online and starting their business online as people are avoiding to came in interact with more people. This will accelerate the growth of E-commerce industry.

During this COVID-19 pandemic growth and increased sales found in e-commerce business related to essential commodities and services.

On 25th March, 2020, BigBasket which is leading online grocery player in India had the follow message, "We'll be back soon! We are currently experiencing unprecedented demand. In light of this, we are restricting access to our website to existing customers only. Please try again in few hours."

Same message was received from another Indian start-up company Grofers. Which make it clear that it E-Commerce has more opportunities to grow in essential commodities business.

2. **Increasing Customer Preference for Online Shopping:** As compared to earlier situation customer are preferring to buy products and services online over internet at e-commerce platforms. The number of digital buyer was estimated to be approximately 330 million by 2020 across the country.

3. **More Employment:** E-commerce industry is generating more employment in country specially in IT sector. E-commerce business needs experts from vario6 field as web-designing, web development, graphic designer, consultants, software engineer, etc. E-commerce is giving opportunity to many household, women and new entrepreneurs to start their business at e-commerce platforms.

4. **Recognition of Contribution of E-Commerce Industry:** Both government and private companies are recognising the role of e-commerce industry for the economic and business growth also major initiatives have been taken to boost the e-commerce industry.

5. **Customer from in Rural India:** Over last decade it has been found that penetration of fast internet services in urban India is more that in rural India. E-commerce has a pace to grow in rural area as these areas are unexplored by sellers. Means there is immense opportunities to increase customer base in rural India by facilitating internet connectivity. Also the recent report of IAMAI (Internet and Mobile Association Of India) and Nielsen it has found that rural area has 227 million active users of internet per the report of IM rural India has more active internet users that is more than 10 percent as compared to urban India which was 205 million as of November 2019. This results in more connectivity with people living in rural areas and will increase the number of customers also.

Threats

1. **Cybercrime:** Increasing cybercrime and hacking of data of user's sensitive information creates fear in mind of people that they losing their interest in buying if products and services over internet. This a major threat for e-commerce industry.

2. **COVID-19 pandemic:** In March 2020 Indian Government restricted the online sales and delivery of non essential items except for some critical and essential commodities. Many Indian E-commerce business namely, Uber, BookMyShow, Nykaa, Pepperfry.com etc. which were not included in list of essential commodities issued by Government faced a huge slow down in their business. This crisis getting worse day to day and out of control which is major threat for many e-commerce business.

3. **E-skimming:** E-skimming of credit cards activities by cyber criminals during COVID-19 pandemic and over last few years got increased. Cyber criminals can steal personal data and credit card information.

4. **Website crash:** These websites can be operate by number of customer simultaneously which generates a huge quantity of data. Less bandwidth or poor software can lead to crash of website that can disrupt the whole business.

5. **Unfair trade practices:** Price manipulation, high delivery charges, non acceptance on return of products, product quality mismatch from that of visual images and description, fake website and misleading advertisement to attract customers are the threats that is spoiling the e-comm industry.

Conclusion

India is a developing country and second highest populated country in world. In ever changing environment and during COVID-19 pandemic India has potential to speed up the economic growth by efficiently and effectively use of resources in E-commerce industry. Initiatives have been taken in past that is praiseworthy and efforts continuously being made in this direction. E-commerce industry giving its contribution in fulfilling the needs of sellers and buyers in COVID-19 pandemic and in maintaining social distance to fight against COVID-19 pandemic. Indian information technology proves the milestone for e-commerce industry. Improved internet connectivity and innovation in digital technology eliminating the gap between buyer and seller, reducing transactional cost, generating employment and enabling to fulfil needs in a virtual world for mutual benefits. E-commerce industry has bright future in India. Although there exist problems in the way e-commerce industry but every problem has a solution. Here are some facts finding in this study:

• There is need to keep a strict check on corrupt officials and fake websites.
• Financial assistance and investment is required in E-Commerce from private sectors and Government.
• Innovations and more technical know-how skills are required in E-Commerce industry.
• Need to ensure the better internet services and it's accessibility in rural and backward region of India.
• Many small merchants don't possess sufficient technical knowledge. They are unfamiliar and uncomfortable with the changing technology. There is need to impart technical skills and know-how.
• Need to ensure high speed bandwidth and efficient payment gateway.

Overall E-commerce is a growing Industry in India in last decade and has potential to contribute In GDP and economic growth of the nation.

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Change of Wave:
Globalization to De-Globalization

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Abstract

Globalization is inter-relation and interconnectedness of various cultures, economies and population at various level. It not only includes movement of goods and services but also human capital and technical ideas. While globalization happened across various decades, the same can be attributed to three waves. While the first two waves focused on technological development which helped growth of global trade multifold, the third wave emphasized on supply chain management driven by the emerging markets of India and China. Wherein globalization talks of how to get an inclusive picture of different economies using their best, de-globalization takes a different path. With kind of scenarios world has been facing since 2008 with crash of global markets, to current date where world is hit by pandemic. Countries have become more restrictive and more focus has shifted to self-reliance. Be it the US government, China or European region, all started with some sort of focusing on internal reliance rather than moving out. Brexit itself can be taken as live example of de-globalization. We can find that the process started way before pandemic era with US as America first policy, China focusing on Made in China Policy and UK moving out of European Union. These all in a way are part of de-globalization and with current situation of pandemic, countries using National Health and National Security as forefront have accelerated the process of de-globalization.
In this paper we would try to focus on how the economy was moving under globalization and how different things went into changing the wave towards de-globalization. Also we would try to find out how effective or ineffective will this be considering current interdependency of countries in every possible aspect.

***Keywords:** Globalization, De-globalization, Trade War, Nationalism.*

Introduction

Considering change in global market over last century, there has been considerable integration between different world economies. Either calculating it through the trade volumes over the decades, movement of human resource or movement of capital from one continent to other, none of the developed or emerging market economies have been left untouched. Globalization can be considered one of the most important economic action which happened over in last one century. Free or less restricted flow of goods, capital and people have helped nations to change its fate. Be it Middle Easter countries turning from a deserted mass of land to a

economic powerhouse investing trillions of dollars across the world or be it China moving from a third word country to forefront of supply chain. Globalization can be considered to be one of the ways of eliminating poverty, utilizing resources and providing opportunities to emerging markets on one hand and providing efficient use of capital resources and larger reach to market on other.

Objective of Study

With the study we aim to understand

1. Meaning of Globalization and its related stages
2. Meaning of De-globalization, and
3. Reasons of shift from Globalization to De-globalization

Definition of Globalization

Globalization in itself means a process of interdependence of various social, economic and cultural systems. As per IMF, the concept of globalization is based on following business principals:

1. Transactions and Trade
2. Movement of Capital
3. Movement of Human Resource, and
4. Diffusion of knowledge

Globalization can be considered as a phenomena where integration of culture and markets happen. This allows a unblocked movement of knowledge, human resource, services, products and ideas which helps basic economies to grow and provide them a natural progression from developing to developed economy.

Globalization can be linked to historic civilizations wherein different cultures and civilizations exchanged goods. Civilizations like Sumerians found trade route to Indus Valley region which in a way formed basis of slow transition from self-dependence towards exchange of goods and services between cultures, or foreign civilizations. The Silk Route can be considered one of the foremost examples of globalization wherein the trade route ran from Mediterranean Sea stretching across Asia till Pacific coast of China. Although such exchanges were limited to restricted regions because of proximity, huge investment of capital in movement of goods and cultural differences.

Stages of Globalization

Although considering history of globalization, we can divide it into four major stages; namely

1. Stage 1: Humanizing : People moved for food (primarily hunting)
2. Stage 2: Localizing: Production of food where people lived (Agriculture and Barter trade),
3. Stage 3: Old Globalization (Production increased locally and trade increased); and

4. Stage 4: New Globalization (Production and consumption moving across geographies)

Our focus will be on Old and New globalization which formed basis of growth in last two centuries.

Focusing on the old and new globalization, we can divide the period in three parts. One pre-world war one which focused on local production, colonization, formation of trade routes, movement of resources to industrialized nations and movement of cheap labor from one part to other. This part saw setting up of huge industries in western nations. Capital stayed in industrialized nations but resources and people moved to fuel this expansion. There was rapid increase in production. This stage came to an end with WW1 starting in year 1914.

The second part started after end of WW2. This was phase where economies were rebuilding itself. We had Germany and Japan which after WW2 drastically took reconstruction of respective countries and economies which boosted the global trade scenarios. Global trade increased multifold with focus on exports and imports from Asian nation of Japan and Korea to western Europe and USA.

The third stage can be considered from year of 1990 wherein there was shift from production to supply chain management. Instead of a single country producing specific products, a robust supply chain was formed consisting of various nations which participated in final production of goods. These were considered to be newly industrialized economies which had started focusing on providing cheap production solutions. China gained much in this and became the global supply hub for each and every product. Other than China, other Asian countries like India, Thailand, Vietnam and Bangladesh gained. This was also the period marked by dotcom boom. IT and BPO industry grew at rapid pace thus moving services from one continent to other.

But globalization is not all music to ears. With its advantages came its disadvantages. While Old Globalization period was marred with negative points like colonization, draining of material resources, exploitation of human resource and focus on capitalism, the new globalization stage has its own disadvantages. Unequal economic growth, lack of localized business, exploitation of labor, effect of regional issues on global production and effect of financial crisis are few to be named.

Shift from Globalization to De-globalization

De-globalization can be considered as reversal of Globalization. It can be considered as a process wherein the interdependence and integration of capital, trade and people reduces. It marks with repatriation of capital from investee to investor, focus of restrictive trade policies, restrictive movement of people and also policies formed in retaliation.

Although de-globalization can be traced to 19th century wherein globalization suddenly came to an end with advent of WW1, we can see more prominent examples in recent past which point towards de-globalization. Brexit and Trump policies are major example of de-globalization. The 2008 financial crisis started as global issue which effected many countries simultaneously and led to a question whether globalization helps or it amplifies

local crisis situations into global. We can safely state that the crisis of 2008 did plant idea of de-globalization which was nurtured with future policies like USA first, UK moving out of EURO Zone and China's retaliatory policies against USA.

There was a well prevailed perception that after the 2008 fiasco, trade and capital would tend to grow at its usual pace but the scenario had been different, Global trade volumes grew by 3.5% from 2009-2018 against the average pace of 7.6% before the crisis (Data Source: Bloomberg). Even the movement of capital which is measured by FDI flows has reduced in the said period. The only movement that has been positive was movement of people as workforce moved in search of jobs.

Reason for Shift from Globalization to De-globalization

To ascertain if we are really moving into a de-globalization era, we need to focus on few points:

US China Relationship

Keeping aside the fact that China remains the biggest holder of US treasuries, US policies in recent past have been a key point of contention. Under the Trump administration, US protectionism policies have been framed with America First in mind. Announcement like 25% of additional import duties on $50 billion worth of goods imported from China and plan to increase the same to $200 billion worth of imports added to heat. China in retaliation did tried to increase the tariff but the same was not effective as they do not import much from US to make that hike considerable. The tariff policy war kept on for over a year with both sides taking steps to harm each other.

Following the protectionism policy, many other countries started to leverage the sentiment like Japan tightening export of South Korean Imports from Japan, US expanding tariff regime on European Automobile Industry.

Brexit

Brexit was listed as one of the top risk in 2016 which finally became a reality. It was a referendum wherein people voted to move out of alliance which formed backbone of EURO region. We can consider it as a thought against globalization as it was fueled by nationalism, inability of EU to solve problems like unemployment which started from 2007-08 and belief of people that such organizations are mostly defunct and serve no purpose. There was a huge difference between the economic conditions of the EU members itself. Looking on the situation of western European countries and eastern European countries, one can clearly see the rift. Countries having a stable economy worked for weaker countries. UK, Germany and France formed the base line for EU economy whose wealth was being distributed to weaker EU participants. Also it was workforce movement from eastern part to western part which led to a belief that jobs which were for residents of a country were being lost to foreigners.

Pandemic

COVID-19 has made global economies to think if they are paying price of globalization with human life. Now questions are being raised that are we so much dependent on each other that a negative event in one corner of the world can effect whole world.

Taking leaf from the earlier part in stages of globalization where we discussed setting of global supply chain, the event of COVID actually disrupted the whole supply chain as China has set itself as hub for each and every industry.

The pandemic has changed the view on supply chain. Every country saw one or other kind of restriction on trade majorly export with countries focusing on providing nationals with required products first. We have seen ban on export of medical equipment, ban on export of raw material for medicines and also protective gears. Such kind of policies on one hand increase shortages of critical products in countries and on other hand increase hoarding and profiteering. With such fears in mind countries are rethinking on trade policies and ways to reduce dependence on each other. All major economies in one or the other way have started to rethink and realign trade policies. China being at the heart of the pandemic, countries like Japan, US which had considerable investment have started moving out. Japan per se has started to provide support to companies which shift base from china to other Asian countries. Companies like Amazon and Apple have started to look for alternate sites for sourcing.

Conclusion

Considering the factors like diminishing global trade, nationalist policies and disruption in supply chain caused by pandemic, we can say that we are in middle of a de-globalization wave which started with 2008 financial crisis and had been fueled by trade wars, economic and political decisions and a nation based leadership. There has been a wave of de-globalization after every wave of globalization but it has provided more reasons to join hands for inclusive growth rather than individual growth. With current wave of de-globalization, economies are thinking of localization but this localization will not be possible without globalization. New sources needs to be identified, new ways to be devised and new supply chain to be established in parallel which is both inclusive of local and global.

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Changing Pattern of Consumer Behaviour After Pandemic COVID-19: Special Reference to Online Retail Shopping

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Introduction

In this paper 'consumer behaviour' is discussed as in how consumers have reacted towards online shopping, how the consumer behaviour has changed amid COVID-19 and post-pandemic, how consumers will react to their changed behaviour. Will they shift back to offline shopping or will they continue to like being online shoppers? COVID-19 pandemic has been a critical situation from the start. To control the spread of the virus, various measures were taken. One of them was a complete lockdown. It has put everything on hold. Going through a pandemic where public health measure is everyone's topmost priority and a partial or complete lockdown situation where the world stood still for a long period, this resulted in a change in market dynamics. This situation has pushed human behaviour in different directions, some of them are irrevocable and others are temporary. This article looks at the changed pattern of consumer behaviour since the pandemic has started and further it looks at whether this new consumer behaviour paradigm is permanent or transient? This COVID-19 pandemic has increased the use of digital tools in people's life and business to remain connected with everyone in a world that's physically disconnected at the moment. Increased use of various available digital tools has been blurring the lines between work, lifestyle, and social interaction. We expect this scenario to continue in the post-COVID-19 world also.

Evidence suggests that people still follow the same habits picked up during the crisis, such as washing hands frequently, using tissue paper to open doors at public places, carrying extra masks in their handbags, using keys to press elevator buttons, etc. Consumer attitudes, behaviors, and purchasing habits have changed during this ongoing pandemic and lots of these new ways will continue post-pandemic also. We have seen people enjoying the virtual workforce and hence the trend of everything coming online is growing at a rapid pace.

The COVID-19 pandemic has technically and fundamentally changed the world as we all know it was. People are now living differently, thinking differently, and hence buying differently. Consumers all over the world are looking at goods and services and their brands through a new lens. Some research indicates that these new habits which have formed now will continue beyond this crisis, permanently changing what we care about, what we value, how

we live and work, how and where we shop, etc. This is a new normal and people worldwide are trying to completely adapt to this new normal. During the pandemic, people embraced technology more than ever to support all aspects and consequences of isolation but now they are used to it. It has become a piece of cake for them. This is having a strong impact on the way we engage with our communities, friends, and families and how and where we shop for our essentials and basic needs as well as for unimportant things. Be it a product or service from a big brand or an unknown small business, be it an electronic item or a woodwork item, be it a grocery item or some processed food, every single thing is available online and with so much ease that anyone can buy them with just some clicks.

So, there has been digitalization of buying everything since the pandemic started. This pandemic has forced all of us to follow new ways of doing things and changing existing practices and that too for a considerable long duration of time. The shutdown of physical stores during lockdown has led consumers to rethink their shopping habits. People who did not like and were previously reluctant to shop online were left with little or no choice for almost a period longer than 1 year. and now when they get used to the convenience of online shopping, they will be slow to come back to brick-and-mortar retailers.

Let's take an example. The 2016 demonetization drove people towards the era of digital transactions in a big way. Not only the then-existing platforms like PayTM benefited, but in that scenario, the ecosystem soon evolved in the form of UPI and other new entrants like Google Pay, PayPal, etc. to make digital payments thrive further. Indeed, a number of those gains did go away once the cash was back in circulation but there was an enormous shift in consumer behaviour that had already taken place. People got used to paying online for even a very small amount of money because everyone was accepting it. This habit can be seen in the current situation also. Similar kinds of consumer behaviour will follow in buying things online. First, they didn't have any other option but to shop online, and now they are used to it. They get everything so conveniently and swiftly with just some clicks. It is not only easy and convenient but comes with monetary benefits too. To woo the customers, offering discounts or various offers is a trend nowadays and shoppers are hunting for these deals to save more money.

We will likely see a similar kind of shift with online shopping post-COVID-19. In a developing country like India, online shopping still accounts for just 1.6% of total retail sales which shows that sector is still far from saturation. As the Coronavirus has forced people to stay indoors for a longer period, this percentage is likely to increase significantly. Both China and SouthEast Asia are seeing this shift in their country and India is likely to follow the same suit.

Objectives

1. To study the pattern of consumer behaviour towards online retailers amid the COVID-19 pandemic
2. To study whether this new consumer behaviour paradigm is permanent or transient

Literature Review

Accenture (2020) focused on the consumer's new habits formed during the COVID-19 pandemic. Research says that these habits will endure beyond the crisis and permanently change the consumer's values, attitudes, and behaviour.

The Economic Times (2019) World Bank says that trade within the south-Asian countries is low. India accounts for just 1.6% of total retail sales in South Asia in terms of online sales. Though it has grown substantially in recent years, it still counts a very low % share in this region.

Bhardwaj et al. (2021) focused on the impact of pandemic on consumer's sentiment and behaviour. They say that the COVID-19 crisis has altered the behaviour of Indian customers as they have heightened their focus on health and their embrace of digital tools and platforms to make purchases. Companies should start integrating such behavioral shifts into their planning and go-to-market strategies in the future.

Puttaiah (2020) emphasized how the pandemic is changing the way we work, travel, communicate and shop, and which of these new habits are likely to stick permanently.

Research Methodology

Random sampling has been used in Gurugram city with 60 respondents. The respondents are students who are either graduates or postgraduates and employees of Gurugram University. The respondents are of various age groups and having different annual family incomes. The data was collected using online surveys which were sent to the students and employees of Gurugram University.

Limitations of the Study

The sample selected for this study was specifically 60 people (students and employees) of Gurugram University. The study is limited to a small sample and may not be applicable to people outside this specification.

Findings and Suggestions

Findings on Demographic Profile

Table 1: Demographic Profile

Category		Frequency	Percentage (%)
Gender	Male	24	40
	Female	36	60
Age	Below 20	5	8.3
	20-50	52	86.7
	Above 50	3	5
Marital status	Married	10	16.7
	Unmarried	50	83.3

Category		Frequency	Percentage (%)
Educational Qualification	Upto senior secondary	8	13.3
	Graduate	25	41.7
	post-Graduate	27	45
Family Income	Below 2.5L	25	41.7
	2.5L-5L	17	28.3
	Above 5L	18	30

Data Source: Online Questionnaire

The data depicts that a large percentage of the respondents (86.7%) belong to the age group of 20-50 years. There were 36 females and 24 males. Hence, 60% were female, and the rest 40% were male. The majority of the respondents were graduates and postgraduates.

Findings on Consumer Buying Behaviour

Table 2: Understanding the Buying Behaviour of Consumers

Category		Frequency	Percentage(%)
Have you faced any problems in shopping during the lockdown?	Yes	29	48.3
	No	31	51.7
Are you shopping online during the lockdown?	Yes	51	85
	No	9	15
How many times do you shop online in a month?	Once	23	39
	Twice	14	23.7
	Thrice	4	6.8
	More than Thrice	18	30.5

Data Source: Online Questionnaire

- The majority of the respondents (51.7%) said that they did not face any problem in shopping during the lockdown period and 48.3% said that they faced problems.
- The majority of the respondents (85%) said that they do online shopping while only 9% said that they don't shop online.
- Among those people who shop online, 30.5% buy more than thrice a month, 23.7% buy twice a month and 39% of them buy once a month from online retailers.

Findings on Payment Methods Used for Online Shopping

Table 3: What Payment Method do You Use for Online Shopping?

Category	Frequency	Percentage (%)
Paytm	10	16.7
Amazon Pay	2	3.3
UPI	18	30
Mobile Banking	3	5
Internet Banking	2	3.3
Cash on Delivery	25	41.7

Data Source: Online Questionnaire

- For online shoppers, various payment methods are available like Paytm, Amazon Pay, UPI, Mobile Banking, Internet Banking, Cash on Delivery, etc.
- The majority of the respondents (41.7%) pay through cash on delivery option, the 2nd most trusted payment method is UPI which was opted by 30% of respondents followed by Paytm which was opted by 16.7% of respondents.
- Mobile Banking, Internet Banking, and Amazon Pay payment system users are very less in number.

Findings on Preferred Online Platforms
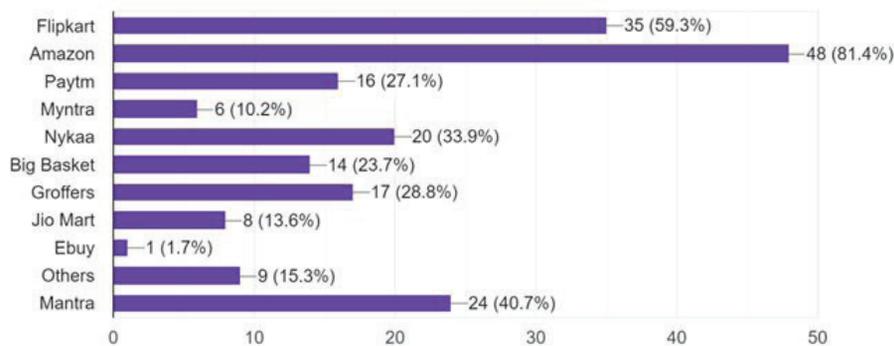
Figure 1: Which Website or App that You Frequently Use for Shopping?

- It was found that among the various available sources, Amazon is the most trusted platform where the respondents could vouch upon and shop online. It could be because of the prompt services provided by Amazon or it could be because of various regular offs and offers provided by Amazon to its customers. Amazon has been successful in building trust in its users which were seen by ratings given by respondents.
- The second most used platform was found to be Flipkart followed by Myntra.
- Ebuy and Jio Mart were found to be the least used platforms by the respondents while shopping online.

### *Findings on Often Buying Products*
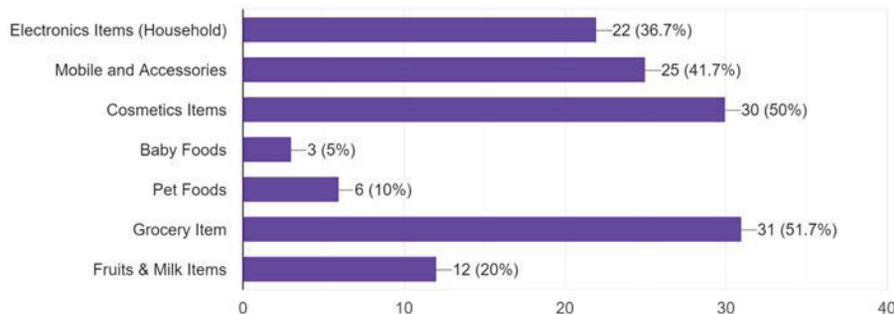
Figure 2: Which Type of Product that You Often Buy from Online Store?

It was found that the most purchased items via online platforms were grocery items followed by cosmetics items and mobile and accessories.

Findings on Online Shopping Experience

Table 4: Online Shopping Experience

	Response Statements	Frequency Table				
		Strongly Agree	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
1	I get on-time delivery	27	2	11	19	1
2	Detail information is available on websites	23	2	3	16	16
3	I can shop 24X7 (Anytime, Anywhere)	25	2	9	24	0
4	Wider options and easy to compare with other products	23	2	13	22	0
5	I prefer to buy from a website that provides safety and ease of navigation	25	1	8	25	1
6	Easy to search and select the right product	26	2	1	9	22
7	I purchase from familiar websites	21	4	2	10	23
8	Online shopping takes less time to purchase	26	1	8	24	1
9	Online Shopping website protects my personal data	30	2	9	10	9

Data source: online Questionnaire

- The majority of the respondents strongly agree that they get on-time delivery by online retailers
- The majority of the respondents strongly disagree with the point that they prefer to buy from familiar websites online. This could be interpreted as people would shop from the websites where they would get a better deal for their needs which might be in terms of quality or price or some offers.
- It is found that the majority of the respondents strongly agree that they get detailed information about the product or service they want to buy.
- Half of the respondents said that they found it easy to search and select the right product while shopping online while half of them said that it was difficult to search the select the right product according to their needs and demand.

Findings on Consumer Behaviour Pattern

Table 5: Consumer Behaviour Pattern

Category		Frequency	Percentage (%)
How do you feel about your overall experience at this online retails shopping?	Extremely Satisfied	5	8.3
	Satisfied	47	78.3
	Not at all Satisfied	8	13.3

Category		Frequency	Percentage (%)
Would you recommend your favorite products/ website to others?	Yes	46	76.7
	No	14	23.3
Would you prefer to buy online post-COVID-19 Pandemic?	Yes	48	80
	No	12	20

Data Source: Online Questionnaire

- The majority of respondents were satisfied (78.3%) with their online retail shopping experience, 8.3% were extremely satisfied and just 13.3% had a bad experience opting for not at all satisfied.
- 76.7% of respondents selected that they would recommend their favorite products/ websites to others while just 23.3% said no to this.
- It is found that 80% of respondents would prefer to buy things online post-COVID-19 pandemic also.

Conclusion

The experience of living during the COVID-19 pandemic has changed the world in which we live and it has a great impact on consumer behaviour. The changes such as digital adoption and value-based buying behaviour that provide positive experiences like convenience and well-being are likely to last longer.

In the emerging post-pandemic reality, the demand in the e-commerce industry looks fairly robust. It is for sure that there will be some realignment in brand as well as category preferences but on the whole, this sector is poised for growth. This provides a chance for the retailers to offer something unique, innovative, modular, and value-based products to satisfy the customer's needs. They have become more aware, demanding, and quality conscious and at the same time, they want these qualities to fit in their budget. It is important for retailers to understand consumers' preferences to stay relevant, reachable, and affordable and can adapt accordingly.

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Sustainable Development Goals: Impact of COVID-19 in India

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Abstract

Worldwide Sustainable Development Goals (SDGs) (herein after called as SDGs) includes alleviating poverty, protecting environment, reducing economic inequality, ensuring peace & justice, climate change, innovation and sustainable consumption. These Goals does not differentiate between "developed" and "developing" countries and is based on the principle of "no one is left behind". This research paper is based on the study to examine the impact of COVID-19 on National Sustainable Development Goals (SDGs) in India. The findings reveal that all the states have improved their scores, while Mizoram, Haryana and Uttarakhand are top gainer. Kerala is on the top, while Bihar is the poorest in SDG performance. Good health, clean water, affordable energy, Climate change, life on land and peace and justice have a positive push, while attention should be taken on Poverty, Hunger and Gender Equality.

***Keywords:** Sustainable Development, Sustainable Development Goals, United Nations, COVID-19, Enviornment Protection and Poverty.*

Introduction

The Brundtland Commission introduced the term sustainable development, first time in the year 1987. In the year 2000, the United Nations General Assembly passed a resolution for setting the Millennium Development Goals having 8 main targets and 18 associated targets and set an aim to achieve sustainable development goals by the year 2015. An "Earth Summit" took place in year 1992 in the city of Rio de Janeiro, Brazil later on in the year 2012, a conference was held in the name of RIO+20, this conference decided that the Kyoto Protocol will continue till 2020 also decided to hold a conference in Paris, France in the year 2015 and finally come up with the "Sustainable Development Goals". As a result, total 17 Sustainable Development Goals were adopted in the United Nations Sustainable Development Conference to be achieved by the year 2030.

Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as the World Wide Goals, were adopted by the United Nations in the year 2015 for alleviating poverty, fighting inequality,

stop hunger, protect earth and make sure that by year 2030 all people enjoy a peaceful and healthy life. Sustainable Development Goals does not differentiate between "developed" and "developing" countries and based on the principle of "no one is left behind". It is a collection of 17 integrated goals to achieve a better and sustainable future.

Sustainable Development Goals: United Nations Role in India

United Nations has apprised the participation of social organizations, educational institutions and the media in its discussions during its General Assembly sessions. The United Nations team in India supports the NITI Aayog's efforts to focus on the interconnection between the goals so that no one is left behind and support by providing adequate funding to achieve the Sustainable Development Goals in India. The United Nations, in collaboration with NITI Aayog and its partners, has carried consultations on the Sustainable Development Goals to enable Central Government and various State Governments, civil society organizations and scholars to deliberate different sustainable development goals.

In fact, through this, the United Nations has set an ambitious goal of ending poverty, hunger and advancing everyone in India. The core Global Agenda for the year 2030 is based on the principle of universality – 'Let no one be left behind'. For the implementation of these objectives, it is necessary to involve various agencies apart from central and states governments. Development must be inclusive in all its dimensions for all, everywhere and it should be built by the participation of everyone, especially for the helpless.

Research Methodology

This research paper is exploratory and descriptive in nature. The secondary data is collected from Ministry of Health and Family Welfare, Ministry of Rural Development, National Bank for Agriculture and Rural Development (NABARD), Ministry of Women and Child Development, Ministry of Communications, Ministry of Home Affairs, Ministry of Social Justice & Empowerment, Ministry of Agriculture and Farmers' Welfare, Ministry of Statistics and Programme Implementation, Government of India and NITI Aayog. This study is limited to Indian perspective only. Statistical tools like percentage and average are used to get result.

Objectives of the Study

1. To study the Sustainable Development Goals and National Indicators in India
2. To examine the impact of COVID-19 on Sustainable Development Goals in India

Objective 1: To Study the Sustainable Development Goals and National Indicators in India

India is committed to implement the SDGs through nationally defined indicators based on the national priorities and requirements. In this effort, at national level NITI (National Institution for Transforming India) Aayog has plotted the SDGs into various on-going national and

sub-national policies and programs. Government of India is functioning with the approach to planned vision, priority setting and achievement. As per the Sustainable Development Progress Report issued by Ministry of Statistics and Programme Implementation, Govt. of India, total 17 Sustainable Development Groups (SDGs) are identified in United Nations General Assembly, these are discussed in the following table:

Table 1: Sustainable Development Goals

SDG	Objective	Statement
SDG-1	No Poverty	alleviating extreme poverty for all people in every country of the world.
SDG-2	Zero Hunger	End hunger, food security and better nutrition and promote sustainable agriculture
SDG-3	Good Health and standard of Living	To give a healthy life to all and to improve the life quality
SDG-4	Quality Education	Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities
SDG-5	Gender Equality	To achieve gender equality and strive to empower all girls and women
SDG-6	Clean water and Sanitation	Ensuring the availability and sustainable management of clean water and sanitation for all
SDG-7	Affordable and clean energy	Ensuring access to affordable, reliable, sustainable and modern energy for all
SDG-8	Decent work and Economic Growth	Promoting productive employment and decent work for all, while promoting sustained, inclusive and sustainable economic growth
SDG-9	Industry, Innovation and Infrastructure development	Creating robust infrastructure, promoting inclusive and sustainable industrlization
SDG-10	Reduction of Inequality	Reducing inequality within and between countries
SDG-11	Sustainable Urban and Community Development	Making cities and human settlements inclusive, safe, resilient and sustainable
SDG-12	Responsible Consumption and Production	Sustainable production and consumption patterns
SDG-13	Climate Change	Ensuring immediate action to tackle climate change and its effects
SDG-14	Life in Water	Ensuring the conservation and proper use of oceans, seas and marine resources for sustainable development
SDG-15	Life on Land	Strive to prevent the increasing loss of terrestrial ecosystems, protected forests, land degradation and biodiversity that promote sustainable use

| SDG-16 | Institute for peace and Justice | Promoting peaceful and inclusive societies for sustainable development Solar Ensuring access to justice for all |
| SDG-17 | Collective Partnership in achieving goals | Revitalizing the Global Partnership for Sustainable Development and strengthening the implementation. |

Data source: Sustainable development Progress report-2021 issued by Ministry of Statistics and Programme Implementation, Govt. of India.

The above mentioned Sustainable Development Goals (SDGs) in Table 1 are wrapped almost every aspect of human life. If these goals are achieved within the stipulated time, it is sure that the life of the poor across the world will be easier and better possibilities will be offered to them to live. The SDG India Index for the year 2020–21, released by NITI Aayog, developed in collaboration with the United Nations, tracks progress of all States and UTs on 115 indicators that are aligned to MoSPI's National Indicator Framework (NIF). National Indicators are the sub division of SDGs as per the prioprity and preference of country. These 17 SDGs are discussed in Table 1 and out of 115 national indicators few indicators have been discussed in this paper in Table 4.

Objective 2: To examine the impact of COVID-19 on Sustainable Development Goals in India

India's Leading Role

The Government of India is strongly committed to achieve SDGs by the year 2030. It has initiated a series of nation-wide welfare and developmental programs. It is duly reflected by the statements made by H'onable Prime Minister of India and other ministers on various occasions at National and International level. The slogan "Sabka Saath Sabka Vikas" is justified the initiative taken by Govt. of India in line with the Sustainable Development Goals. India will play a leading role in determining success in achieving the Sustainable Development Goals around the world. The COVID-19 pandemic has created a global crisis. In these advers senierio, the government and pharma companies coordinated together to ensure the supply of essential lifesaving drugs, antibiotics, medical consumables, vaccines and laboratory & hospital provided the medical equipment to the nationals in India and across the globe. The Government of India has created Voluntary COVID-19 Emergency Fund of USD 10 million to ensure the proper supply of health services.

Role of State Governments

Successful Implementation and the progress of Sustainable Development Goals are lies in the hands of state governments as they are most capable of prioritizing and ensuring public interest. Several programs of the government such as Swachh Bharat, Make in India, Skill India and Digital India are the core of the Sustainable Development Goals. In fact, 15 out of 17 Sustainable Development Goals are directly related to the activities of the state governments. State governments are taking extreme interest in conceptualizing, planning, budgeting and development to implement and monitor the Sustainable Development Goals.

Various States and UTs in India are classified based on their SDG India Index score. Aspirant: Score 0–49, Performer: Score 50–64, Front-Runner: Score 65–99, Achiever: Score 100

Table 2: Index Score of States and Union Territories

Aspirant (0-49)	NIL
Performer (50-64)	Manipur, Madhya Pardesh, West Bengal, Chattishgadh, Nagaland,Odisha, Arunachal Pardesh, Meghalya, Rajasthan, Uttar Pardesh, Assam, Jharkhand, Bihar. UTs – Dadra and Nagar Haveli and Daman and Diu
Front Runner (65-99)	Kerala, Himachal Pardesh, Tamil nadu, Andhra Pardesh, Goa, Karnatka, Uttarakhand, Sikkim, Maharastra, Telangana, Mizoram, Panjab, Haryana, Tripura. UTs – Chandigarh, Delhi, Lakshadweep, Puducherry, Andaman and Nicobar Islands, Jammu and Kashmir, Ladakh.
Achiever (100)	NIL

Data source: SDGs India Index 2020-21 Report issued by NITI Aayog
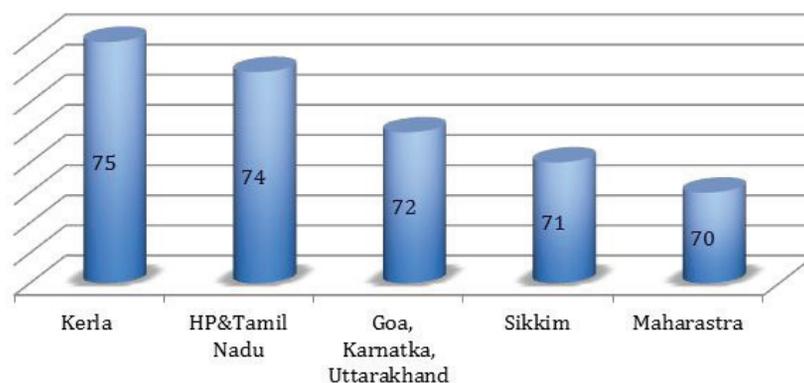
Figure 1: The Top-Five States in SDG India Index 2020–21
Data source: SDGs India Index 2020-21 Report issued by NITI Aayog.
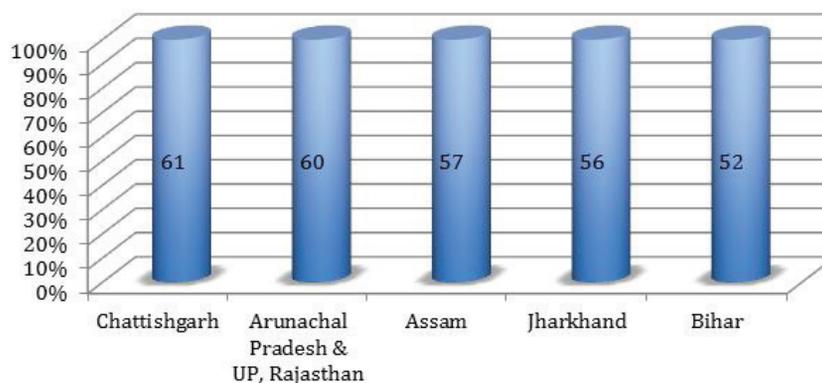
Figure 2: The Bottom-Five States in SDG India Index 2020–21
Data source: SDGs India Index 2020-21 Report issued by NITI Aayog.

Government of India think tank NITI Aayog has released its third report on Sustainable Development Goals 2020-21. Kerala is on the top while Bihar has performed the worst. The condition of Jharkhand is also not good and its above Bihar.

Table 3: Top Fast-Moving States (Score-wise)

State	2019-20 Score	2020-21 Score	Change in Score
Mizoram	56	68	12
Haryana	57	67	10
Uttarakhand	64	72	8

Data source: SDGs India Index 2020-21 Report issued by NITI Aayog.

All States have improved their score, Mizoram, Haryana, and Uttarakhand are the top gainers in 2020-21, in terms of improvement in score from 2019.

The National indicators are discussed here in the following table to study the progress in India during this pendemic. These national indicators incidates the present status of SDGs in India as follows:

Table 4: Sustainable Development Groups National Indicators

National Indicators	2015–16	2018–19	2019–20
SDG 1: No Poverty			
Self Help Groups Linked to Bank Credit (in lakhs per year)	18.32	26.98	31.46
New Pension Scheme Coverage (in cr.)	0.97	–	1.44
Institutional Assistance Provided to Senior Citizens (in numbers)	23,095	40,450	50,860
Households with any usual member covered by a health scheme or health insurance	28.7	–	–
Beneficiaries under Integrated Child Development Scheme (ICDS)	–	–	8,16,54,722
Social protection benefits under Pradhan Mantri Matritva Vandana Yojana (PMMVY) (out of total eligible population)	–	–	91.38%
Employment under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	–	–	84.40%
beneficiaries added under Employee's Pension Scheme (EPS) during the year	–	–	2.34.23.696
Proportion of total government spending on essential services (education, health and social protection)	–	–	30.31%
SDG 2: Zero Hunger			
Agriculture Productivity – Wheat (in kg per hectare)	3034	3533	3440
Rice (in kg per hectare)	2400	2638	2722
Net area under organic farming (%)	0.97	1.59	2.02
Plant and animals genetic resources			
– Plant	4,32,799	–	4.64597
– Animals	6000	–	19305

National Indicators	*2015–16*	*2018–19*	*2019–20*
Conservation of fish genetic resource (in number)	–	–	1609 (2020–21)
Gross Value Added in Agriculture	61427	–	77540
Proportion of beneficiaries covered under National Food Security Act 2013	–	–	97.59% (2020–21)
SDG 3: Good Health and Well-being			
Maternal Mortality Ratio (per 1,00,000 population)	130	122	113
Under five Mortality rate (Per 1,000 live birth)	43	36	–
Tuberculosis incidence (per 1,00,000 population)	214	202	196
Significant fall in Malaria (per 1,000 cases)	0.92	–	0.13
SDG 4: Quality Education			
Higher secondary education (Gross Enrolment Ratio)	48.32	50.14	–
Education Facility:			
* Proportion of schools with access to electricity	58.55%	73.86%	–
* Proportion of schools with access to computer for pedagogical purpose	27.31%	32.66%	–
* Gross enrolment ratio for tertiary education	–	–	27.10%
SDG 5: Gender Equality			
Percentage of Women candidates contesting Lok Sabha elections	8.19%	–	9.01%
Women's Poiltical Participation in Natinal Parliament (Lok Shabha Seats)	–	–	14.36%
More women in Leadership Roles (women in managerial position)	173	–	190
Women SHGs linked with Banks	88.92%	–	91.67%
SDG 6: Clean Water and Sanitation			
Safe drinking water through pipe water supply (for rural Population)	37.85	40.58	50.66
Improve drinking water sources	94.57%	–	96.96%
Proportion water bodies with good ambient water quality (for rural population)	87%	–	90%
Rural household have access to toilet facilities (rural household)	50.9%	99.03%	100%
Disasters are open defecation free	18.45%	–	100%
SDG 7: Affordable and Clean Energy			
Households Electrified	–	–	99.77%
Households using clean cooking fuel	62.83%	–	100.00%
Installed Generating capacity (watt per capita)	63.68	–	93.30
SDG 8: Decent Work and Economic Growth			
Patent Issued	6,326	13,045	28,391
Start-ups recognised	502	–	14,742

National Indicators	2015–16	2018–19	2019–20
Outstanding credit (Micro, Small and Midium Enterprises) (in Rs. crore)	12,16,007	15,10,651	16,13,582
Banking Outlets (per 1,00,00 Population)		60.9	98.8
SDG 9: Industry, Innovation, and Infrastructure			
Subscribed to Internet	26.98%	–	54.29%
CO2, Emissions per unit of GDP from the power sector (in tonne/Rs. crores)	61.45	50.65	–
Researchers (per million Population)	218	255	–
Broadband Subscribers (Number of Users per 10,000 Persons)	1179	4289	5000
SDG 10: Reduced Inequalities			
Representation of scheduled caste in Lok Sabha	–	–	15.50%
Labour share of GDP	30.23%	–	31.76%
Budget Allocation for welfare of SCs and STs	2.89%	3.94%	3.92%
Budget allocation of the north eastern states	–	–	1.99%
SDG 11: Sustainable Cities and Communities			
Cities evolving as per masterplan	25.61%	–	35.84%
Door to Door waste collection	–	–	100%
waste Processed	17.97%	–	65%
People killed/Injured in Road Accidents (per 1,00,000 persons) Death Rate	11.86	11.46	–
Injury Rate	38.31	33.56	–
SDG 12: Responsible Consumption and Production			
Food avability (per capita per annum)	173.75	180	–
Hazardous Waste	201.45	189.47	–
instaled renewable energy (in watts per capita)	63.68	93.3	–
SDG 13: Climate Action			
People died, missing or affected by Disasters (per 1,00,000 population)	14314.76	12060.1	–
Emission intensity of GDP over 2005 level	–	–	21%
SDG 14: Life below Water			
Maximum Sustainable yield in fishing (in million tonne/year)	3.078	–	5.311
O-SMART Scheme (Ocean services, Modelling, Application, Resources & Technology) (Budget Estimated)	–	–	445 crore
Assistance to the traditional/artisanal fishers for procurement of Fibre Reinforced Plastic boats and fishing implements ((boats) Rs. 1098.25 Lakhs	259	–	560
SDG 15: Life on Land			
Forest cover of total geographical area	21.35%	–	21.67%
Protected Area (% of total Geographical Area)	–	–	5.23%
Wetland Area declared as ramsar sites	4.15%	–	7.09%

National Indicators	2015–16	2018–19	2019–20
Tree cover of the total geographical area	2.82%	–	2.89%
Expense on Environmental Protection)	–	–	0.08%
SDG 16: Peace, Justice, and Strong Institutions			
Judges for every 1,00,00 population	1.32	–	1.42
Government e-Services available to citizens	1052	–	3870
International Homicide rate (per 1,00,000 Population)	2.63	–	2.24
SDG 17: Collective Partnership in Achieving Goals			
budget allocation to ministries for strengthening statistical capacity (in Rs. Lakhs)	307451	4,00,188	536367
Domestic Budget funded by Domestic Taxes	68.14%	–	75.42%
Share of Merchandise exports	1.62%	–	1.71%
Commercial service exports	3.16%	–	3.52%
New Pension Scheme Coverage (in cr.)	0.97	–	1.44

Data source: Sustainable Development Progress Report 2021 by Ministry of Statistics and Programme Implementation.

	SDG 1	SDG 2	SDG 3	SDG 4	SDG 5	SDG 6	SDG 7	SDG 8	SDG 9	SDG 10	SDG 11	SDG 12	SDG 13	SDG 15	SDG 16
2020	60	47	74	57	48	83	92	61	55	67	79	74	54	66	74
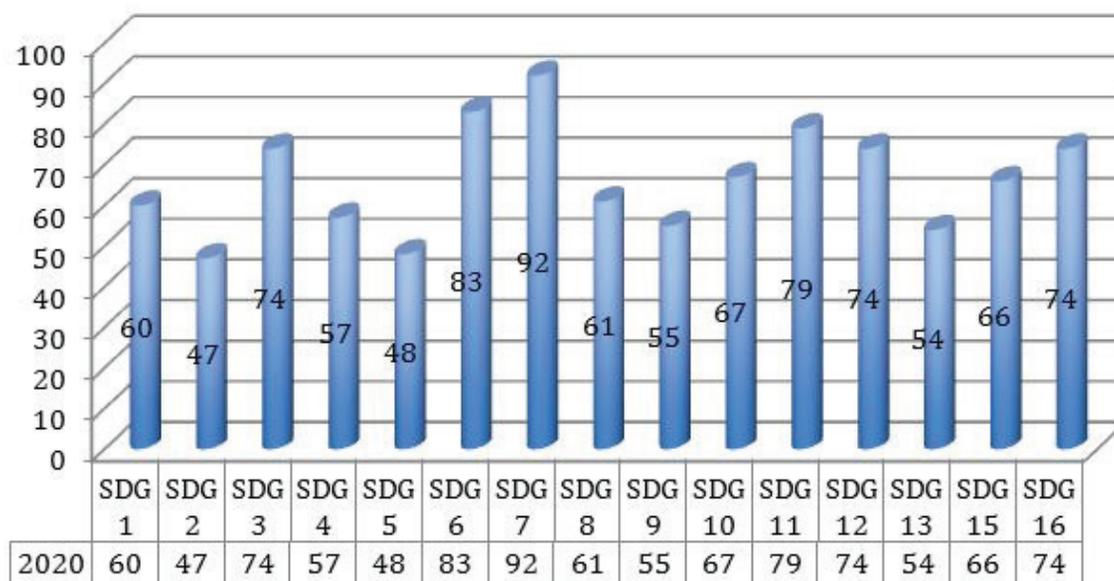
Figure 3: Sustainable Development Goals India Index score in year 2020
Data source: SDGs India Index 2020-21 Report issued by NITI Aayog.

The composite score for India improved in the year 2020-21. This indicates that India has overall progressed forward in its journey towards achieving the SDGs, nine goals drive the positive push – SDG 3 (good health and well-being), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities), SDG 12 (responsible consumption and production), SDG 13 (climate

action), SDG 15 (life on land), and SDG 16 (peace, justice and strong institutions). Two goals – SDG 2 (zero hunger) and SDG 5 (gender equality) demand special attention. In the other five goals (excluding SDG 14 – life below water, which applies only to 9 coastal States, and SDG 17 – partnerships for the goals, which is qualitatively analyzed), indicating the scope for significant improvement in the coming years.

Research Findings

- To end extreme poverty total 31.46% of Self Help Groups are linked with bank credit, total 1.44 Crore. persons are covered under New Pension Scheme. 50,860 persons got institutional assistance during COVID-19.
- A significant increase can be seen in agriculture productivity and plant and animal's genetic resources during 2019-20 and 2021-21.
- Maternal Mortality Ration reduces to 113 (per 1,00,000 population) and 0.13% fall in malaria cases during pandemic.
- Increase in Gross Enrolment Ratio in higher education with an access to electricity and computer facility and online classes were conducted during COVID-19.
- 14.36% increase in women participation in Lok Shabha as well as significant involvement women in leadership roles.
- 50.66% of rural population got safe drinking water, 100% rural households have access to toilet facilities. Electrified in 99.77% households, 100% using clean cooking fuel and 14,742 start-ups recognized.
- 54.29% persons are subscribed to Internet, 99 banking outlet are available on 1,000 populations, 5000 broadband subscribers on 10,000 persons and labour's share in GDP increased to 31.76%. & 3.92% of total budget expenditure is allocated for the welfare of SCs and STs.
- 100% door-to-door waste collection, reduction in road accidents & disaster management techniques are improved, O-SMART scheme for ocean is launched.
- 21.67% geographical area cover under forest, 2.89% tree coverage of the total geographic area and 0.08% of total Government expenditure spent on Environmental Protection, Government e-services available to citizens and 3.52% commercial service export of total global exports.
- All States have improved their score, Mizoram, Haryana, and Uttarakhand are the top gainers in 2020-21, in terms of improvement in score from 2019.
- Kerala is on the top while Bihar has performed the worst. The condition of Jharkhand is also not good but it is above Bihar.
- SDGs nine goals drive the positive push – SDG 3 (good health and well-being), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 15 (life on land), and SDG 16 (peace, justice, and strong institutions).

- Two goals – SDG 2 (zero hunger) and SDG 5 (gender equality) demand special attention. In the other five goals (excluding 14 – life below water, which applies only to 9 coastal States, and 17 – partnerships for the goals, which is qualitatively analyzed), indicating the scope for significant improvement in the coming years.

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Environmental Sustainability – A Review

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Abstract

Environmental sustainability has been one of the prominent challenges for years now. Cumulative impact of pollution and population growth have deteriorated the purity of environment. Unpredictable climatic changes and biodiversity loss are significant consequences of global warming, which has eventually disturbed the ecological balance. Availability of natural resources has diminished as well. There is a need to explore the effective and economical approach for the restoration of natural resources and control of pollution.

Introduction

Environmental sustainability deals with the practice of conserving natural resources and protecting ecosystem. However, population explosion and several anthropogenic activities have posed a threat to sustainability of natural resources. In present scenario, the impact of pollution which is the lethal impact of overgrowing population have disturbed the ecological balance of our planet. Apart from this, urbanization and industrialization and residues of modern agricultural practices have contributed to altering the purity of our environment as well. Consequently, we are on the verge of compromising the availability of natural resources for our future generation.

Global Warming

In present scenario, we are facing several environmental issues intensely such as global warming, ozone layer depletion and biodiversity loss which are direct or indirect impact of pollution. The primitive idea about the role carbon dioxide as the primary greenhouse gas was conceptualized by Svante Arrhenius. According to Arrhenius (1896), the two-fold enhancement of availability of carbon dioxide in atmosphere would heat up the increase the earth's temperature by 5-6 C.

Excessive of greenhouse gases such as carbon dioxide, methane, nitrous oxide, and chlorofluorocarbon have disturbed the temperature balance of our planet.

Biodiversity Loss

Global warming is one of the leading causes for biodiversity loss which has been aided by deforestation. According to study, we are going through one of the biggest biodiversity loss

phases in the present time. There is list of endangered species which might be extinct in the future. The cumulative impact of global warming, deforestation and commercialization of animal products have made the earth unfavorable for survival. We came across the cases of man-wildlife conflict which is another reason for biodiversity. Though India is blessed to host varieties of species of plants, birds and animals owing to its geographical but unfortunately, we have failed to protect them.

There is need to formulate policies to restrict the extensive biodiversity loss across the globe.

Pollution and Toxic Contamination

However, industrial discharge and residues of agricultural waste have altered the natural characteristics of water bodies as well. The aquatic ecosystem has been completely disturbed due to excessive inflow of chemical fertilizers, organic waste, heavy metal, and industrial discharges. *Minamata disease* is a neurological disease which has occurred through mercury poising. Toxic elements in chemical residues gets incorporated into soil which in turn affects the entire food chain. Recently, 500 people succumbed to mysterious illness in Andhra Pradesh which occurred to consumption of vegetables and fishes contaminated with lead and nickel, as confirmed by AIIMS, India. Food security is another issue which is to be addressed.

Unoptimized application of agrochemicals have ruined the safety of agricultural practices.

Acid rain which normally occurs due to presence of oxides of Sulphur and nitrogen is significant factor responsible for contamination and biodiversity loss of terrestrial and aquatic ecosystem.

The root cause for most the environmental issues is air pollution. Occurrence of harmful gases such oxides of nitrogen, Sulphur and carbon have deteriorated the quality of air. It is one of the contributing reasons for global warming, ozone layer depletion and acid rain. It has serious impact on health of people as well. It is so unfortunate that we are struggling for pure air and pure water, and we are responsible for the same.

Apart from industrial discharge, solid wastes such as non-degradable waste loke plastics has also disturbed the food chain. According to report, a mass of plastic waste named as "Great Pacific Garbage Patch" approximately 1.6 million km² in size – twice the size of Texas, is floating on the surface of Pacific Ocean.

Climatic changes, pollution, contamination with toxic materials, global warming are various facets of environmental degradation which must be addressed using effective and ecofriendly approaches such as biotechnology aided methods. It is crucial to generate alternative for fuels which could substitute for petroleum. But the impact of environmental education would broaden the ability to visualize the consequences of environmental degradation.

Review of Literature

Environmental sustainability basically deals with the process of addressing environmental challenges such as global warming, using bio-based effective and economical approach.

As per literature, global warming is the prominent factor for several other issues such as biodiversity loss and air pollution.

According to United states Development Authority (USDA) and organization for Economic Cooperation and Development (OECD), the greenhouse gases are likely to increase the temperature of earth by 02 °C by 2050 (Arora, 2018). Occurrence of natural calamities such as flood, excessive rainfall landslides and drought have the changed the dimension climate as unpredictable and unforeseen. Owing to global warming, the glaciers and Himalayan caps are melting steadily resulting in flood in nearby area. According to report, melting of Pine Island Glacier (one of the largest ice streams in Antarctica) might result in 1.6 feet of global sea rise.

It is very important to promote afforestation for the ambient temperature in the atmosphere (Zhou et al., 2021).

Environmental awareness programmes could be effective way to educate people about the ways to protect environment. According to Ergin et al. (2021), 87.7% of people were aware about the issue of climate changes in Turkey.

Boer and Aiking (2021) reported that the concept of exploring food consumers could be helpful in both climate change and biodiversity loss.

The concept of phytoremediation has been effective for the treatment of water contaminated with pharmaceuticals and personal care products residues (Kurade et al., 2021).

Skariychan et al. (2021) reported that bacteriophage-based therapy could be effective for the treatment of water contaminated due to heavy microbial load.

Objectives of the Study

1. To study the impact of several bio-based remediation to control global warming.
2. To study the impact of ecofriendly methods environmental challenges, occur due to global warming
3. To study the impact of bio-based approach for the control of water pollution.

Discussion

2.0 Sustainable Approach to Mitigate Greenhouse Effect and Global Warming

Global Warming is one of the intense consequences of Greenhouse effect, however scope of several approaches such as soil carbon sequestration and afforestation have been explored to mitigate atmospheric accumulation of CO_2. However, researchers have also confirmed the impact of crop albedo and marine biota beneficial on the reduction of surface warming.

1. **Soil Carbon Sequestration:** Soil carbon sequestration deals with concept of reducing atmospheric concentration of CO_2 and storing it into the soil pool. The process can be mediated by biotic as well as abiotic factors. For example, the process of soil carbon sequestration can occur from the conversion of atmospheric CO_2 found in the soil into inorganic forms such as carbonates in the with the help of plants especially in arid and semi-arid climate.

2. **Crop Albedo:** The concept of increasing the albedo of crop leaves have been beneficial for reducing the availability of carbon dioxide gases in the air. In this, the concept relates with the idea of enhancing the albedo of surfaces such as top surface of the clouds and the upper surface of crops leaves which reflect solar radiation back into the space.

3. **Marine Biota:** Removal of atmospheric CO_2 has been significantly achieved using ocean biota which deals with the practice of manipulating the biological pump through photosynthetic primary productivity in the surface ocean followed by sinking of the material to the deep ocean.

3.0 Ecofriendly Approach to Control Pollution

Several approaches have been made to control water pollution and air pollution.

For example, natural coagulants such as *Moringa Oleifera* have been proven effective to reduce the heavy metal contamination. Researchers have employed the application of biobased filters to reduce BOD and COD of wastewater. However, preference of biofertilizers and vermicomposting over chemical fertilizers could be helpful in the control toxic pollutants. It should be mandatory to treat industrial discharges before it could be become prominent sources of pollution. The treatment method should be employed based on the preliminary analysis of effluents. Exploring the potential of biodiesel could be beneficial for control of air pollution.

Conclusion

Today Environmental sustainability is challenge for our planet. It is the strategy to restore the purity of environment. It is unfortunate that we are struggling to have access to pure water and air. Global warming is prominent attributing factor in prevalence of environmental issues such as biodiversity loss, water pollution and unpredictable climate changes, which could be resolved by soil carbon sequestration and afforestation. However, the application of bioremediation approach for the control of air pollution is yet to be explored. There is dearth of intersectoral participation of academicians, scholars, government, and non-government organization to restore the purity of earth. It is important understand the relevance of environmental education and upgrade our day-to-day activity considering the safety of environment. We should rely on the concept of reuse, recycle, and recover as much as possible.

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SECTION 4

ADVANCEMENTS IN TECHNOLOGY AND DIGITALIZATION

Strategic Application of Information Technology in Healthcare Industry

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Introduction

The global health care sector is witnessing exciting time where digital technologies are making significant positive impact. The global digital healthcare market size crossed USD 143.6 billion in 2019 and it is estimated to grow further at a compound growth rate of 16% from 2020 to 2027. Rising adoption of mobile Healthcare (mHealth), government initiatives to digitize healthcare and the growing prevalence of chronic disorders are likely to accentuate the demand further for digital healthcare systems (Grand view, Jun, 2020). While it is critical to boost the physical healthcare infrastructure, there are multiple drivers like a growing and aging population, rising prevalence of chronic diseases, infrastructure investments, technological changes, evolving care models, higher labour costs amid worker shortages also posing a challenge to business growth given high-cost investment requiredto boost physical infrastructure. More to India context,where we have observed to adopt digital technologies are critical to creating accessible and affordable healthcare systems for all as we have only 8.6 Doctors and 5 beds per 10K customer as compare to developed nation norm of 31.2 Doctors and 52 beds (Rangarajan 2020). As per NASSCOM 2019 study on Health care Technology implementation, digital technologiescan go a long way to bridge this large gap to help optimizing the significant investment required, which itself is large challenge for developing countries like India where spending is just limited to 4.25% of overall GDP as compared to 8% global. IT transformational technologies can significantly boost the utilization of existing physical infrastructure and help to create an eco-system of Telemedicine, remote patient care, and automation where existing infrastructure and medical staff throughput can be significantly boosted up to improve access and affordability to the patient in a remote area. Digital eco system will also help establishing new revenue stream and service continuity even in case physical proximity is challenged either by pandemic or other catastrophic forces. The strategic application of technology not only critical to extend the availability and affordability of healthcare, it's also important from improving overall patient experience and life saving through real time remote patient monitoring.

High Impacting Digital Technologies and Trends

With the advancement of classic and disruptive technologies, the healthcare and life-sciences sector in India is rapidly transforming, defined by data mining, clinical diagnoses through predictive analysis, and self-monitoring devices and sensors to help maintain a healthy lifestyle. The growing use of digital technologies such as Artificial Intelligence and IoT in the healthcare industry is slowly addressing the scale and level of healthcare access across the sector. With the advancement of conventional and disruptive technologies, the healthcare and life-sciences sector in India is rapidly transforming, defined by data mining, clinical diagnoses through predictive analysis, and self-monitoring devices and sensors to help maintain a healthy day to-day lifestyle. The growing use of digital technologies such as Artificial Intelligence and IoT in the healthcare industry is slowly addressing the scale and level of healthcare services across the sector. Few of the major trend and technologies which are disrupting the healthcare sectors as Telemedicine, Artificial Intelligence, AR and VR, Wearable and Internet of Medical Things (IoMT) and Robotics

Telemedicine

Telemedicine is the remote practice of caring for patients when the provider and patient are not physically present at same location. Digital technology has enabled doctors to consult patients by using HIPAA-compliant video-conferencing tools. There are three main practices of telemedicine, which include store-and-forward, remote monitoring, and real-time interactive services. Each of these has an important role to play in overall health care and, and can offer tangible benefits for both healthcare workers and patients. In Store-and-share telemedicine healthcare providers share patient medical information like lab reports, imaging studies, videos, and other records with a physician, radiologist, or specialist at a different location. Remote patient monitoring devices use digital technology to exchange communications between patients and providers. Patients monitor themselves to collect data about their health at various instances throughout the day, then electronically transmit secure data in a message format to their clinicians or technicians.Interactive telemedicine is a real-time interaction between patients and healthcare providers. This method can be conducted in nursing, hospitals, or at the patient's house via a video-conferencing system. Moreover, this is more convenient for patients to obtain health care. Telemedicine adoption not only offers a superior experience to a patient with enhanced availability and affordability also helps healthcare providers to expand their service coverage and revenue without much investment in physical infrastructure which has a higher payback period as compare to digital infra investment.

Artificial Intelligence

The major factors driving the artificial intelligence in healthcare growth are the increasing volume of healthcare data and growing complexities of datasets driving the need for AI, the

highly intensifying need to minimize the towering healthcare costs, improving computing power and reducing hardware costs, growing number of diverse industries partnerships and collaborations, and rising imbalance between health workforce and patients driving the need for improvised healthcare services (Marketsandmarkets.com, 2020). The primary aim of health-related AI applications is to analyse relationships between prevention or cure techniques on patient outcomes. AI programs are applied to practices such as diagnosis, treatment protocol, drug development, personalized medicine, and patient monitoring and care. AI algorithms can also be used to analyse large amounts of data through electronic health records for disease prevention and proactive diagnosis. Companies are developing technologies that help healthcare providers to improve business operations through increasing utilization, decreasing patient boarding, reducing the length of stay, and optimizing staffing levels. The various applications of AI in healthcare includes, Patient Data & Risk Analysis, Inpatient Care & Hospital Management, Medical Imaging & Diagnostics procedures, Lifestyle Management & Patient Monitoring, Virtual Assistants, Drug Discovery, Research, Healthcare Assistance Robots, Precision Medicine, Emergency Room & Surgery, Wearable, Mental Health

Augmented Reality (AR) and Virtual Reality (VR)

Augmented reality is a technology that blends real-world elements with virtual creation. E.g., a person might visit a trade show and aim their smartphone at a display to activate an AR experience that allows them to see a computer-generated vision of a product. The appropriate usage of AR/VR not only helps to improve patient care by minimizing the risk but also helps healthcare providers to reduce cost by optimizing the critical healthcare infra like minimum OT hours, healthcare professionals' efforts, and intervention. There's plenty of potential for VR and AR in healthcare also like surgical planning could become easier. Even the most experienced surgeons sometimes encounter complex situations when operating on patients, but these high-tech solutions may make those instances solved ahead of actual operation procedure.

Using VR patients can be educated about their surgeries, too. For example, a person can see a digital version of their brain, along with the problem a surgeon needs to fix and how they are going to perform (hitconsultant.net, 2020).

Wearable and Internet of Medical Things (IoMT)

The Internet of Medical Things is an ecosystem of connected sensors, wearable, medical devices and clinical diagnostic systems. It helps various healthcare applications to reduce healthcare costs, provide timely medical responses, increase the quality of medical treatment, and seamless integrations with another system in real-time. IoMT is the use of wearable medical devices and sensors that are connected to remote-tracking or monitoring systems. Unlike in-home IoMT, on-body IoMT can oft be used outside of the home as people live while leading their normal lives. The IoMT consists of smart devices, such as wearables and

medical/vital monitors, used for health care use on the body, in the home, or community, clinic, or hospital settings with real-time location, telehealth, and other services. There are two major segments of such devices, these includes On-Body Segment and In-Home Segment:

- **On-Body Segment:** The on-body segment is broadly divided into consumer health wearables and medical and grades wearables. Consumer health wearable include devices for personal wellness or fitness like activity trackers, bands, wristbands, sports watches, and smart garments. Most of these devices are not regulated by health authorities. However, this may be endorsed by medical experts for specific health applications. Clinical-grade wearables include regulated devices that are generally certified for use by one or more regulatory or health authorities, such as the U.S. Food and Drug Administration. These devices are used in conjunction with expert advice or a physician's prescription.
- **In-Home Segment:** The in-home segment includes personal emergency response systems (PERS), remote patient monitoring (RPM), and telehealth virtual visits. A PERS integrates a wearable device and a live medical call centre service to increase self-reliance for homebound or limited-mobility seniors. The package allows users to quickly communicate and receive emergency medical care. RPM includes all home monitoring devices and sensors used for chronic disease management, which requires continuous monitoring of physiological parameters to support long-term care in a patient's home for continuous observation of discharged patients to accelerate recovery time and prevent re-hospitalization and medication management (Frost & Sullivan, 2017).

Robotics

Robotic technologies are used in many areas that directly affect patient care. They can be used to disinfect patient rooms and operating suites, reducing risks for patients and medical personnel to transmit infection. They work in laboratories to take samples and then transport, analyse, and store them by avoiding potential health hazards.

Robotics suitable deployment can help to reduce the manual efforts and cost to a significant extent and improve profitability and revenue in long term for service providers.

Robotic surgery offers many benefits to patients compared to open surgery, including:

- Shorter hospitalization.
- Reduced pain and discomfort.
- Faster recovery time and return to normal activities.
- Precise incisions, resulting in a reduced risk of infection.
- Reduced blood loss and transfusions during surgery.
- Minimal scarring drew from the precise cut.

Robotic can also be used efficiently for nursing which can de burden the human nurses in the future. They can be deployed to carry out repetitive and monotonous tasks so that human staff has more energy to deal with issues that require human decision-making and complex skills, creativity, and above all, care and empathy.

Existing Solutions Gaps and Future Opportunities

- **Lack of multiple Technology Integration,** e.g. Electronic Health Records (EHR) system doesn't coordinate with the platform of telemedicine services.
- **Lack of Real Time Vital Info,** e.g. mostly system not connected to real time Vital Monitoring.
- **Usability,** e.g. most of the existing systems are complex to operate and use by patients.
- **Customer Data Privacy and Consent,** e.g. as per HIPAA's privacy and security rules do require that the information gathered through a telemedicine service is encrypted and transferred through secured network connections. Additionally, when contacting patients, you have to be sure you are messaging them across a secure connection. Before you record and store video calls, you need to get the permission of your patients.
- **Limited Data Sets,** e.g. most of the implementation is done on small set of data which reduces the accuracy and recommendation ability of system algorithm. In future National Health Data grid may address the same.
- **Lack of Adoption,** e.g. current capability sets are used minimally given usability and maturity of such applications.
- **Limited Adoption,** e.g. while this hold great promise for the future, as of now it has limited adoptability given solutions maturity not up to the mark.
- **High Cost and Effort,** e.g. most of the implementations needs significantly high infra, time and resource investment.
- **Usability,** e.g. the patient end devices needs frequent power charging and network connectivity which is bit cumbersome for elderly patient.
- **Reliability and variability,** e.g. still not many OEM are able to meet the reliability and variability norms required by medical grade devices,hence usage for critical monitoring is still not a common trend.
- **High Cost,** e.g. existing deployments still cost option for the developing nations, given faster adoptability and large production of such robots may bring down the price in future
- **Adoption:** Still not many patients and practitioners convinced for the critical patient care needs and look for human based interactions

Conclusions

The role of digital technologies in healthcare is evident. It is also established a huge gap in physical infrastructure and healthcare professionals need significant investment, which can be optimized to a good extent by leveraging digital solutions.

While govt and policymakers are putting focused effort to make healthcare available and accessible to all, technology providers, OEM's and the start-up ecosystem can also provide a significant push to the adoption of digital technologies.

Further active research work and technology innovation to create a National Health data grid, open yet secured technology implementation, and manufacturing of smart medical devices at an affordable price can significantly boost the growth of digital solution adoption.

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E-Learning a Learning Destination for Professionals

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Abstract

Within this dynamic and competitive world, working experts are esteemed for their inherent quantity of occupation abilities. A person's pay and professional development are profoundly reliant upon these abilities. The more prominent the quantity of abilities, the higher is the pay and vocation movement. In the event that the number is less, the expert would for the most part be side-lined with the present profile and likely be hard to scale -the path towards career-progression. As more organizations are boosting proficient improvement through e-picking up, working experts are altogether the more anxious to wear the twofold part of an understudy and an expert.

Keywords: *E-Learning, Learner Centred, Target Audience, Digitalization.*

Introduction

Preceding the COVID-19 pandemic, E-learning was developing roughly 15.4% yearly in instructive foundations all throughout the planet without vulnerabilities or tension on those establishments or on understudies (Toth-Stub, 2020). Notwithstanding, as this exploration was led during COVID-19, the circumstance has changed drastically. Instructive establishments started giving a large portion of their administrations internet, including teachers and various appraisals by means of a few stages for more than 60% of learners all throughout the planet because of worldwide limitation measures to limit the spread of COVID-19 (2). Alluding to the information delivered by the World Health Organization (WHO), COVID-19 has been accounted for in more than 216 nations, and there are regions with a large number of affirmed cases (3). Numerous nations have taken prudent steps, including lockdowns of schools and colleges, and changing to full E-learning mode during the spread of the Coronavirus, to keep away from future expected waves (Graham,2013). This activity was because of social distance rules, which were firmly prescribed by the WHO to forestall the spread of COVID-19 (5).

The time necessities for changing the utilization of advanced apparatuses in the preparation of understudies are thought of. The significance of digitalization in the association of human resource training in current conditions is uncovered, since it is continually changed as per the prerequisites of present day culture. The undertakings of digitalization, which are doled

out to the higher school are signified. The actions for the further digitalization of the learning interaction in foundations of higher expert education are figured.

The Learning World is developing quickly and extending because of the advancement of the computerized climate: electronic reading material are being made, instructive platforms are arising and creating, the quantity of open mass on the web courses is estimated in thousands, and the quantity of their shoppers is in the large numbers. Distance education has become part and parcel of our everyday living.

Digitalization is something that is needed to make the training cycle more adaptable, adjusted to the real factors of the cutting edge time and adds to the arrangement of proficient's in the arising "digital world".

"Digitalization is the progress to a computerized technique for correspondence, recording and communicating information utilizing advanced gadgets".(6) Digitalization leads to transformation in the thought process of an individual, his interaction with other individuals, and external environment with novel tools and techniques.

Within this dynamic and competitive world, working experts are esteemed for their inherent quantity of occupation abilities. A person's pay and professional development are profoundly reliant upon these abilities. The more prominent the quantity of abilities, the higher is the pay and vocation movement. In the event that the number is less, the expert would for the most part be side-lined with the present profile and likely be hard to scale the path towards career-progression.

Skills Development: Compelling/Burning Need

With new advances persistently foraying into the market, working experts are relied upon to be in the know regarding the most recent range of abilities. Bosses themselves are requesting that their workers fabricate and update their abilities. A few businesses even give financing to accomplish something similar. Working experts are in this manner presented with two choices. Either foster the abilities all alone by means of self-learning or join some expert establishment to gain proficiency with the abilities.

Resume Creditability: E-Learning

Effective course finishing testaments consistently look great on a resume. A selection representative exploring for commendable up-and-comers will undoubtedly be intrigued by the quantity of authentications referenced in a resume. It passes on the message that the applicant has invested in amounts of energy to foster his abilities. Recruiting administrators don't separate among conventional and online degrees. On the off chance that the online degree is taken from some rumoured establishment, chiefs believe the contender to be ideal for enrolment. The online accreditations are an additional benefit enrooted towards high profession ways.

E-learning offers adaptability alongside expanding their abilities hole and attractiveness. Through man-on-man learning, student teacher has reached to an unheard of level. It likewise

assists working experts with staying cutthroat and develop expertly. The new flood in e-learning programs has provoked a higher interest for particular, abilities shrewd representatives. Analytics from Arizton depicts that the 2023, the worldwide e-learning market is relied upon to produce income of $65.41 billion. With more organizations are boosting proficient advancement through e-picking up, working experts are altogether the more anxious to wear the twofold job of an understudy and an expert (7).

Directives for Better eLearning Professionals

Strategize the E-Learning

A recorded E-Learning procedure isn't just a guide yet additionally assists you with spotting data holes, plan imperfections, underlying errors, and execution provisos that may somehow debilitate your course. Define the Targeted audience in terms of their location, time of attending the course and how will they be accessing the online course, match the individual learning objectives with that of organisation. Plan the desired content and the marketing plan well in advance. The hardware and software part should be managed aptly. Finally, measure the E-learning Effectiveness across the learners.

Read the Target Audience

Like advertisers make "Buyer Personas" to deliver more focused on content, so should you make "E-Learners profiles" to become acquainted with your crowd better. Courses are meant for E-Learners So that they ought to cook their inspirations, requirements, and assumptions. Doing so will assist you with conveying a focused on message that resounds with E-Learners, motivates them, and satisfies the E-Learning objectives most adequately. Ensure that the inquiries you present outfit the accompanying pieces of data:

- What rouses your E-Learners to look for information and really endure a course?
- What data do your E-Learners need, or to be more explicit, what working environment issues should your course settle for your E-Learners?
- What will be the normal learning way?
- What sort of substance would your E-Learners like to burn-through—contextual analyses, demo recordings, stories, agendas, or some other?
- How might the students need to get to the course—on their cell phones or by means of the intranet
- How do learning inclinations change across ages?

Design Visuals in E-Learning

Individuals are visual animals, retention is more from a picture than from a lump of text; help individuals bode well out of the substance and direct consideration, expanding the conceivable outcomes that the students will recollect.

As an E-Learning engineer with an objective to make critical learning, you MUST NOT leave behind this medium while planning courses. Despite of interruptions pulling E-Learners, savvy and alluring visuals keep them snared to your course and assist them with holding the learning.

Design Learner-centred Instructional Approach

As discussed the significance of putting the E-Learners at the CENTER of the course configuration (Read the Audience). At the point when you deliberately make from a position of association, you promptly hit a compatibility with your crowd, and they, thus, feel attracted to your message. However, it isn't sufficient that the substance you remember for your course is pertinent for E-Learners. The educational methodology ought to likewise be planned remembering them. E-Learners profiles assist you with understanding your crowd so you can modify your the plan, the substance, the illustrations, and shape your course for them.

Abbreviate Your Courses

E-Learners anticipate courses to be just about as convincing as watching a YouTube video and packs in as much data inside a short space of time. As per a report by Software Advice, The LMS Features that Drive Employee Engagement Industry View, more the half of the 385 workers who participated in an overview showed that they would utilize their organization's learning devices more if the courses are SHORTER. As indicated by them, longer courses are more difficult to process and hold as well as hinders their every day work. Adhere to these microlearning rules.

Add Personality touch to the E-Learning Courses

Probably the best analysis you know about individuals taking your E-Learning courses is that it needs character. At the end of the day: 'It's Bland and Boring'.

When we consider the remarkable product, the greater part of then have a shared factor; they utilize human character characteristics in each message they convey to the world. Individuals relate more to characters than to generic brands, or messages that appear to come from anonymous substances. The E-Learning crowd is the same. Inject the courses with character—genuine, unmistakable, and pounding—to interface with your crowd and get positive reactions from them.

Literature Review

Damaraju, et al. (2016) stated that Electronic instructive innovation called E-Learning, has ended up being an essential piece of IT organizations today, including a broad scope of in-house trainings, online workshops, digitization approaches, parts and conveyance strategies. For example, m-learning puts accentuation on portability, yet is generally indistinguishable in principle from E-Learning. The possibility of E-Learning in Indian IT organizations has acquired power over the most recent couple of years. The reason for this examination is to

introduce the condition of E-Learning instruction among IT experts all in all and specifically, Hyderabad. The paper centres around the utilization of advanced assets by IT experts, and impact of E-Learning on learning and improvement perspectives. The discoveries propose that the majority of the IT experts know about the use of advanced E-Learning assets. An enormous number of IT experts are of the view that they would utilize E-Learning conveniences and assets whenever supported/paid by their organization. They would pay from their pockets if the learning prompts affirmation. Pérez-Sanagustín et al. (2017) confirmed that the utilization of computerized stages in the purported "digital factories" is upsetting the methods of innovation commercialization. Exchanging stages dependent on computerized stages change the market of administrations, yet additionally logical and specialized exercises. Parker et al. (2020) discussed the possible impact of technology on core job characteristics and job demands.

Research Methodology

Research Approach

The research approach is descriptive and conceptual in nature. The calculated idea of the article presents a specific limit because of the constrained idea of information.

Types and Sources of Data

In order to attain the aim of the study secondary data is collected from research papers, journals, articles, magazines, websites and peer-reviewed journals have been accessed. Reports from National and International organisations are also being studied and referred.

Conclusion

Through endorsement programs, degree educational programs, workshops, or online course commitment, e-learning is extending the scope of current training to working experts all throughout the planet—permitting E-Learners to arrive at their scholarly objectives individually. Actually, time won't back off, and our general surroundings is simply going to keep getting more instructed. E-learning permits working experts to connect the information hole without it negatively affecting their generally settled lives.

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Efficacy of Online Teaching

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Abstract

COVID-19 provided a new opportunity to Online Education. As the world suffers from a global pandemic, almost everything has transitioned from physical to online including education system. Students learn right in the comfort of their through online teaching, in place of going to school. There are concerns about the efficacy of online teaching. How much students learn from online teaching? How effective is online teaching?

Below are few key elements for maximizing student engagement during online learning -

- *Narrative – Online learning should be an engaging narrative consists of a storyline and theme. It would be a new experience for the teaching community, but it will certainly increase the entertainment and learning value.*
- *The Continuous Flow of Action – There should be a continuous flow of action, especially in sound and visual. Once the classes start, teachers can develop activities every a few minutes to keep the students fully engaged with the lesson.*
- *Quality of Study Material – Teacher should be creative to present the lesson in an entertaining way. Effective online teaching uses professional lighting and high-quality input devices to create rich and engaging presentations, which will surely catch students' attention and make learning all the more effective.*
- *Interactive Session – Having an interaction makes the learning all the easier and engaging. There are various functions in Zoom you can take advantage of, such as the raise hand function, chat window, surveys, breakout session, and polls, to name a few.*
- *User Friendly Online Study Tools – The study tools used by teachers should User friendly having more graphics presentation than content. The teacher should have all controls but it should provide two-way communication for more interactive sessions.*

My research findings indicate that, using about points Online education will be as effective as the offline mode and considering the future scope educations institutes should provide both Online and offline Mode to reach education to everyone.

Keywords: *COVID-19, Online Blended Teaching Mode, Flipped Classroom, SPOC, Development, Case Study.*

Introduction

With the COVID-19 -a novel corona virus disease spreading across the globe, many countries have ordered closure of all educational institutes. Educational institutions have come to a

functional standstill since they had to protect their students from viral exposures, which are likely in a highly socializing student community. April 2020, It was a compelling necessity and a nationwide lockdown was imposed by the Government of India. As the schools and colleges are shut for an indefinite period, both educational institutions and students are experimenting with ways to complete their prescribed syllabi in the stipulated time frame in line with the academic calendar. These measures have certainly caused a degree of inconvenience, but they have also prompted new examples of educational innovation using digital interventions. This is a silver lining on a dark cloud considering the sluggish pace of reforms in academic institutions, which continues with millennia-old lecture-based approaches in teaching, ingrained institutional biases and obsolete classrooms. Nevertheless, COVID-19 has been a trigger for educational institutions worldwide to pursue creative approaches in a relatively short notice. During this time, most of the universities have shifted to online mode using Blackboard, Microsoft Teams, Zoom, or other online platforms .The faculty of all education institutes had to face an abrupt switch from traditional classroom teaching to online teaching methods, which proved challenging.

The Offline to Online Teaching Journey

Given a Context, I would prefer to start it this way, we are all thrown into a situation where we don't have any idea of what is going to come, during March 2020, when lockdown was imposed first time. Classrooms were shut, the colleges were shut, students were at home, we were at home, we were asked to do a lot of things which we have no clue or no idea about. However ,we learnt a couple of times, about how to probably record a video? How to share it? How to work with Flipped classroom techniques? Nothing was so very regular to us because we had that physical connect with students. When we missed that physical connect ultimately we went into a situation, probably this is what that has come for us. So I believe, that all of us somewhere down the line was thrown into this particular situation zone. Offline Teaching to
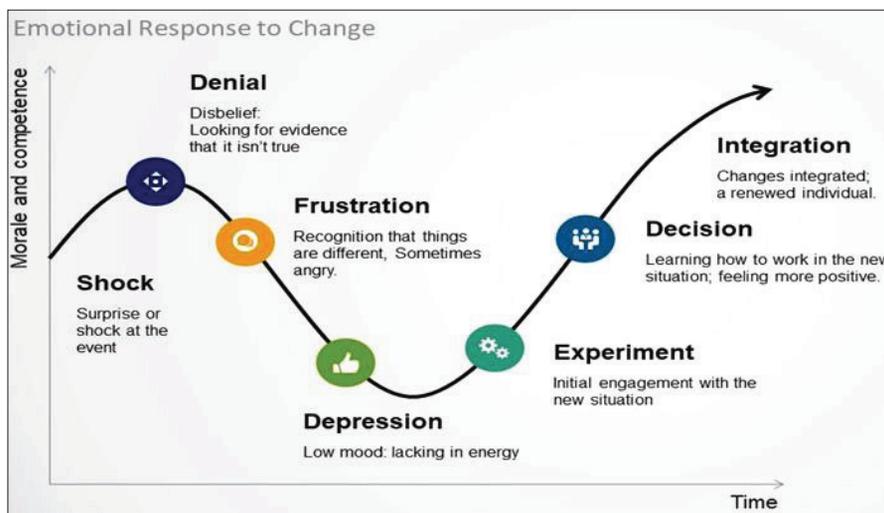
Online Teaching – How did it happen? What happened? What we went through? Many of us rather most of us will definitely accept the fact that we have underwent a lot of trouble.

This is what Kubler-Ross change graphs says. Kubler-Ross is a Psychiatric which worked on a lot of issues and one of them is the change curve.

We all know that change is constant. So whenever we are forced to accept something we were in shock. Then we need to do certain things. But we are frustrated and due to that denial to accept the change and felt helpless, we get into depression. I believe this phase we all have gone through during this lockdown time. Then gradually we started experimenting things and then we took up some decisions and probably now at this point of time after around 1.5 years we are now at this stage where we are trying to integrate the possible solutions which we have experimented with into the real life to just accept the change.

Benefits of Online Learning

Results of the study indicate that flexible schedule and convenience was ranked as the major benefits of the online learning. Online education offers students the opportunity to study at their own pace and time of their convenience. Hence, flexibility and convenience are major drivers behind the demand for online education.

- Flexible schedule and convenience
- More comfortable environment
- Improve your technical skills
- More interaction and greater ability to concentrate
- Self-discipline and responsibility

Challenges Faced by Teachers during Online Teaching

- Lack of digital skills
- Lack of resources
- Unfamiliarity of teaching online
- Time management
- Less conversant
- Apathy towards online teaching
- Re-thinking and re-planning of courses from offline to online
- No clarity on what Tools and techniques to use
- Struggling to find the right tool
- Troubleshooting

Factors Affecting Failure of Online Classes

Technological Constraint

- **Digital divide:** Gap between the learners who have ready access to internet and computers and those who don't. Not all rural students have the privilege of Internet and laptop.

- **Data limit:** Insufficient data pack to access the material to attend the classes. Online classes consume large amount of data which is difficult to afford.
- **Poor connectivity:** Interrupted internet supply that makes the learners difficult to learn. Dragging of classes due to network problem.
- **Issue with the device:** Lack of device or device incompatibility to applications used for online classes. Unavailability of gadgets with some of the students.
- **Non-recordable videos:** Online classes that cannot be downloaded or recorded for future learning. Videos that cannot be recorded aur was later force difficulty in learning.
- **Technical issues:** Low quality audio OR video, low bandwidth. Lack of voice clarity and poor signal strength.
- **Virtual presents only:** No face-to-face interactions between the learners and teachers. Only One way communication and no scope for interaction.

Distractions

Poor Learning Environment: Lack of congenial learning environment. Home environment is not suitable for learning as it leads to a lot of disturbances from children and relatives.

Teachers Incompetency

- **Technophobia:** Instructors fear of handling ICTs. Lack of technical expertise of the teacher. Poor teaching skills and in-ability of instructor to render the subject matter. Prolonged monotonous lectures with improper explanations is example of the same.
- **Unstructured content:** Curriculum which is designed improperly, lacking a clarity in a course objective. Poorly designed content where classes are held for namesake.
- **No follow ups:** Instructor doesn't take the feedback/online exams to addresses their queries. Doubts cannot be cleared effectively compared to classroom environment.

Learners in Efficacy

- **Indiscipline:** Irresponsible and Un-organized behavior of the learner. Lack of discipline as no one is there to control the students.
- **Student attritions:** Reduction in the number of learners attending the class. Poor attendance and student miss the classes without any reason.
- **Unmotivated:** Learner does not possess interest or enthusiasm in learning. Lack of interest and laziness among the students to learn during vacations.

Health Issues

- **Train:** Difficulty in concentration due to the harmful radiations from device used for online classes. prolonged use of mobile phone for class is causes headaches due to harmful rays.

- **Worsening of existing health issues:** Deteriorating the already existing health issues due to prolonged online classes. Continuous class is lead to worsening of migraine and backache.

Suggestions for Online Classes

1. **General:** Refers to overall comment about online classes without referring to a specific context or content. Online classes are innovative way and is supplementing classroom teaching.
2. **Content:** Presentations or videos or audio used by instructor. Add more images/ videos / gifs/comic, etc., appropriate to the course content would make it more interesting and feel good for listeners thereby magnetize the concentration of the listeners.
3. **Connectivity:** Access to internet. Attendance should not be considered for some students as they have not responded due to poor network.
4. **Interactivity:** Active participation of instructor and learners during the class. Online classes are not lively. Instructor should ensure the active participation of students.
5. **Flexibility:** Convenience of teacher and learner. Convenience of the student should be considered and give sufficient time to learn themselves.
6. **Skills:** Expertise of instructor in imparting knowledge and digital literacy of instructor. Instructor should explain in an effective ways such that students can remember for longer time.
7. **Evaluation:** Accessing the learning by query is raised by Learner, Online test and assignments and taking their feedbacks. Make it mandatory so that students ask doubts and that will be marked.

Factors Affecting Success of Online Classes

It is opined that nature of content and infrastructure were the major determinants for smooth conduct of online classes (see Table 1) The course instructor should spend quality time to design the content which should be well structured, concise, interactive and relevant. The students should be able to record the classes such that content can be accessed at any time based on their convenience. Recording will also come in handy for those students who have internet connectivity issues to live stream the classes.

Table 1: Factors Affecting Success of Online Classes

S.No.	Themes	Subthemes	Criteria	Examples
1.	Nature of content	Structure	Comprehensive and efficient course design incorporating course goals and learning objectives	"Staffs should spend quality time in preparing the content, rather than just copying from other material and making PowerPoint Presentations and reading it to students"

S.No.	Themes	Subthemes	Criteria	Examples
		Accessible	"universal design for learning" as it considers all possible learners	"good reachability for all learners"
		Interactive	Ensuring active participation of learner along with interactive videos making them to assimilate the concept	"Platform should facilitate face to face interaction and should use animated videos to enhance interactivity"
		Comprehensive	Content should be easy to understand	"classes should be crisp, concise and precise"
		Flexibility	Study anywhere at anytime	"timetable should be fixed according to the convenience of learner"
		Relevancy	Appropriateness of the content to the curriculum as perceived by the learner	"lecture should be productive with practical experience"
2.	Infrastructure	Connectivity	Learners can access the internet without interruption	"elimination of network issues"
		Data pack	Availability of sufficient data pack to enjoy the internet facility	"free data pack for attending the online classes"
		Data speed	Quick flow of information without interruption	"high speed internet without interruptions"
		Devices	Possession of suitable devices to attend the classes	"we should be able to attend the classes using mobile phones"
		Video/audio quality	Fidelity of video/audio output during the classes	"clarity in audio/video"
		User friendly	Software/hardware that is use to learn	"using student friendly interface"
3	Competency	Technical skills	Basic knowledge of computer and Internet skills required by instructor	"Our instructor should be the one with good technical knowledge"
		Communication skills	The ability of the instructor to convey the concepts effectively	"Creation of classroom like environment by the instructor using his communication skills"
4	Readiness	Motivation	Goal directed behaviour of the learner	"students should possess self-learning interest"
		Discipline	Staying organized and responsible	"Students should be more disciplined"
		Focus	Ability of the student to avoid distraction and stay focussed on the curriculum	"ability of the students to remain focussed decides the success of online classes"

S.No.	Themes	Subthemes	Criteria	Examples
5.	Follow up	Query	Question answer session that will help in clearing the doubts	"Recorded videos and good study materials with platform to ask queries will be more effective"
		Evaluation	Monitoring the learners during the class time to ensure their presence and taking the feedbacks about the previous classes, providing the assignments and conducting the online tests for evaluation	"Classes with regular online tests"

Conclusion

COVID-19 pandemic has totally changed the way of teaching. E-learning is on a trajectory pace in the field of education. Online classes can be a supplement to traditional classroom teaching but never a complete replacement. A well-trained competent faculty will effectively facilitate student learning and positively impact students outcome full stop addressing the faculty concerns and providing training in necessary aspects will further positively motivate the faculty which in turn helps in the success of online learning.

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Major Challenges in Learning Online in Rural India

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Abstract

Learning from traditional approach, that is learning face to face in class is now shifted to learning online. One way of looking at online learning is, student can learn about various topics at their own pace. Other way of looking at online learning is, not everyone is having access to resources through which they can learn and especially in Rural Area this is the major challenge to overcome. The paper includes challenges faced by students while learning Online, paper also includes various steps which can be taken to improve education online.

Keywords: *COVID-19, Online Learning Challenges, Quality Education.*

Introduction

In today's time when the whole world is fighting the epidemic of COVID-19. Countries hit by the pandemic are facing a lot of difficulties. Because no one was already prepared for it. In a country like India, whose majority of the population lives in villages, they are facing even more problems because there is less economic resources neglecting the cities. This pandemic has affected everyone at all levels economic, social, occupational and health, there has been loss and slowdown in all types of work. In this paper, what problems have been faced by the children studying in rural areas during the epidemic, the problems have been faced by the children of urban areas but more to the rural children because they have less resources than them. To write this paper, I interviewed the children studying in Nuh district of Haryana, talked to them on the phone and listened to everyone's problems, due to which they are neither able to read nor think ahead. Everyone's problems are different but all are related to each other. Not everyone has the resources to facilitate the steps taken by our state government. Today's children are the future of tomorrow, they should pay attention to them, what are the benefits of passing them without examination when they do not have any knowledge of the subject of their class.

Objective of Study

1. What are the problems students are facing in online medium.
2. What steps can be taken to improve the online education.

3. To what extent all the people have benefited through this medium of education.
4. To understand the concept of E-learning to examine the type of E-learning.

Meaning of E-Learning

Here E refer to electronic. Therefore in this method of learning we use electronic devices such as smartphones, laptops, PC, etc. We compare between online study or I say e-learning to our traditional classroom study there are some advantages of both and as well as some disadvantages also .For example in classroom study we get a better surrounding and a mentor standing in front of us or moving around us so we can concentrate and study with the discipline but in e-learning we saw some students as well as teachers also not doing there best .They are just making fool of one another by taking classes for a minute just to sure attendance.

Secondly we have e-learning by which thousands of students study by one teacher at a time which is not possible in classroom which means we save a lot of time with online study.

Types of E-Learning

1. **Synchronous Learning:** In this, teachers and students are connected to each other through online medium, they stay connected live with each other on the web or any geographical place or in any classroom at the same time even while living apart from different distances and any They also solve the problem immediately by asking the teacher. This is known as "Real Time Learning" method in which teacher and student are connected by two way communication. It is a student's centred method in which the students are present in real form, it is being widely used in online learning. In this type of e-learning, students provide learning resources by using many online tools. Some examples in this include audio video conferencing, live chat, virtual classroom, webinars, etc. It has gained a lot of popularity in the last few years.
2. **Asynchronous Learning:** In this type of learning, teacher and student are not connected to each other live together. This is a "Not Real Time Learning", it has one way communication. In advance, videos are made and put on any subject, later the students watch and read on their own according to their own pace. It is not necessary that both of them talk together in any classroom together. For example web based training, in which any online course, blogs, website's, video, tutorials, e book, forms etc. The biggest advantage in this type of e-learning is that when it takes time, 24×7, you can see and take information. That is why this medium is preferred more.
3. **Blended Learning:** A new form of learning has emerged in this type of learning. In which there is a mixed form of Synchronous and Asynchronous learning. In this, both have to be used online through virtual classes. It is used to encourage mixed learning in open schools. It provides opportunities to get information about the same subject in different ways, so that students can make copy notes along with understanding.

Some Benefits of E-Learning

1. In offline Classroom students are not comes full strength but a teacher came and teach us then he have to go to other class then teach same no of students and it goes on class by class. I think it is just waste of time and energy because a teacher teach same content but to couple of students at a different time. But with the help of e learning a teacher can teach thousands of a student at a time.
2. In a classroom students are hesitate to question teacher in front of other students. But in e learning we just have to say our problems in sitting our own bedroom which makes me so comfortable and now am getting my questions answered.
3. Nowadays students facing a lot of problems by traveling to college. In our suffer there are many possibilities which makes us lait to the classroom or to attend the lecture. But with the e learning traveling seems to be zero as we study in our bedroom and take the lecture in time but if due to some reasons we are not able to take the lecture then lecture automatically save on the online application like unacademy, byjus, etc. It means we can attend the lecture at any time or at any place.
4. In classroom a teacher can teach a chapter once but with the help of e learning we can see tha same class as much time as we want. Am not saying that teacher can teach how many time we want but the lecture save online and we are able to take it again and again.
5. In classroom a student want quite and calm surrounding to concentrate on studies but there are a lot of noise In the classroom which is never a issue in online study because a student learning in his own bedroom close from inside which makes zero noise except students listening there favourite music.

Major Challenges Face by Learning Online in Rural Areas

All the hurdles that have come due to COVID-19 are being moved towards their solution. People are now in sync with reality. Companies have also asked their employees to work from home, in all colleges and schools, students have been instructed to study from home. Online classes are being run for studies. This crisis has prompted students to take up e-learning opportunities as there is no end to it. The pandemic has affected rural students more than the cities. But the country is slowly developing more towards online education. Rural areas are struggling with intermittent power supply and outdated equipment. Unfortunately, rural students are deprived of access to the latest tools and online content, which are enjoyed daily by urban students. Not having a proper data plan can be even more difficult for families who are facing financial constraints. This affects both teacher and student participation in live classes. The digital divide that has come for some time has made the issue of digital literacy in rural and urban areas a matter of even more serious concern. Teachers and students of rural areas do not match with students and academicians living in urban areas.

In rural areas, the network speed is very low, due to which the students are not able to receive the message well in the online classes used during the education and due to the low

network speed, the class is often closed in the middle. Rural students also lack resources, there are very few students who have personal phone, laptop and internet data available, for this most children have to depend on their family members. Due to being a co-family, noise pollution affects the students while taking the class, when they take the class, when they study, the people around them interrupt them and in between, they affect the reading with good interest due to which they are able to read their own words. Unable to concentrate full attention on getting education. The personal contact between the teacher and the children is not established, then they only complete the formalities. Teachers and children are not face to face, in which many times only after making attendance, by turning off the camera, children start doing other work, they are not able to give their full attention to studies.

There is a sense of quiet and secluded place, due to the presence of co-family in the rural area, people do not get a quiet and isolated place to study and are unable to study to their full potential, having more than one child in the family and even more Affects When there is a lack of resources, parents do not understand which child's education should be given more importance, because everyone cannot read together, so electronic resources are provided to the same child that too For limited time. The surrounding environment in which she is found to lack enthusiasm for taking online education. Due to lack of proper information, there is often dissatisfaction among the rural people that they are affected by preconceptions, according to them, reading in the traditional way is effective and appropriate. Another major problem in rural areas is the lack of facilities in which people have to deal with due to power supply and old electronic equipment.

Digital systems had already made their place in urban areas but in rural areas, smart classrooms and digital learning were not introduced Rural education still depended on traditional methods for its readers, now this change may not happen overnight It may take time to go from traditional to digital directly. There is a need for a more user friendly platform with proper training for teachers as well as or to introduce students to digital technologies so that it becomes comfortable to teach and earn using all those technologies. Shortage of teachers in rural areas and poor teachers to students ratio is also a shortcoming. For rural education, for complete digitization of education, skilled and good teachers have to be filled so that the students of rural areas also have full attention and concentration. To read from Online education will have to provide ease of engagement and learning among students through contemporary online classrooms. Health problems Due to the small size of laptop and phone screens, one has to face mental and physical stress, annoyance and other problems due to being attached and leaning on it for a long time. There have been improvements in power and network facilities but there is still a lot of room for improvement. The availability of restricted technology equipment for a limited time also prevents students from studying.

The availability of restricted technology equipment for a limited time also prevents students from studying. In the absence of proper environment, there was an environment of education system in which children were prepared to study and there is no such system in online, children have to study by putting their own efforts, which would harm those children.

Who is not serious about his studies because in online education one has to be self dependent and have to study by himself. Some subjects are practical, so even learning them is facing a lot of difficulties in learning. Stagnant effect of electricity and high speed internet still remains a major problem for rural areas. Formalities are fulfilled in which the student is not understanding whether he is learning something or not. In this way, an educated unemployed class is being prepared, which can prove fatal for the coming future. The system of proper evaluation is not available due to which there is chaos in education.

Mesures to Improve Online Education System

1. More than 50% of India's population lives in villages and not all have full access to internet facility as far as internet facility has reached. There the internet signals are weak, due to which the internet is not accessible properly, which is the biggest obstacle in the online education of children's.

2. The government will first have to take the Internet facility to the villages and remote border areas, for this concrete steps will have to be taken so that the children can study without any hindrance.

3. Electricity comes for a short time in remote areas and computers, laptops and mobiles cannot run without electricity, so we can strengthen online education by taking electricity to the villages.

4. The government should also ensure that no child is deprived of education due to lack of technology so that his future is not in danger.

5. A survey has revealed that some companies and institutions give less importance to online education, they consider traditional education better than it. Over time this bias will also have to be eliminated because it is not necessary that the person taking traditional education better person.

6. Some university institutes charge more than the students for online degree programs. Though training facilities are provided to them in return but the students should be removed. So that all the students can get benefit.

7. Before the Corona period, online education was not given much importance in India. So the educational institutions did not have any infrastructure for education. Perhaps there were some educational institutions where there was the best infrastructure for online education, if online education is to be run smoothly, then gradually but completely modern infrastructure will have to be developed to see its better results.

8. Provide necessary equipment for taking online education for the children of economically weaker families which have laptop, mobile, internet-connection and computer, etc. There are some families who have the same mobile phone and there are two or more children studying in the house, so it is impossible for all the children to come online education day at the same time.

9. By making a concrete plan by the government, the children of economically weaker families will have to provide the necessary items for online education. So that these

children can be educated smoothly or else the economically weak children and financially prosperous There will be a huge gap between the children.

10. Online education should also be done by government schools and children who do not have smartphones should be provided smartphones by the governments of all the states. Emphasis should be laid on providing online education to the children in the right way without any negligence.

11. Not only good infrastructure, most of the teachers in India also do not have the necessary technical knowledge for online education. He is not technically trained enough to properly educate children or create high quality e-content.

12. Teachers are the backbone of the entire education system. Therefore, teachers should be given proper technical training, they should be taught to use the medium of new digital devices, laptops etc. Should be provided to them. If this is possible, then online education will prove to be a milestone in the betterment of the system.

13. Most of the government schools do not even have smart class e-board, computer, printer and internet connection. Where children can also be given basic knowledge of computer and internet. If online education is to be successful, then all government schools will have to be equipped with internet connection and computer facilities.

14. Syllabus and course material will have to be prepared keeping in mind the online education.

15. Due to spending more time in online education every day, the physical and mental health of children has also been affected. Because children's health cannot be played with.

16. At present, about 40% of the people in India are using the Internet, in which the number of youth is also high, so it is a big challenge to reach this percentage.

17. The biggest problem of children comes when science or any subject in which practical education is very much needed. This is not possible in online education, for this also it is necessary to find some solution.

18. Reading material on regional languages is very less available on the Internet, which may cause inconvenience to the children studying in the regional language. If online education is to be made successful, then the government should solve this problem as soon as possible.

19. At the time of Corona disaster, education was being given to the children of government schools through Doordarshan. Although this program was for a limited time but more such programs should be conducted, which can improve online education.

20. In online education, student teachers are not directly face to face, so teachers have to face difficulty in understanding and evaluating students, a solution will also have to be found, online education is the best for distance education. It is assumed.

21. However, the government has taken an important decision in which students can take any distance learning education degree along with their regular degree course as a way to encourage online education.

22. During online education, children should sit in a quiet place. So that no one bothers them and can read them properly.

23. Teachers to prepare the curriculum in a way that is understandable to children of all levels.
24. Equal importance of education should be given to all children. And keep watching through their test to see what progress is there in the student.

Conclusion

COVID-19 has disrupted all the sessions of education, giving an opportunity to change our education system in a modern way. Due to this, not only urban education but also rural education is being made digital education through online classes. While the infrastructure has not been developed to connect every village and city in India with today's online education, it is time to see rural schools and rural colleges becoming e-learning friendly. Easy and less crowded e-learning solutions are coming to rural India for easy and convenient online classroom. In the last few years we have seen improvement and development in the infrastructure of education and other facilities in India. The government should make a successful strategy that works with a development by removing the lack of education in rural areas. For this there should be continuous effort and increase in digital knowledge and keep pace with upcoming innovations in digital technology. To improve the situation online orientation is to be made affordable and accessible to all.

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Technological Readiness of Educational Institutions with Reference to ERP and Related Software

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Abstract

Technology and economic growth are highly related with each other. Many research studies have shown that the adoption of technology in universities and in learning institutions will develop the East Asia's economies. If the universities adopt the Enterprise Resource Planning (ERP) system ,it will upgrade the level of education. By looking all these benefits many universities and learning institutes in India are now spending to implement ERP software that take two or more years to implement. These educational institutions express a great deal of frustration about the cost and learning to use ERP systems. First of all, the decision to outsource or not has always been a challenge, outsourcing has its own advantages and drawbacks. Many Universities indulge in outsourcing activities for adopting latest technology. By outsourcing these technological services the organizations save their funds also. The limitation in applying the ERP is that the employees are not competent and the flow of records and data is not systematic and their exist a number of power games within the system. On the other side, formal and informal training and learning process are consistently identified as success factors of ERP system. The study tried to highlight the current status of ERP in educational institutions, beside these also analyzes the technology readiness amongst the key stakeholders, i.e. faculty and students.

Keywords: *Technology, ERP, Educational Institutions, Software.*

Introduction

Enterprise Resource Planning (ERP) Schemes are software packages that deliver the comprehensive combination of information of numerous divisions within an organization. These systems assimilate with all organizational resources and pooled paybacks are spread to all departments (Garcia and Perez, 2007). Generally, ERP helps in integrating the total resources in organization. Xia et al. (2010) defined an ERP system as a commercial and configurable software package that manages and integrates of all the information flowing through the functional areas in the organization, i.e. financial, accounting, supply chain and customer information, sales and distribution, production planning, materials management and human resources management. According to Goel (2011), Enterprise resource planning (ERP) system assists enterprises in automating and integrating cross-functions such as accounting,

procurement, distribution, inventory management, sales and marketing management and human resource management.

ERP systems are described as computer-based systems designed to process the transactions of an organization and facilitate integrated and real-time planning, production, and customer response (O'Leary, 2000). The foremost objective of ERP is to upsurge functioning productivity by refining business processes and reducing costs (Beheshti, 2006). The need to increase efficiency is one of the most important reasons to implement an ERP system (Ifinedo and Nahar, 2006). These systems are designed to address the problem of disintegration as they assimilate and rationalize internal processes by providing a collection of software modules that cover all serviceable zones of a business (Koch et al., 2001). ERP helps the organizations to gain a competitive advantage by integrating all business processes, managing and optimizing the available resources (Noudoostbeni et al., 2009).

ERP improves the efficiency of top management decisions and increases the flexibility in reacting to changing business needs. It is a software solution that integrates information and business processes to enable information entered once into the software to be shared throughout an organization. Now a day ERP has become a basic necessity for organizations to improve their efficiency. ERP allows various departments with different requirements to connect each other by sharing the identical evidence in a solo structure (Harrison, 2004).

ERP in Educational Institutions

Higher education worldwide is strongly inclined by IT growth, particularly in universities around the world (Allen and Kern, 2001). ERP in the universities (Pollock and Cornford, 2004) motivates and leads to paperless work. The teachers and students need massive data and upgraded e-learning environment. According to Watson and Schneider (1999) one of the main purposes of applying ERP in universities is to deliver institution with a superior capability for research and education.

ERP system implementation leads to integration of dissimilar managerial jobs into a more organized and cost effective method to gain a intentional benefit which comprises the incorporation of student management, human resource management, conveniences management, and financial systems that have in the past been maintained by distinct inheritance systems (Zornada and Velkavrh, 2005). Education Institutions have arranged noteworthy funds in ERP application to increase institutional professional practices (Mehlinger, 2006). King (2002) explained the highest rewards of ERP for higher education includes: admittance to data for planning and refining the management of the institution, to increase amenities to faculty, other staff and students, decrease business threats, better administration of university data, perfect and well-organized data recovery.

Technology Readiness

In the world economy, technical modification could be a strong external strength that encompasses a distant-reaching influence on the competitive scene of the industry. This example

has caused in services more and more being transported through self-service technologies, providing several paybacks to shoppers as well as physical property, customization and bigger fulfillment (Curran and Meuter, 2005; Meuter et al., 2005). Parasuraman (2000) defined the Technology Readiness as a whole state of attention causing from a gestalt of rational enablers and inhibitors that mutually regulate a person's tendency to use different technologies.

Technology eagerness refers to people's inclination to cuddle and use new technologies for finishing goals in home life and at work (Parasuraman, 2000). According to the Mick and Fournier (1998), customers intermingling straight with technology in a flash follow positive and negative moods for exploitation new technology. though this negative and positive sentiment concerning technology might domicile, the comparative power of those feelings is probably going to vary across people. (Parasuraman, 2000).

Review of Literature

The implementation of ERP systems in higher educational institutions has been described as a challenging undertaking. For instance, expenses and risks involved are high, whereas the return on investments is medium to long-term (Ferrel, 2003). Feemster (2000) explained the problems faced while using ERP and also the difficulties faced by US colleges while implementing ERP. The process of shifting from the file data base management system to ERP was costly and painful. But the adoption rate was very high. The study tried to highlight the current status of ERP in educational institutions, beside these also analyzes the technology readiness amongst the various stakeholders, i.e. faculty and students.

Research Methodology

The present study was originated to study the practice of ERP in education institutions with regard to technology readiness. The study intended to match the perception of the faculties and students on the basis of technology readiness for the usage of ERP in educational institutions. The perception has been compared on the bases of four dimensions: Optimism, Innovativeness; Discomfort and Insecurity of Technology Readiness Index (TRI) scale developed by Parasuraman (2000). The TRI is a Likert type scale with responses ranging from Strongly Agree (5) to Strongly Disagree (1). TRI is 36-item scale based on four dimensions: Optimism, Innovativeness; Discomfort and Insecurity. Optimism and Innovativeness are the positive drivers of Technology Readiness. They encourage users to use technological products and services, and to hold a positive attitude towards technology. Discomfort and Insecurity are the negative attitudes, i.e. inhibitors; they make users reluctant to use technology. The TRI scale has demonstrated high internal reliability. Coefficient alpha scores range from 0.74 to 0.81 across the four dimensions of the scale. The TRI scale has also demonstrated high construct validity by being able to discriminate across different levels of ownership of products/services for which one might a priori expect different levels of technology readiness to be very relevant. The study was carried out in NCR. Because, it is an educational hub.

The sample size was 195 consisting of faculties and students belonging to different institutes that include management, engineering and social sciences. The number of faculty was 96 and the student was 99. The average age of faculty was 32.4 ranging from 25 to 38 and of student was 20.38 ranging from 18 to 23. It has been observed that almost all institutions have started use of software for institutional work; however most of the institutions are either in the implementation stage of ERP or planning to implement ERP.

Result and Discussion

Results of the study were derived on the basis of the research problem that whether the perception of faculty and students differ regarding the ERP and related software usages in educational institutions. For this, perception of faculties and students were compared and tested using null hypothesis on four dimensions of technology readiness as mentioned below.

Dimension	Hypothesis	Z-Value	Result
Optimism	H_{01}	1.43	Accepted
Innovativeness	H_{02}	1.04	Accepted
Discomfort	H_{03}	2.33	Not Accepted
Insecurity	H_{04}	2.08	Not Accepted

At 5% level of significance.

Optimism

Optimism is defined as a positive view of technology and a belief that offers people increased control, flexibility, and efficiency in their lives (Parasuraman and Colby, 2001). It generally captures positive feelings about technology. Optimism is the tendency to believe that one will generally experience good versus bad outcomes in life (Scheier, and Carver, 1992).

• H_{01}: ERP usage is perceived to be optimistic by faculty and students.

It has been found that first null hypothesis was accepted and it indicated that faculty and students do have a positive feeling towards enterprise resource planning usage. In a study conducted by ECAR (2007) the majority of respondents approved that information technology in a option increase their knowledge, results in more quick response from their teacher, facilitated in terms of association and communication with colleagues, and permissible the student better control of option deeds. According to Singh and Wesson (2009), user should be given a user friendly interface covering convenient formats for input and output of information for making the efficient use of the system and easy implementation.. According to Lin and Hsieh (2007) one of the major issues of the injection of technology into service business is customer readiness and willingness to use technology-based systems as well as influence of such systems on service results. Other relative studies have also identified specific consumer beliefs and motivations that may enhance (e.g., perceived ease of use, fun) or inhibit (e.g. perceived risk) adoption of new technologies (Dabholkar, 1994).

Innovativeness

Innovativeness is demarcated as a propensity to be a technology developer and thought leader (Parasuraman and Colby 2001). This aspect normally measures to what degree individuals perceive them as forefront. Personal innovativeness in IT is the willingness of an individual to try out any fresh information technology (Flynn and Goldsmith, 1993). It is deliberated to be a attribute; i.e., a moderately unchanging descriptor of an single and invariant across situations (Agarwal and Prasad, 1998). Karahanna et al. (1998) presented that more innovative individuals, the early adopters, have less composite acceptance arrays about new technology.

- H_{02}: ERP usage is perceived to be innovative in Educational Institutions by faculty and students.

The second null hypothesis was also accepted that indicated that faculty and students both were adopting innovative practices while using ERP in educational institutions. They have a positive imprint of its utility in general. Early adopters use innovations even when their probable worth is undefined and their paybacks are not clear.

Discomfort

Discomfort is demarcated as a apparent absence of control over technology and a sensation of being incredulous by it (Parasuraman and Colby, 2001). This measurement usually measures the terror and worries people involvement when challenged with technology.

- H_{03}: ERP usage in Educational Institutions leads to discomfort amongst faculty and students.

The third null hypothesis related to discomfort related to ERP Usage was not accepted. It indicated that the there is a difference in the perception of faculty and students regarding the comfort level while using ERP in education institutions. The result showed that the faculties feel a little discomfort as compared to students in using ERP. ERP and related software offers plenty of features to be taken care by faculty, which seems to be very tedious by faculty beside their daily assignment like teaching, assignment evaluation, attendance monitoring, etc.

Insecurity

Insecurity is well-defined as suspicion of technology and doubt about its aptitude to work properly (Parasuraman and Colby, 2001). These dimension emphases on worries people may have in expression of technology-based dealings.

- H_{04}: Faculty and students perceived that ERP usage in Educational Institutions is insecure.

This hypotheses was rejected that highlighted that faculty members perceive to be insecure as the students are also a prominent user of the same software and being student nature can harm the confidential data. Security is an important challenge for ERP implementation which includes user authentication, authorization, time restriction and data security (She and

Thuraisingham, 2007). According to Walczuch et al. (2007) unconfident staffs professed IT as fewer beneficial and less stress-free to use.

Conclusion

It has been found that there exist variations like ERP or related software amongst faculty members and students. Faculty the readiness towards technology members are still feeling discomfort and insecure with the ERP software as they thought that it can be accessed by mischief students. Beside this, these software [5:59 pm, 01/07/2021] Dr.Moniika Bhatiia: provides many features/options for faculty members, however they are not able to use these features as engaged in administrative work along with teaching work. On the other hand, students are feeling overwhelmed with such software as they feel independent and can easily track their progress like attendance, assignment, etc.

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COVID-19 a Boon or Bane on Education Sector in India: A Review Based Study

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Abstract

Over a billion students have been displaced as a result of school/university closures caused by COVID-19. To avoid school/university closures, governments are trying a range of strategies. What impact might this ideal storm have on educational achievement and learning? The results of simulations involving various lengths of lockdowns and varied levels of mitigation effectiveness (primarily remote learning) are presented in this research, resulting in an optimistic, intermediate, and pessimistic scenario. We find that both the level of education and learning will diminish, based on data from several Indian educational institutions. COVID-19 may result in a loss of quality-adjusted education, reducing the number of effective years of basic education that students get during their lives. Approximately 7 million children from basic to secondary school could drop out because to the pandemic's income shock alone. The research gaps are found out over studying various research papers, which are discussed herewith. This study focuses on the positive and negative effects of COVID-19 on the education in India,

Keywords: *COVID-19, Education Sector, Impact, Education, Review.*

Introduction

The development of Corona Virus Disease (COVID-19) has triggered a global public health emergency. In India, emergency protocols were devised to contain the virus's spread, resulting in restrictions on all non-essential public movements. With the closing of educational institutions, the demand for a new educational model has arisen. The move from physical to digital learning is happening quickly emerged. The use of the internet for education has been seen as a positive trend a viable alternative to traditional education. However, according to an e-learning meta-analysis, online learning is better than nothing and comparable to traditional learning. To improve the e-learning experience, educational institutions must follow government guidelines and recommendations while encouraging students to continue learning remotely in this challenging environment. (Chaturvedi, Vishwakarma, & Singh, 2021)

The educational institution's closure has touched 80 percent of the world's student population, posing an unprecedented task for ministers and educational institutions to re-think and wrestle in order to preserve learning continuity while projecting long-term school closure.

According to the MHRD report and the National University of Planning and Administration, infrastructural development has slowed significantly, affecting 260 million students. This article examines the effects of the corona virus pandemic on education and the education sector in India, as well as the impact of school closures caused by COVID-19. (Jain & Aggarwal, 2020)

The simultaneous health and economic shocks are unprecedented. For example, we know that the crisis has impacted families' socio-emotional and mental well-being. Since the lockdown measures were revealed, domestic abuse charities have reported an increase in calls to their help lines. COVID's socio-emotional influence is extremely likely to have a negative impact on student learning. The simultaneous health and economic shocks are unprecedented. In the intermediate scenario, if no corrective action is taken as youngsters return to school; these learning losses might translate into $10 trillion in lost earnings for the economy. In this scenario, if the COVID-19 shock is not mitigated, the entire cost of the cohort of learners currently enrolled in the educational system's life cycle earnings is close to $10 trillion in present value. (Azevedo, Hasan, Goldemberg, Iqbal, & Geven, 2020)

In India, over 32 crore students were unable to transfer schools or universities, and all educational activities were halted. Despite these obstacles, Higher Education Institutions (HEIs) have responded successfully and have been able to maintain teaching-learning, research, and societal service with the help of some instruments and strategies throughout the epidemic. The main effects of COVID-19 on HEIs in India are discussed in this article. HEIs and educational authorities in India took some steps to ensure seamless educational services during the crisis, which are discussed. Higher Education Trends After COVID-19: May Encourage Personalized Learning It's possible that student attendance will decline. Student mobility for higher education on a national and international level may be limited. It is possible to continue learning with social separation. Educational institutions may operate on different shifts throughout the day. It's possible that this will widen the divide between rich and underprivileged students. Technology may be used to facilitate teaching and learning. Open and distance learning (ODL) and online learning may see an increase in demand. Blended learning could take the lead. (Jena, 2020)

More than 1 billion and 575 million students are said to have been affected by the closure of schools and institutions around the world as a result of countries' preventive steps against the spread of COVID-19 (UNESCO, 2020a). Because of the remoteness, using technology has been seen as the best (if not the only) way to maintain educational systems running in many regions of the world during this time. Despite the difficulties in implementation, various benefits have been identified in the necessity to change to remote or online learning, the most notable of which is the prospect for rapid advancement in the field of digital education. (UNESCO, 2020a)

Review of Literature

The following research paper performed a cross-sectional survey of 1182 people of all ages from various educational institutes in Delhi - National Capital Region (NCR), India, to learn

more about the effects of the epidemic on students' lives. The influence of COVID-19 on students of various ages was recognised were time spent on online classes and self-study, learning medium, sleeping habits, daily fitness routine, and the resulting impacts on weight, social life, and mental health. Participants were asked about their daily online learning routines in Indian educational institutions after making the shift from offline learning: average time spent for online study (hours) per day; medium for online study; average time spent for self-study (hours) per day. 51.4 percent of responders said they didn't do anything with their time during the lockdown. In addition, their sleeping habits, daily physical regimens, and social interactions had a substantial impact on their health. (Chaturvedi, Vishwakarma, & Singh, 2021)

Education is impacted due to covid-19 and because the worldwide population has prioritised health over education, the corona virus outbreak entails significant losses in learning hours, with significant implications for your social life and, in particular, your employment. Theresearch paper states that as a result of COVID-19, a slew of social and economic issues have arisen, including student debt, digital learning, poverty, and homelessness, as well as children's education, childcare, housing, internet, and disability services. The research paper also talks about the COVID-19 impact on admissions, on infrastructure, on assessment and on overall digitalization. This study relies on both secondary and primary sources. The material for this article comes from numerous education reports from organisations such as UNESCO and VOXEU. This article draws on a variety of secondary sources, including articles from the Economic Times and India magazine, as well as news reports, journals, and government reports. Sample surveys were conducted to achieve the paper's goal. Personal interviews (phone or text message) with teachers to learn about their perspectives and identities on subjects related to the paper's goal. (Jain & Aggarwal, 2020)

The research paper states that, a few institutions, such as Ashoka University in Haryana, have survived the storm relatively unscathed since they had made arrangements for online distribution of course content well before the crisis. However, the majority of colleges, institutes, and universities lacked this forethought, and those that did had little trouble during these trying times. Another factor could be that certain institutions have been hesitant to set up online content distribution platforms because they are concerned about the impact on their commercial character. This paper, thus suggested that in this pandemic, one should look for the brighter side and focus on positive impact COVID-19 has like: the establishment of a 'Blended Classroom,' the importance of the teacher's position will grow, the educational content's level of quality will improve, with the creation of new portals for 'on-demand' transmission of educational content, time and location will no longer be a barrier to education delivery. (Koul, & Bapat, 2020)

In the paper, it is mentioned as a precautionary measures in order to accept the online system of education effectively, medical institutes must be clear about data storage, data usage, and data sharing policy because a large number of students will be sharing their personal identity data, relocation, academic progress, and abilities, including behavioral data. Misuse of data can lead to prejudice and social harm, therefore data security becomes a top priority. It

also state that, a high internet bandwidth, as well as a well-lit space, audio video development equipment, and skilled staff, are required for live transmission of practical or clinical skill demonstrations. As a result, the entire operation consumes a lot of resources. Furthermore, it is difficult to ensure the availability of laboratory materials for lab teaching and patients for clinical skill demonstration during a crisis. (Khan, Panat, Iqubal, Joshi, Kumar, & Shukla, 2020)

According to a poll conducted by ASSOCHAM and Primus Partners, only 17% of teachers in government schools have been trained to deliver online classes, while 43.8 percent of teachers in private schools have. Teachers are also saddled with COVID responsibility in addition to online programmes, which has had a negative influence on their health and well-being. Teachers are essential in giving psychosocial support and promoting children's social and emotional learning. Governments must offer teachers with training and support that goes beyond academics as part of the COVID-19 education response. States are not hiring regular cadre teachers and non-teaching employees for an extended period of time due to a constrained resource envelope for school education. (Brief, 2020)

In the paper, Rawal stated, and the objectives of the paper were, The impact of COVID-19 on the Indian education system, with a focus on the role of teachers and students through online education. In the context of online education, how is the positive impact beneficial to students, parents, and teachers? How can the harmful impact of COVID-19 on kids' education be reduced? Also stated, despite the fact that the outbreak of COVID-19 has had numerous detrimental effects on education, Indian educational institutions have acknowledged the challenges and are doing their utmost to give students with smooth support services during the pandemic. The Indian education system now has the possibility to evolve from a traditional system to a modern one. (Rawal, 2021)

Although online learning has become a feature of many education systems throughout the world, the extent to which it is employed and how it is used to accomplish quality distance or online learning is thought to differ. This level is determined by a variety of circumstances, including the many parties participating in the execution of this learning format and the incorporation of technology into education systems prior to the COVID-19 pandemic-related school shutdown period. According to the findings of previous studies aimed at identifying the factors influencing educational systems' ability to integrate technology into teaching, it is suggested that in order to achieve positive results in the integration of teaching technology, it is necessary to understand the types of interactions between teachers, students, and technology. Teachers' stress, cumulative weariness, and mental exhaustion have also been proven to influence their resistance to change, which, in addition to making them resistant to change, can also negatively affect their performance and job satisfaction. The teachers who took part in the study claimed that they had no prior experience with distance or online learning. Most of the participants also reported that, prior to the preventive measures against the spread of COVID-19, communication with colleagues about school difficulties and delivery of information from the school was done mostly through verbal communication or phone calls (including Viber). (Duraku, Z. H., & Hoxha, L., 2020).

The closure of medical colleges as a result of the epidemic created prospects for a shift to online medical education. We will continue to use online medical education to varied degrees once we have adopted it. In the post-covid era, blended learning, or a combination of online technology-based learning and real-world exposure, may become the new normal. There are several untapped topics in the field of online medical education that medical educators should investigate further in the near future. In India, the student's device determines his or her ability to access online learning resources during lockdown. It must be assured that students' learning achievements are not influenced by their socioeconomic background, else a digital divide would emerge amid many other social differences. (Khan, M., Panat, S. R., Iqubal, M. A., Joshi, A., Kumar, P., & Shukla, A. K., 2020).

Apart from the drastic change in society's normal life, students' normal way of schooling has been jeopardised in many ways, including peer learning, group discussions, brainstorming sessions, practical experiments, and important events, as well as co-curricular and extra-curricular activities, all of which are important in enhancing students' metal and physical growth. We had to switch from a traditional educational system to an online one due to the epidemic. Theoretical classes are the most common type done during online teaching. Teachers can just give lectures on the subject and cannot actually teach it. On the other side, students can merely master the theory portion of the classes, leaving the practical portion out. Online classes also do not allow for face-to-face discussion. Teachers and students cannot undertake any practical or research work while learning online. Despite the fact that we live in a contemporary world, many people are still living in poverty. Not everyone is literate. One cannot dispute that there are still many people who are unfamiliar with modern equipment and technology, as well as others who cannot afford to purchase them. However, in the aftermath of COVID, educational institutions are adjusting to new ways of imparting education by incorporating cutting-edge information and communication technologies into the teaching and learning process. (Ngima, Y., & Tsering, D., 2020).

The positive impact scale in the second segment uses some items to assess how students felt about the beneficial effects of the COVID-19 programme on their social and educational lives during the curfew period: Obtaining spiritual thoughts and peace of mind; affirmation of the value of tolerance and forgiveness; cooperatively resolving family difficulties; reorganisation of life priorities; family cohesion; feeling of society destiny oneness; Personal and public awareness; concern for the well-being of friends; Learning to look after one's body; a sense of awe for life and death. The influence of the COVID-19 pandemic on the social and educational aspects of students' lives was examined in this study using 30 statements that represented the scale of positive and negative consequences. To establish the scale's validity, these statements were subjected to principal component analysis (PCA). In this study, students' perceptions of the positive and negative effects of the COVID-19 epidemic on their social and educational lives revealed a high to moderate level of agreement. However, the influence of the COVID-19 pandemic on social aspects of students' lives was greater than on educational aspects. The beneficial effects that arose included staying connected with family members, appreciating life and death, reordering priorities in life, practising environmental hygiene, and feeling

societal destiny oneness. Concern about being a burden on others as a result of COVID-19 infection, on the other hand, was a perceived negative influence. (Alghamdi, 2021)

The majority of a child's formal education takes place in a school setting. Children may spend less time learning as a result of the closure of school facilities and the shift to a remote learning environment. Students' weekly learning time during the COVID-19 lockdown is reduced by 4 to 8 hours compared to when schools are open, according to the Schul-Barometer (School Barometer) survey, which took place from March 25 to April 5, 2020 and was targeted at Austrian, Swiss, and German students aged 10 to 19 years, weekly learning time during the COVID-19 lockdown is reduced by 4 to 8 hours. Furthermore, one out of every five students claims to study for less than 9 hours per week. Leaving aside the debate over the efficacy of in-class vs. online instruction, numerous research have repeatedly shown that less time spent learning might result in learning loss. Students with Special Educational Needs and/ or Disabilities (SEND) are more likely to be affected by physical school closures. Even if they are aided by online tailored tutoring, the fact that it is mediated by technology reduces its efficacy. Digital tools, on the other hand, can be beneficial to SEND pupils, especially if they are used as part of a larger, encompassing approach. (Di Pietro, G., Biagi, F., Costa, P., Karpiński, Z., & Mazza, J., 2020)

Social separation has a bad impact on health, which is exacerbated by the combination of the two previous assertions. A pandemic could have a severe impact on students with special needs. It's possible that the alterations will have a negative impact on their capacity to scope learning challenges. Furthermore, parents' labour increases are a result of the pandemic, which is not directly related to schooling but can be counted as an effect of closure. This necessitates new arrangements for children to stay at home while the closure occurs, which is exacerbated in situations where playgrounds and children's centres are closed. (Magomedov, Khaliev, & Khubolov, 2020)

During the lockdown, the National Institute of Mental Health and Neurosciences studied how children and adults became more reliant on digital devices. Eye strains, headaches, and computer vision sickness are all adverse effects of our growing reliance on digital devices. Students tend to lose interest in online learning, and it's difficult to keep a class or a group of students engaged. Student engagement is critical to grasping concepts and ensuring effective instruction. (Goswami, 2020)

Studying from home often necessitates more self-discipline and determination to complete online courses, especially in the early stages when students are adjusting to the new system, which can lead to a sense of increased study obligations. Lecturers who are unfamiliar with the new form of delivery, on the other hand, may overburden their pupils with study materials and tasks. As a result, students were asked to compare their workload prior to the cancellation of onsite classes with the changed circumstances following the lockdown. (Aristovnik, Keržič, Ravšelj, Tomaževič, & Umek, 2020)

Education systems are increasingly looking to foreign policy experiences, data, and analyses as they construct policy solutions during this crisis. Education at a Glance, a publication of the Organization for Economic Cooperation and Development (OECD), contributes to these

efforts by developing and analysing quantitative, internationally comparable indicators that are particularly relevant to understanding the context in which the sanitary crisis has unfolded. While the indicators in Education at a Glance were compiled prior to the crisis, this booklet places them in the context of the epidemic. (Schleicher, 2020)

From a social, physical, political, educational, and labour standpoint, the pandemic produced by the COVID-19 sickness is wreaking havoc on civilization. In the sphere of education, a paradigm change is taking place that is more than just methodological. Because different educational administrations have had to rush the transition of the educational system from face-to-face to online instruction, the usage of ICT has gone from being one of the most common to being one of the most common more methodological resources to a necessary solution to ensure that the teaching and learning process is not disrupted, preventing the global collapse of educational systems This is both an educational and a health strategy, as school closures and the adoption of online instruction would aid in the pandemic's containment. (Espino-Díaz, Fernandez-Caminero, Hernandez-Lloret, Gonzalez-Gonzalez, & Alvarez-Castillo, 2020)

Objectives of Study

1. To anticipate or find out the various potential threats and potential opportunities in education system because of COVID-19 pandemic in India.
2. To find out impact of COVID-19 on students and teachers in India.
3. To find out the positive and negative impact of COVID-19 on education sector in India.

Hypothesis

H0: There is no significant relation between education and COVID-19.
H1: There is a significant difference between education and COVID-19.

Methodology

Data and information for this research were gathered from a variety of secondary sources. It was compiled from a variety of books, online publications, and a few well-known journals. The data used in this study was gathered from a variety of reports on the COVID-19 pandemic produced by national and international organisations. Information was gathered from a variety of reliable websites.

Conclusion

The study, with the help of secondary data and research papers shows that due to COVID-19, it has been seen that there can be more to the developmental activities as far as the relationship between education and COVID-19 is concerned. It is necessary to comprehend and address the accessibility status of online instruction for students with impairments. While there are benefits and drawbacks to online learning for students with impairments, there is a dearth of

contextual evidence-based understanding. Integrity in online assessment will be critical for medical students to develop professionalism. We must create an online evaluation system that is fair, valid, dependable, and ethical.

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Artificial Intelligence: A Linchpin in Tackling the COVID-19 Pandemic

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Abstract

The Spreading of COVID-19 infection has entailed the rise of computer systems as almost all regions including colleges, schools, malls, temples, offices, airports, and railway stations have shut down activities that require human gathering and interactions to maintain social distancing. Now Employees are adjusting with new emerging patterns of work which is completely online in almost every organization like in business, education, industry, society, government and many more. Artificial Intelligence (AI) is the new upcoming milestone in digitizing healthcare, financial services, retail, smarter R&D and education. AI is garnering a lot of interest and raising hopes in the fight against COVID like tracking covid cases, protein structure prediction, contact tracing, diagnosis, in curbing spread of misinformation and development of vaccines. Sudden requirement of this digitalization also lead to some issues regarding gig workers, technostress, online fraud, net neutrality and many more. Though the internet is a global resource but in our country people in remote areas don't have access to it for which we can say that this new normal is dividing the country digitally.

Introduction to AI

Artificial Intelligence (AI) is known for the development of intelligent machines that thinks and works like human being. As AI influences our way of living and is gaining popularity day by day. Many technical analysts claim that AI is the future. But, it is our present. In 2014, $300million was invested in Artificial Intelligence based startups which shows an increase of 300%. Around 15% of Apple phone users uses Siri's voice recognition system. With AI, the process of manual work is decreased to a large extent in context of automation and because computers are used in almost every sector specially during this covid times, now machine learning-based technology act as a linchpin in tackling the COVID-19 pandemic.

How AI Act as a Linchpin in Tackling the COVID-19 Pandemic

As COVID-19 become a global pandemic, AI tools and technologies can be employed to help the medical community and society to manage every stage of the crisis and its aftermath: detection, prevention, response and recovery. Here are some of the AI applications at different stages of the COVID-19 crisis.

How to Understand and Treat COVID-19 through AI

• AI tools and strategies are helping the medical community to understand the COVID-19 virus. Data mining tools can reveal virus history, transmission, and diagnostics, management methods, and lessons from past epidemics.

• AI can be used to target treatment and develop vaccines.

• AI can be used to customized content to combat incorrect information, e.g. through social networks Monitoring and tracking infection in real time, e.g. Tracking Predicting a person's chances of infection, e.g. EpiRisk. Delivery Drones for transportation of building materials; robots of high-performance functions in hospitals, e.g. CRUZR robot Service automation Investing three users and chat channels, e.g. COVID-19 Canadian chatbot Accelerate research Open data projects and disseminate a computer to find AI-driven solutions in this epidemic.

• AI computing power is also made available by technology companies such as IBM, Amazon, Google and Microsoft; people who provide computer processing power and through government-private initiatives such as the COVID-19 High Performance Computing Consortium and Health AI.

• New approaches that include prizes, open source collaboration, and hackathons, help speed up research into AI-driven solutions to the epidemic.

AI can be Employed to Help Detect, Diagnose and Prevent the Spread of the Virus

• AI-enabled warning systems can help find epidemiological patterns on common mining issues, online content and other multilingual information channels to provide early warnings, which can help syndromic monitoring and other health care networks and data flows.

• AI tools can help detect transmission chains and monitor broader economic impacts. AI technology has demonstrated its ability to capture epidemiological data much faster than traditional health data reporting.

• Prompt diagnosis is key to reducing infection and understanding the spread of the disease. Included in the images and detail of the signs. AI programs help prevent the spread of the virus which is our priority right now.

• Many countries use human surveillance to monitor COVID-19 cases (for example, in Korea algorithms use geolocation data, camera surveillance drawings and credit card records to track coronavirus patients). While machine learning models that use travel, billing and communication data to predict next-generation diagnosis, as well as border information and search engines, search engines and social media also help track the disease in real time.

• Independent robots and drones are being deployed to address the urgent needs of hospitals such as delivering food and medicine, cleaning and sterilization, assisting doctors and nurses, and delivering services.

How AI can Help Respond to COVID-19 Problem, and Recovery

- Fighting false information onsocial network. Search engines use AI data and tools themselves and rely on algorithms to detect and remove problematic or false content on their platforms.
- Virtual assistants and interviews have been sent to support health organizations, for example in Canada, France, Finland, Italy, the United States and the American Red Cross. These tools help track people depending on the presence of symptoms.
- Identify and communicate with high-risk individuals.AI can help to identify Medicaid patients most at risk from COVID-19 based on the risk of respiratory problems and social isolation.
- AI can ultimately play a role in accelerating the training and education of health workers By monitoring their economic hardship and recovery -via satellite, social media and other information.

Applications of AI for Business Boosting

Artificial intelligence is playing an key role in business. When we open our Facebook, our newsfeed give recommendation from Amazon or book a trip online everytime.

Manufacturing Robots

Robots are machines that are programmed to perform tasks assigned to them. Modern robots powered by AI have no biological intelligence, but they are capable of solving problems and imagining limited capacity.

- The Roomba 980 model uses artificial intelligence to scan room size, identify obstacles and remember effective cleaning routes. Self-contained Roomba can also determine how much construction should be done depending on the size of the room, and does not require human assistance to clean the floor.
- Hanson designed by Hanson (pictured above) is a wonderfully developed robot for public reading. With the help of AI Sophia can communicate with us and use facial expressions to convey human-like emotions.
- Emotech is a builder of Olly which has a flexible personality teaches a robot to be more like its owner. Olly's strength is far greater than anything the current voice assistants can do. For example, if Olly sees you relaxing your head, it may ask you if you have a long day and suggest your favorite music to help you relax.

Healthcare

The artificial intelligence shows transforming the game into health care, improving almost every aspect of the industry from robot-assisted surgery to protecting private records from cyber criminals.Here are a few examples of how artificial intelligence facilitates processes and opens up new avenues in the healthcare industry.

- PATHAI creates AI-enabled technology for pathologists. The company's machine learning algorithms help pathologists diagnose tissue samples and make more accurate diagnoses. The aim is to increase not only the accuracy of the diagnosis, but also the treatment
- Pager uses artificial intelligence to help patients with minor ailments, aches and pains. The company uses a machine to analyze clinical data and claims to find gaps in patient health care.
- Atomwise uses AI and in-depth learning to facilitate drug discovery. of small molecules Specifically used to deal with certain medical problems of the day, including Ebola and multiple sclerosis.

Self-Driving Cars

Self-driving cars are the last sign that the future has come for us. When viewed as a science fiction novel, self-driving technology slows down to a non-driving object. In fact, more than 33 million private cars are expected to hit the road by 2040. We can thank AI for the advances we are seeing in technology for the real future. sector. These cars have built in sensors that constantly monitored everything that is happening in the car and use AI to make the right adjustments. These sensors capture thousands of data points every second (such as car speeds, road conditions, pedestrian traffic, other traffic, etc.), and use AI to help interpret data and operate efficiently – all in the blink of an eye. We may still have a long way to go until we are fully capable of driving independently, but these companies are below and paving the way for an independent driving future.

- Self-driving cars collect petabyte information on a daily basis. AI uses this big data to constantly learn about advanced safety techniques, driving techniques, highly efficient routes, etc. Giving the passenger a final guarantee that they are safe.
- Waymo is Google's self-driving car project which can analyze situations and make safe predictions for the next journey without anyone having to interact with the steering wheel. passengers and take them to their destinations – all independently, of course. At the moment, Waymo Via is focused on autonomous vehicles for long-distance work and delivery of miles.
- Luminar Technologies produces one of LIDAR's most advanced car vision products in the world. Fiber laser are used to provide an AI system for self-driving cars to take an in-depth look at the world around them.

AI in Finance

- AI and the financial industry is a game made in heaven. The financial sector relies on accuracy, real-time reporting and the continuation of high-level decision-making. These ai automated advisors use scan the market data and predict the best stock based on your preferences.

- Robo-advisor technology that uses AI for building a personalized profile based on his or her financial plans. automation to harvest tax losses, trade, trade and portfolio management, all operations that once required a lot of elbow fuel and know the way.
- AlphaSense has created AI-enabled financial search engine to help investment firms gain information The ability of the system to scan millions of data points and make possible reports based on relevant financial data saves analysts many working hours.
- NUMERAI is a hedge fund funded by AI using a learning machine used by thousands of data scientists around the world.

AI in Travel and Transportation

Artificial intelligence becomes a mega trend in the transportation and transportation industries. travel arrangements or to get home after work, AI makes it easy to get around. Many users book trips on their phones, review travel tips and research local landmarks and restaurants. AI-enabled chatbots are rapidly changing the tourism industry by helping in-person and customer-based interactions with faster response times, better booking rates and even travel recommendations.

- Google uses AI in many areas, but a specific technology in Google Maps makes our navigation easier. With AI-enabled maps, giant search technology checks traffic information and uses algorithms to determine which route you can take, either on foot or in a car, bike, bus or train
- Hopper uses AI to predict low prices for flights, hotels, cars and rental homes. Using flight and hotel history data, Hopper will also make recommendations to the user if the booking has reached a lower price point or if the user has to hold back for the price to drop.
- Hipmunk offers airline booking rates, hotels, travel and holiday rental via Airbnb. The company "Hello Hipmunk", launched in 2015, is an AI-enabled tourism assistant.

AI in Social Media

Negative intelligence can make or break the future of the industry With its ability to plan large amounts of data, image recognition, present dialogues and predict cultural change, AI is very important in an industry with billions of users. hate speech with other bad characters in real time.Here are a few examples of how some of the biggest names in the game use artificial intelligence.

- Whether chats, news, suggestions for tagging on images or ad targeting, AI is deeply embedded in the Facebook platform.
- Twitter uses artificial intelligence to monitor and classify video feeds depending on the subject. The Ai tools used to crop images to focus on the most interesting part. Twitter AI has recently been used to identify hate speech and terrorist language in tweets. In the first half of 2017, the company acquired and closed 300,000 terrorist-related accounts, 95% of which were acquired by non-personally identifiable, smart devices.

- Data structure called "activity graph" is used to collect information on how each company and its employees use the slack tool and how they communicate with each other. The information from the "work graph" can be used to train artificial intelligence models that make Slack easier to use.

AI in E-Commerce

Have you ever searched through the website only to find a picture of the exact shirt you were looking elsewhere that it would reappear. Using learning materials in e-commerce processes enables his companies to build better relationships with customers. AI-driven algorithms customize the user experience, increase sales and build lasting and loyal relationships. Here's how some great e-commerce leaders use AI to increase sales and loyalty.

- Amazon is the king of e-commerce. Amazon uses artificial intelligence in almost every step of its process. In 2014 the company introduced its AI-enabled voice assistant, Alexa. Inspired by Star Trek computers, Alexa introduced a wave of powerful, interactive interlocutors.
- Twiggle, a high-quality search engine for e-commerce sites, uses native language processing to increase search relevance and product awareness in businesses. customers in what they need.

AI in Marketing

The implementation of artificial intelligence as machine learning has a wide range of uses when it comes to successfully managing advertising campaigns is the Another reason for the budget increase. AI-enabled tools are now widely available for small and medium-sized businesses. Artificial intelligence helps marketers create in-depth customer awareness reports, create dynamic content and book influential business meetings – all without much human impact.

Here are a few examples of clever commercials:

- Amplero builds AI-enabled marketing tools for a wide range of consumer-focused industries, including financial, telecommunications and gaming communications. Amplero's expertise finds patterns in data to create dynamic audience profiles. Vendors can then use company software and machine learning skills to perform thousands of tests on a scale.
- Drift uses dialogue, machine learning and natural language processing to help businesses book multiple meetings, assist customers with product queries and make the sales cycle more efficient. Technology is very good at making time-consuming sales activities traditionally. For example, if a customer on a website uses Drift, a chatbot will appear, ask questions and add it to the campaign if it earns. Additionally, the company "Drift Assistant" uses email responses, route guidance and update contact information. Companies like Toast and Zenefits use Drift to achieve quality sales leads in minutes rather than days.

Conclusion

As the current situation requires the need for immediate delivery of solutions, the response to this emergence is greatly enhanced by various digital technologies and AI. AI was found to be more consistent and accurate than human experts in finding COVID-19 and drug discovery. We need big data sets to train AI models and legal framework and ethics of information sharing ethics before AI prioritizes testing and beyond. Several barriers to integrating AI with its full potential in the current environment are accessing and sharing clinical and epidemiological information, computer resources, disability, privacy and ethical concerns. To fulfill the full promise of AI against COVID-19, policymakers must ensure that AI systems are reliable and compliant with OECD AI Principles: must respect human rights and privacy; be transparent, expressive, firm, safe and secure; and actors involved in their development and implementation must always be responsive.

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Integration of Blockchain for IoT Security for Prevention of DNS Cache Attack

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Abstract

Blockchain, which is best known for crypto currencies, provides a fascinating option for IoT security. There are significant safeguards for information manipulation in Blockchain. It supports the locking of Internet access for object devices. It also allows the closed and detached compromised instruments used on an IoT network. As a distributed ledger mechanism, Blockchain is acting. It is coupled with IoT to enable transactions from machine to machine. It uses the group that is kept in a database of transactions. Such transactions are checked using several sources and kept in a single directory. The books were dispersed on each node. The research study examines the blockchain idea along with IoT. Paper covers several blockchain research and IoT research. There were difficulties in its application in the need and development of blockchain. In addition, the function of the IoT-based blockchain in security research is taken into account.

Keywords: *IoT, Blockchain, Security, Distributed ledger.*

Introduction

The chain of the block is more popular every day, as the distributed ledger of Bitcoin and ripple for cryptocurrency is functioning. This study focuses on the Blockchain and its pattern of work on the technological implementation of block generation. The present technique examines the avoidance of a Blockchain DNS Cache attack known as the bigger class of naming assaults. DNS Packet interceptions may take place using different methods, such as cache poisoning, man-in-the-middle attacks, and so on. Since Blockchain is safe with numerous security measures, but Blockchain has to be updated in the block generation module to prevent cache poisoning attack. This study effort is thus suggested to reduce the risk of data damage caused by various assaults. It addresses the problem of the usage of user specified port rather than preset port cache toxicity. The communication is initialized using the preset port number here. The second step is to decode the encrypted port number for communication by utilizing the user-defined port number. The usage of IP port would limit assaults when transmitting data. The article has provided a comparative examination of the current method for defeating DNS prevention.

The Blockchain Approach

A distributed ledger technology is Blockchain. It was created as an item linked to and beyond the strong interest in technology business. Blockchain technology is a method of keeping transaction records or digital interactions. This technology is intended to ensure that transactions are safe and transparent. The audit ability and efficiency are extremely resistant to outages. It reduces the odds of disrupting industry and enables creative modelling. This is an innovative technology that is always being upgraded. Strategists are now needed to pay attention to planeers to prevent the disturbing shocks and to get the best chances. You should study Blockchain's new models. Blockchain technology is said to be a distributed database used to safely record data sets quickly. It is inherently shared, meaning that the whole chain is held by no master computer, instead there are chain copies for included nodes. It is expanding and the chain is supplemented by data recordings.

In a blockchain there are two kinds of elements:

- Transactions: Transactions known as actions. Transactions the nodes in a blockchain system are produced.
- Blocks: Blocks may keep transaction records. This guarantees the proper transaction sequence.

Blockchain Benefits

This technique has many advantages. Blockchain's primary benefit is that it can be used openly. Each user has the right to see the blocks and stored transactions. Transaction records are protected by private key. It may also be set up to be used as a private blockchain where after consent nodes are added to the chain. Blockchain's technology is not centralised. There is thus no one authority providing the transaction approval. No one organisation may lay down precise restrictions on transaction acceptance. This means that it is a safe system since it is essential for participants to approve the transactions by approving a set (chosen by specified algorithm, called smart contract). That it is secure is extremely essential. The database may be extended but the existing entries cannot be modified.

Blockchain Working

A minimum number of participants will validate this transaction when a new transaction is added to the chain. To validate the transaction, use an algorithm (smart agreement). You can determine the precise number of participants to verify the transaction using Blockchain. It may be different depending on the system. It is necessary to agree on validating a transaction with the majority of the participants. A number of confirmed transactions are then added to a block that is transmitted to every node on a network. The other block is checked by the participants. Each block in succession has a particular hash of the previous block and fingerprint. Blockchains systems are protected by a shared computer system with a high Byzantine failure tolerance.

Issues in Case of Blockchain

In addition to the benefits of the Blockchain idea, there are also some shortcomings and difficulties. These are covered in this document. In Blockchain, there are certain scalability issues leading to centralization. The future of digital currency is shadowed.

- Power and time processing is significantly necessary to encrypt for all products in the blockchain-related ecosystem.
- Storage in a blockchain ecosystem is also a hurdle. Blockchain removes the requirement for both a central server and device Ids to keep transactions. The ledgers are maintained directly on nodes on the other hand. The booklet will get larger as the time passes. It is not efficient with intelligent devices. These intelligent devices are eg. sensors with very little data storage capacity.
- Man in the middle attacks, waves droppings, etc. are carried out via DNS Packet interception. A single unsigned DNS sends complete query or response. Unencrypted UDP packet makes attacking on dispersed or transit networks very easy for these attackers. DNS is both vulnerable to attacks of DoS and DDoS.

Motivation

Currently used DNS system is designed for threats such as cache toxicity, DoS and DDoS, etc. As blockchain technology provides the integrity of files saved in the data basis, it may be utilized by Blockchain to protect DNS systems. The application of well-formed transactions may be achieved. Authentication and auditing provided by the blockchain, is also utilized to this end. The amount associated with risks to data integrity may decrease. Blockchain-based applications also have difficulties, such as bitcoin mining, since expensive graphic cards and high-speed Internet demand have become a big problem. In order to mine cryptic currencies like Bitcoin, Ethereum, Litecoin, Bitcoin Cash or Dogecoin, the Hash algorithm has to be executed.

The problem with Blockchain technology based cryptocurrency mining is as follows:

1. In some countries, the cryptocurrency is not verified.
2. Crypto currency is prohibited in certain nations.
3. The high-speed internet for the mining of cryptocurrency is required.
4. The purchase and selling of crypto money is lacking in a reputable exchange.
5. Crypt money mining takes a great deal of electricity.

The purpose here is to resolve Blockchain's current problems and to utilise them as a safe DNS solution.

The research goals are as follows:

1. To examine Blockchain's work method.
2. The crypto currencies are based on and popular with Blockchain technology.
3. Data integrity problems in connection with the DNS assault in Blockchain Security to examine the difficulties.

4. To build the suggested Blockchain DNS-induced security model to make this system genuine with port encryption to get country approval.

Literature Review

In 2017, Huh, S. et al. [1] desired to control IoT devices with the help of blockchain technology. In 2019, Dorri et al. [2] introduced LSB for the very first time. The basic reason behind its introduction is IoT safety and its insignificance. A multi stage LSB was introduced by them. It becomes best in the favor of IoT needs. In 2017, Dorri et al. [3] studied smart home thematically on behalf of blockchain by considering IoT safety and personal data. Safety of Internet of Things (IoT) personal information is still become a matter of great concern, especially, because of its network widely dispersed class and extensiveness. In 2018, Minoli et al. [4] introduced working of blockchain for the very first time in support of IoT safety. When Internet of Things (IoT) was put in to operation they produce magnified cutting face in which comprehensive safety attenuation becomes the necessary requirement. End to end safety assistance is required mainly for mission-critical and down-stream business demands. Different type of safety methods and strategies are already considered and implemented. TO make IoT directed ddemands safe working of Blockchain contributed in a significant way. In 2018, Khan et al. [5] reviewd blockchain solutions in addition to unresolved question for the sake of IoT safety. Here, in support of IoT most important safety concerns were presented and surveyed by them. On the grounds of multi layer IoT arrangement and networking protocols most important safety concerns were reviewed and categorized by them.

In 2010, L. Atzori et al. [6] carried out an assessment on IoT. Here, IoT was addressed by the author. In 2016, M. Rouse et al. [7] carried out an assessment on IoT. IoT exists in the form of system in which data processing unit, automatic and electronic devices, human are beings and many other things are linked together. In 2017, A.A. Khan et al. [8] mainly shown their concern in the direction of demands, aarrangement, tasks, and upcoming research area of those internet of things which are formed on the basis of knowing method of communication. Here, a summary on such type of IoT was presented by them. In addition to this, practical implementation of such type of IoT system was also highlighted by them. In 2016, F. Akhtar et al. [9] described white space in the form of defined outlook. Its contribution in the exploitation of possible scope is also described. In general terms, by studying the already provided specification of white space authors wants to explain its exact meaning and the manner in which it becomes different from others. In 2017, F.A. Alaba et al. [10] carried out an assessment in relation to Internet of things safety. In this work, probable safety threats in the IoT are also considered. After addressing the situation of internet of things safety they assessed propable attacks. In addition to research related to genuine concerns, problems related to safety implementation in internet of things safety are also addressed. In 2015, J. Granjal et al. [11] carried out an assessment in relation to already present protocols and genuine research problems. In 2011, R. Roman et al. [12] researched key management systems in support of sensor networks within the limits of Internet of things. Here, in addition to present day system

like public key cryptography, the scope of already submitted keys in support of sensor nodes within the limits of Internet of things are analyzed by us.

In 2008, J. Granjal et al. [13] explained "Why IPSec becomes a right choice in support of those sensor networks which work in the absence of wires". For the achievement of acceptable safety in WSNs, the issues which remain unresolved must be resolved. In 2013, S. Cirani et al. [14] put an algorithm in written form. The basic intention behind the introduction of this algorithm is to enforce safety device in those Internet of things which are established on the basis of Internet protocol. In 2014, I. Butun et al. [15] surveyed IDS in WSN. It exists in the form of publication, in which a latest ID system was surveyed. This system was introduced in support of WSNs. Primarily; comprehensive data related to ID systems is offered. In 2013, A. Abduvaliyev et al. [16] carried out an assessment in relation to those areas of intrusion detection systems which are important in wireless sensor networks.

In 2014, R. Mitchell et al. [17] reviewed and surveyed ID system within the demands of wireless network. They organize present day system of wireless ID methods on the basis of target wireless network, identification method, accumulation method, reliable design and examination method. In 2015, S. Yi et al. [18] carried out an assessment in relation to those safety and privacy concerns which are associated fog the company of fog computing. Fog computing emerges in the form of computing structure which is highly effective and expands cloud computing to the edge of networks. In 2015, Y. Wang et al. [19] take in to consideration the problems and difficulties in safety and forensics Fog computing. Here, the encouraging strong points of Fog Computing were extensively reviewed in the company of thier unique characteristics.Different situation in the middle of Fog and Cloud Computing was also compared. In 2015, S. Sicari et al. [20] focused on Security, privacy and trust in internet of things. It is world in which the contribution of satisfied safety and privacy demands becomes significant. These types of requirements include information privacy and proff, restricted permission inside the network of Internet nof things, secrecy and realibility in the middle of comusers and things, and the implementation of safety and secrecy strategies.

In 2016, R. Roman et al. [21] surveyed and analyzed safety threats and difficulties in Mobile edge computing. The basic intention behind this work is to study those safety threats, difficulties, and mechanisms which are natural in every part of edge models in a comprehensive manner. In 2009, V. Oleshchuk et al. [22] introduced a technology of internet of things. It is a technology which preserves the privacy. Here, various methods are considered by them for providing technological safety to consumers' confidentiality in the world of internet of things. In 2017, J. Zhou et al. [23] studied difficulties in the direction of safety and secrecy in support of those Internets of things which are established on the basis of cloud. In 2014, Z.K. Zhang et al. [24] takes in to consideration the current challenges and research possibilities in support of Internet of things safety.

Following table is presenting the objectives and limitations of existing researches.

Citation	Author/Year	Title	Tools and Technology	Objective	Limitation of Research
[1]	Huh, S/2017	Using a blockchain platform to manage IoT devices	Blockchain	To manage the device in IoT environment from external attacks by making use of blockchain	The technical feasibility of research is less.
[2]	Dorri/2019	LSB: A Scalable and Lightweight Blockchain for IoT Security and Anonymity	Blockchain	To proposed scalable security solution of IoT using Blockchain	The performance of system is slow
[3]	Dorri, A./2017	A smart house case study using blockchain for IoT security and privacy	Blockchain	Proposing blockchain based protection mechanism for IoT environment	The research did just review, not technical work has been made
[4]	Minoli, D/2018	Blockchain security methods for IoT	Blockchain	Enhancement of security of Internet of Things	The system failed to manage DNS cache attack
[5]	Khan, M. A./ 2018	Review of IoT security, blockchain solutions, and open problems	Blockchain	To review the challenges and solution during IoT security	Research is not providing any practical solution
[10]	F.A. Alaba/2017	A poll on the security of the Internet of Things	IoT	Making survey to understand the various influencing factors for security	Research is unable to provide solution in case of man in middle and IDS attack

Problem Statment

There have been several researches in field of blockchain and IoT security. These researches have considered security against man in middle, brute force attack. Some researchers have also considered Intrusion detection system. But there non of them is providing complete

Features	LSB: A Lightweight Scalable Blockchain for IoT security and anonymity [2]	Blockchain mechanisms for IoT security[4]	Enforcing security mechanisms in the IP-based internet of things [14]	A survey of intrusion detection systems in wireless sensor networks [15]	Security and privacy for cloud-based IoT [23]	Proposed work
Blockchain	Yes	Yes	No	No	No	Yes
IOT	Yes	Yes	Yes	No	Yes	Yes

Cloud	No	No	No	No	Yes	Yes
Security	Yes	Yes	Yes	Yes	Yes	Yes
WSN	No	No	No	Yes	No	No
IDS Security	No	No	No	Yes	No	Yes
Man in middle	Yes	Yes	Yes	No	Yes	Yes
Brute force attack	Yes	Yes	Yes	No	Yes	Yes
DNS Cache	No	No	No	No	No	Yes
User defined port	No	No	No	No	No	Yes

solution for security. Moreover security mechanism used in those researches has degraded the performance. There is need of research that should be capable to provide security for DNS cache attack. Moreover there need to integrate a system that should be capable to improve the performance in case blockchain based security mechanism.

Objective of Research

The objectives of research are as follow:

1. Considering the existing security mechanism and considering limitation of existing researches in field of blockchain.
2. Focusing on the security and performance issue in existing blockchain based research.
3. Building a secure and high performance model in order to manage performance issues and security issues that were faced in previous researches.
4. Simulating the comparison chart considering Time consumption, Error rate, Packet size, Attack from Man-In-The-Middle, Brute force attack, Denial-of-Service, Traffic Hijacking, Access violation, Application level attack, Attack by malicious insider, Attack on cloud services

Proposed Work

The suggested model is carried out with the purpose of increasing the safety of the work proposed. After handshaking the DNS client, the port number will be transmitted to DNS
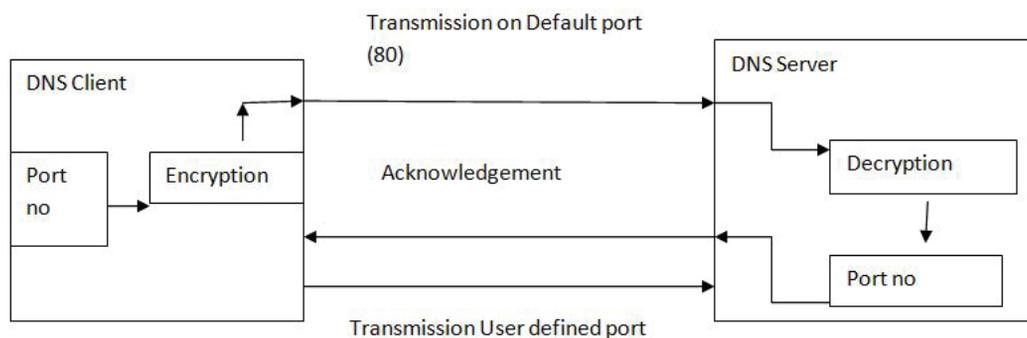
Figure 1: Block Diagram of DNS Security by Integrating Crypted Port Mechanism

Servers located on Blockchain. The port number and IP address is necessary for data transmission, too. In http protocol, the standard port number is 80. In order to provide safe data transfer, this work permits client sending the encrypted user specified port number. First, the DNS server is supplied through the default port with the client's data. This is a user-defined port number that is encrypted. On both the DNS client and the DNS server side the copy of the specified port number is accessible. The server decipheres the data received and obtains the specified number of the port utilized. Then the DNS server will start real communication using the user-defined port. The client transmits users with specified third-party port after receiving a DNS server acknowledgement.

Port number is encrypted individually to prevent the use of a multiplicative reverse method in middle attack. The reverse multiplier method provides security on the port number specified. Resolving the problem of cache poisining is major objective of research.
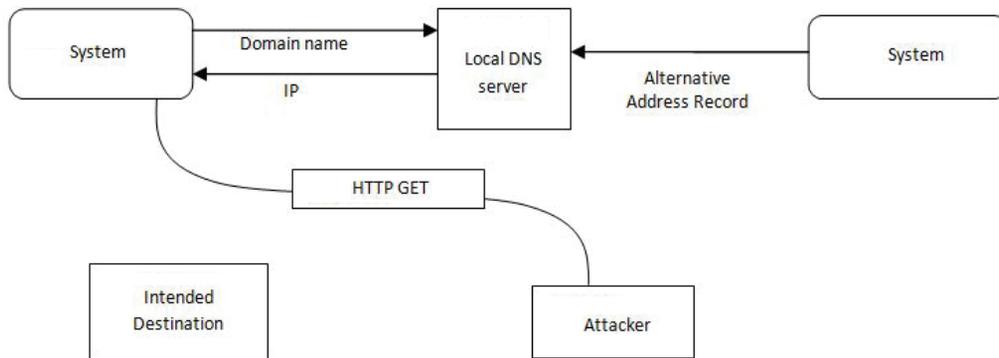
Figure 2: Block Traditional DNS Attack

DNS cache attack on the blockchain is threatened. Figure 3 shows a DNS cache poisoning attack. Example 3 shows. This image shows that a malevolent individual (IP 192.168.3.300) breaks the channel of communication between the client whose IP is 192.168.1.100 and a server machine.

This computer is part of the www.estores.com website. The server's IP address is 192.168.2.200. As it can be seen, the vulnerability of the internet protocol causes the DNS attack in the traditional system. The data may be accessed since it can penetrate various systems.
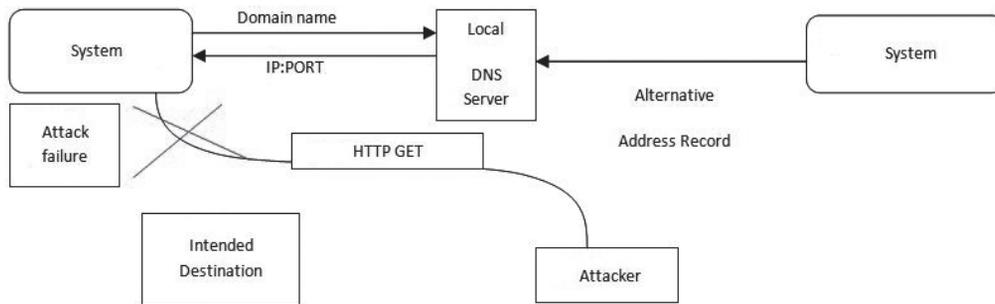
Figure 3: Block Diagram of Security from DNS Cache Poisoning Attack

Factors Influencing the Security

Proposed work has considered different factors that are influencing the security

1. **Size of packet:** The size of content to be transferred over network influences the security. If the size of content is large then it remains more time on network and probabilities of packet damaging get increased. Proposed work has reduced the size of packet using compression mechanism during transmission.
2. **Protocol:** The protocol that is acting as group of rule during data transmission is also playing significant role in security. Because the limitation of protocols might be responsible for security breach. Moreover protocol decides the reliability of transmission. Research has considered TCP protocol that is more reliable than UDP protocol.
3. **Port:** There are 1024 reserved port on network. Thus if transmission takes place on reserved port then the chances of external attack get increased. Research has made use of predefined protocol in first cycle and user defined protocol in second cycle.
4. **Session time:** If the during of session is large and port remains open for long time then the chances of attack increases. The proposed work has made provision to close session immediately after data transmission.

Proposed Model

Proposed model has provided more security and reliability as compare to previous research models. Proposed work is reducing size of packet by making use of data compression mechanism before transmission of data to reduce probability of external attack.

Research is using TCP protocol for communication which is considered more reliable as compare to UDP protocol. Proposed work has used predefined port number in first cycle and user defined port number in second cycle after acknowledgement to minimize risk of DNS cache poisoning attack. The proposed work has made provision to close session immediately after data transmission to reduce chances of man in middle attack.

Process Flow of Proposed Work

The proposed work has focused on the security of data using encryption mechanisms and compression of data using compression mechanisms. The digital content would be first compressed and then encrypted before transmission from server to client. MATLAB (Matrix Lab) is used for simulation. As shown in the process flow, the digital content has been considered as D. After compression the content is converted to CD. Then encryption mechanism is applied. After applying encryption data CDE is transferred to receiving client. Here contents are decrypted and decompressed to restore digital contents.

The process flow of research consists of the following steps:

1. Considering the existing researches related to blockchain implementation and investigating their limitation.
2. Proposing compression mechanism to reduce the size of digital contents in block.

3. Proposing a security mechanism to encrypt the compressed digital contents of block.
4. Establishing the client-server environment to simulate the content using the proposed mechanism.
5. Performing comparative analysis of size, performance, and security in case of the traditional and proposed security system.

On receiving end, contents would be decompressed and decrypted. This system would be capable to resolve issues related to network bandwidth, congestion issues. Moreover, data would be secure from external attacks.
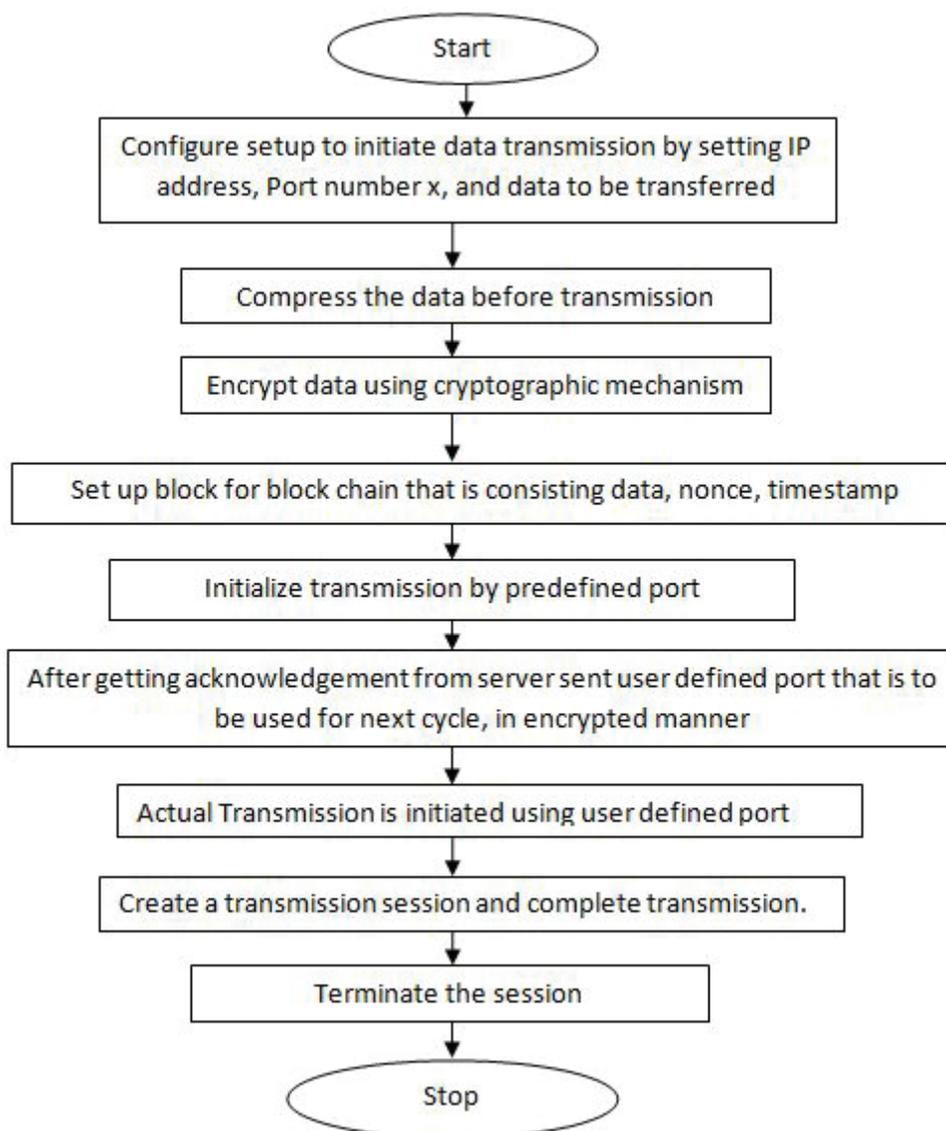
Figure 4: Flow Chart of Proposed Work

Internal Working of Proposed Work

This section presents how the proposed work compresses the large-sized packet and how the security to the data is provided by applying the XOR-based encryption mechanism.
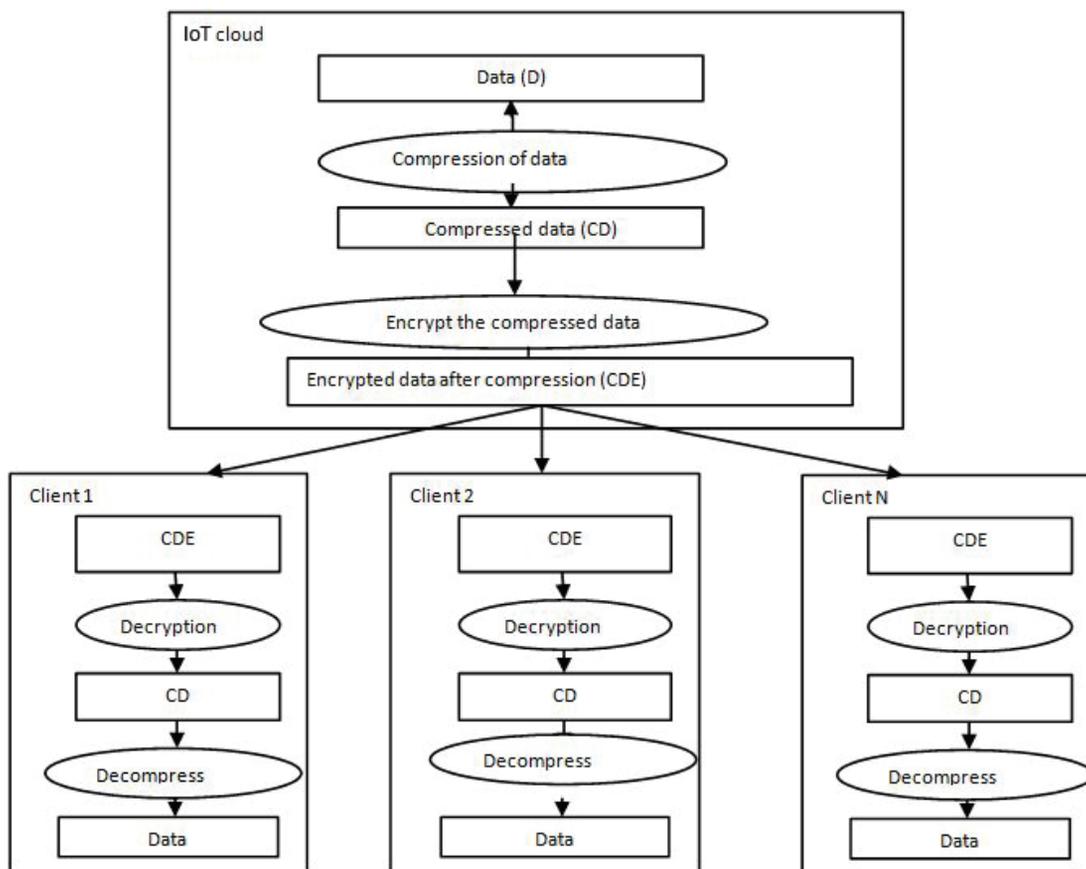
Figure 5: Process Flow of Proposed Work

Data Compression using Replacement Mechanism

The large size content took a lot of time to travel over the network. Moreover, there always remain chances of packet dropping and hijacking. Thus, in the proposed work the content has been compressed before sending. There should be less data loss during compression so the proposed work has used a replacement mechanism to reduce the size of data. The large size strings are replaced with small-sized strings that are mentioned in the replacement table. The replacement table contains the strings with their corresponding small-sized string. The string in the data packet is replaced with their corresponding string only if that string is available in the replacement table.

For example, if the data packet is consisting of a "Computer" string and the small string in the replacement table is "_c1_" corresponding to "computer" then the "Computer" word in

the data packet would be replaced by "_c1_". In this way, all strings in the data packet would be replaced. As a result, the size of the data packet gets reduced. Moreover, this could be termed as first-level encryption where data is not the same as original data.

Technical Implementation

The recommended approach for improving security and compressing the receive individualized of digital products is applied here. It has been established in this work a networked application Net beans built Integrated Development Environment. The design perspective of a server-side application shown below:

This includes the port number, file location, and token that decode data.

Figure 6: Design View of Receiver Application

Sender Implementation

This is the design perspective for a file consumer to retrieve and send data. The port, file path, Network layer address of the server, and data encoding token are all given here.

Figure 7: On the Sender Side, Write Code to Create UPLOAD

Implementation to Get Data Client Side

Running Application

We have to upload nn text from sender to reciever. In below here is nn.txt file.
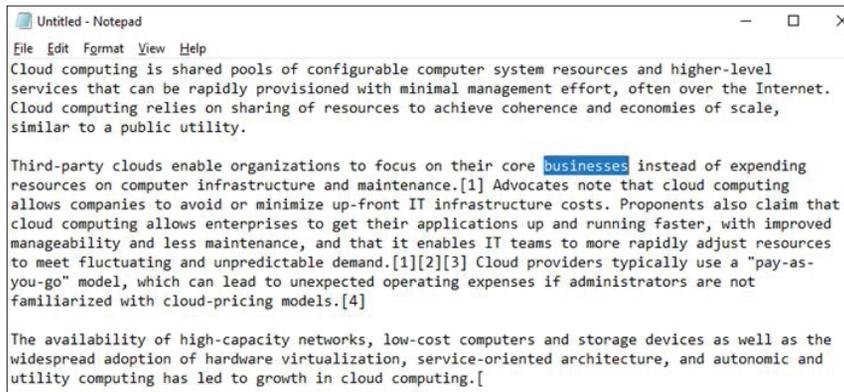
Figure 8: Applications

It is critical to determine whether the port number is greater than 1023 when the server side code is executed. In addition, the file location and approval token are given.

Figure 9: Running Applications

During the implementation of the client-side module, it is necessary to specify the port number 6666, the file location, and the authorisation of the token. In this picture, IP addresses are specified in order to place the destination for a file fer transmission.

Figure 10: Applications of File Sender

Result and Discussion

During the development of the network application, the sender and receiver module has been developed in the "Netbean IDE 6.1" environment. On receiver end port no, file path and token to decode data are stated. The XOR mechanism has been used to encrypt the data. The user-defined port has been taken to transmit data securely. Because ports no 1 to 1023 are already reserved for existing protocols. The file name is set in the file path name text box to store the received content in a text file. On the receiver end, the user would specify the port number, file name, and token to apply XOR operation on incoming data. Then the user clicks on enable upload option to enable the receiver. During sender implementation, the module works to transfer data. Here port, the path of the file, Internet protocol address of the server, and token to encode code is set. Here the sender would set the port number that should be the same as that of the client-side port. Then user specifies the file path and name that is to be sent. The IP address of the receiver is set in the IP address box. In the token box, the sender would send the code to encrypt data using the XOR mechanism. During the implementation of the receiver, the path of the file, port number, and decoding code is set. A text file would be transmitted from sender to receiver. The large string content of this file would be replaced by small words and data would be encoded by applying the XOR application. During the implementation of server-side code, it is a must that port no should be more than 1023. During the execution of the sender module, the port must be user-defined. Moreover, it must be the same as the port number used on the receiver side. To compress the size of packets to be transferred over the network, the data compressing mechanism has been used. Here the large-sized contents are replaced with small-sized contents.

Platform Used to Implement the Proposed Model

The sender and receiver module has been developed on Netbean platform using Java as programming tool. During simulation, the time consumption in the case of previous work and the case of proposed work is noted according to a different number of packets. Simulation work has been performed in a MATLAB environment.

Simulation for Time/Error/Packet Size

Considering the transmission of a data packet in the sender and receiver module, the time taken during transmission of the data packet is considered.

Time Consumption

Time taken has been simulated in the case of the proposed system in comparison to previous RSA; advanced RSA and DNA cryptography-based research are shown in Figure 11. Proposed work is making use of exclusive order during encryption and compressed data has been encrypted. But the previous researches made of use RSA, DNA mechanism that took more time to encrypt data. Moreover previous researches have not compressed the data before

transmission. Thus the time consumption is evidently less as compared to others due to the smaller size of the data packets.
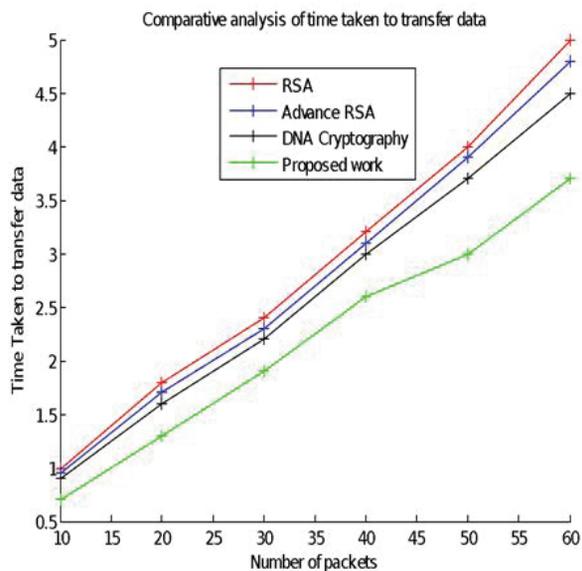

Figure 11: Comparison of Time Taken during Transmission RSA, Advance RSA, and DNA Cryptography with Proposed Work

Error Rate

There remain chances of errors during data transmission. But if the packet size is reduced and packet remains for less time on network than the probability of error is minimized. There remain less chances of error because the size string is reduced using replacement mechanism.
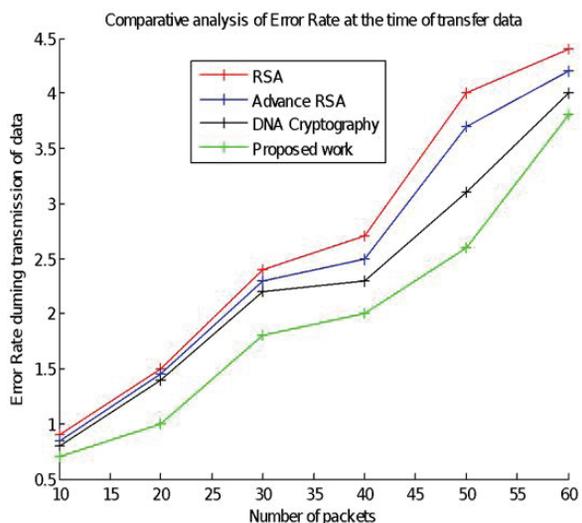
Figure 12: Comparison of Error Rates for RSA, Advance RSA, and DNA Cryptography with Proposed Work

But RSA and DNA cryptography [12,13,14] mechanism used in previous research have not reduced the size of packets. Thus, the present research can minimize the error rate. Figure 12 shows a comparative analysis of the error rate for previous RSA, Advance RSA, DNA cryptography, and proposed work.

Packet Size

Replacement mechanism used in proposed work, has reduced the content length thus it could be said that size of packet takes less space. So, present research is allowing smaller data packets as compare to previous researches. Previous research that made use of RSA and DNA [12,13,14] cryptography did not compressed data. Comparative analysis of packet size in case RSA, Advance RSA, and DNA cryptography has been made with the proposed model.
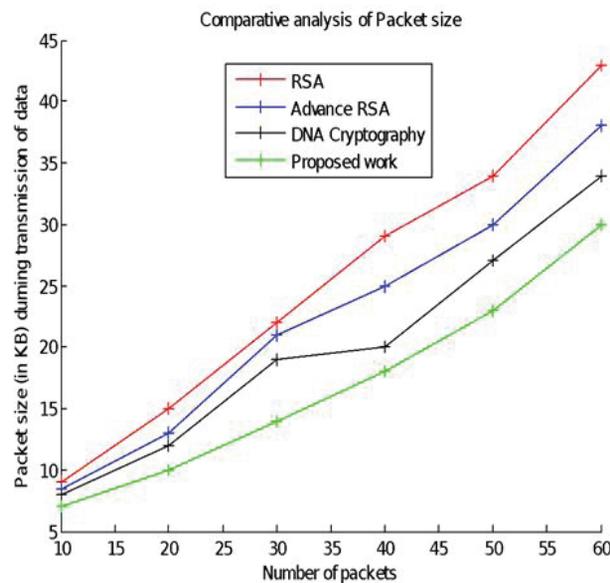
Figure 13: Comparison of Packet Size for RSA, Advance RSA, and
DNA Cryptography with Proposed Work

Matlab Simulation for Comparative Analysis of Security

This section presents the impact of the proposed work on security. In case of the proposed work, the number of packets affected is less as the number of attacks increases. From previous researches, it has been found that DNA cryptography [12] is better as compare to RSA [13] and advanced RSA [14]. But proposed work is better than DNA cryptography. From the following figures, it is concluded that the affected packets are less in the case of proposed work as compared to RSA and DNA-based cryptography approaches.

Man-in-the-Middle

Its impact on the packet in the case of RSA, Advance RSA, and DNA cryptography and proposed work in case of this attack are shown in Figure 14.
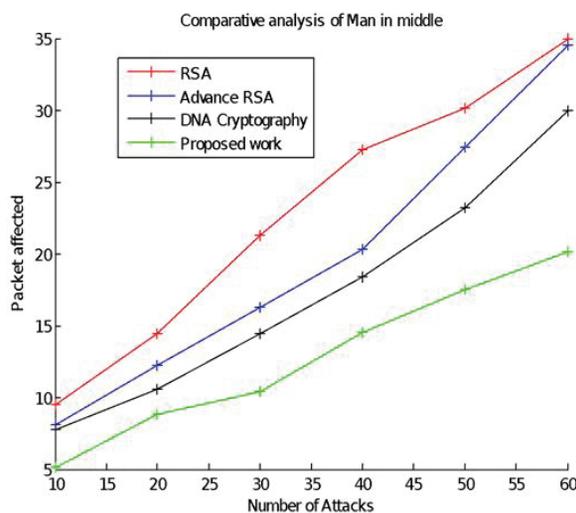
Figure 14: Comparative Analysis in Case of Attack Man-in-the-Middle

Brute Force Attack

A brute force attack involves guessing login information via trial and error. Encryption keys and a hidden web page are also used. Comparative analysis of this attack is shown below.
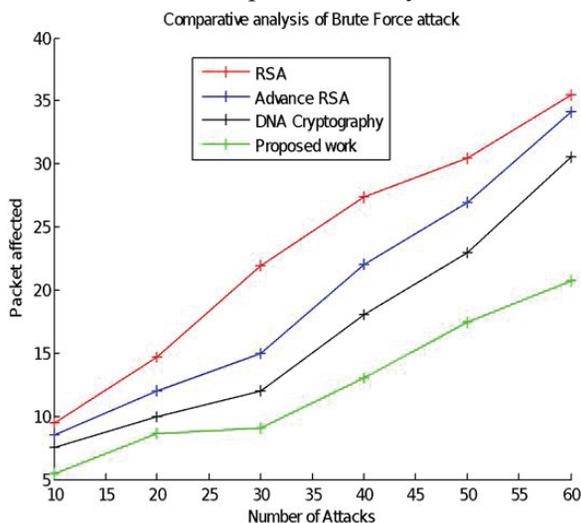

Figure 15: Comparative Analysis in Case of Brute force Attack

Denial-of-Service

A denial-of-service (DoS) attack is a kind of cyber-attack that attempts to prevent people from accessing a computer or network resource. Due to reduced size of packet and less time taken during transmission over network the probability of denial of service get reduced. Thus the impact of denial of service is less in case of proposed work. The following figure is presenting a comparative analysis of Denial-of-Service.
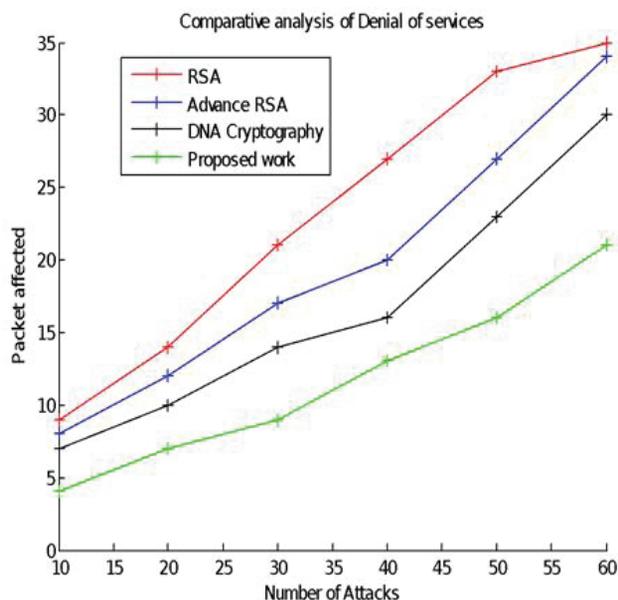
Figure 16: Comparative analysis in case of Denial-of-Service

DNS Cache Poisoning Attack

Use of exclusive or after compression of data and user defined port number has reduced the chances of DNS Cache Poisoning Attack. Figure 17 presents the comparative analysis of the attack on cloud service in the case of RSA, Advance RSA, DNA cryptography, and proposed work.
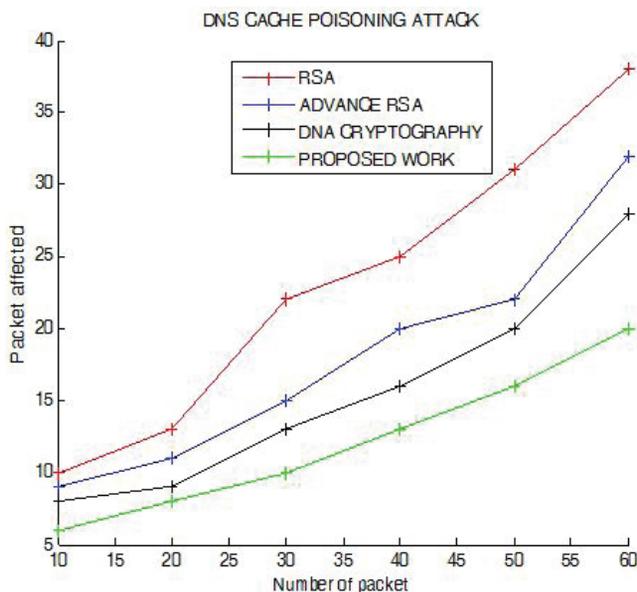
Figure 17: DNS Cache Poisoning Attack

Conclusion

As it can be seen, the vulnerability of the internet protocol causes the several types of attack in the traditional system. The preceding simulations show that, compared to conventional work, the suggested work has decreased the likelihood of assault. Proposed work was determined to be 3 to 4 safer than the conventional safety system. An attacker may obtain the data as it can interfere from other systems. The notion of user-defined port is used to limit the DNS cache. The usage of port with IP address integration enables the channel to be secured. In order to execute an attack, the attackers must know the IP address and port number. The suggested encrypted port number method to communicate may improve transmission security. The method enables the security of the transaction based on Blockchain to be increased. Research examined Blockchain cache poisoning attacks which are called a kind of attack when corrupted material is introduced into DNS name server cache database. The work is effective in reducing the likelihood of data corruption. Blockchain is possible to prevent attacks of cache poisoning by the suggested model IP and port number. By inserting user-defined port number, the block creation process is changed. Using a specified port number would successfully limit Man in middle, DNS, Brute force attackers in IoT.

Scope of Research

Blockchain has offered intriguing solution in case of security of IoT. It consists of strong protections to prevent the tampering of information. It is capable to provide access level security for Internet of Things devices. It has been observed that blockchain mechanism has compromised instruments that are frequently used in an IoT network. Block could be integrated to IoT in order to make machine-to-machine transactions possible. Several application of blockchain such as healthcare, cryptocurrency, network security performs efficiently on IoT platform. Researches in field of blockchain and IoT are supposed to play significant role in enhancement of IoT security.

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