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Chief Editor
Ms. Reena Pillai
START UP INDIA, MAKE IN INDIA, SKILL INDIA, JAN DHAN YOJANA, SWAACH BHARAT ABHIYAN and many more welfare programs initiated, launched and implemented by our visionary honourable Prime Minister of India Narendra Modi are the dream projects to boost India’s economy taking the country to the zenith of progress and prosperity in all walks of life. On the 15th August 2020, delivering his 6th Independence Day speech, Hon. Prime Minister Modi expressed his confidence and sense of commitment that India would be a $5 trillion economy in the year 2024. This vision of our beloved Prime Minister is commendable as it generates sanguine feelings in all the citizens to see India become the third largest economy in the globalized world. It will make India a global economic powerhouse moving from the 7th to the 3rd position in terms of current dollar exchange rate. In the year 2014, India was $1.7 trillion economy and in 2019 it emerged a $2.7 trillion economy i.e. one trillion US dollars added in the last five years.

Despite the temporary set back in global economy due to Covid-19, assuming the current growth rate of 6%, India is poised to become a $5 trillion economy by 2025-2028. The service economy will play a major role in this gigantic task as the country encompasses a sixth of humanity. Rapid changes both within and outside India, in politics and the economy, in the technologies and the environment, in demography and aspirations, all portend a future that will be very different from the past.
It is with immense pleasure and sense of pride that I wish to give in your hands this scholarly research journal that includes insights of various research scholars addressing the various facets of the subject of the National Seminar on “From Developing to Developed: India’s Aspirations to A $5 Trillion Economy” organised by our college on the 7th March 2020.

I take this opportunity to appreciate and thank on record the trustworthy members of the management, erudite teaching faculty, committed non-teaching staff, young and self-motivated students and well-wishers at Model College, Dombivali who took the initiative to visualize and realize the much coveted dreams of our idealistic Hon. Prime Minister Narendra Modi. I unreservedly appreciate the scholarly participants in the seminar who pondered on various issues, challenges and the initiatives taken up by the Hon. Prime Minister for India’s aspiration to become a $ 5 trillion economy. I am immensely delighted to put in the readers’ hands this thought-provoking and galvanizing national journal with my heartfelt good wishes.

Sincerely Yours,

P.V.Sadasivan Nair
Chairman,
Keralaeya Samajam (Regd) Dombivli.
The academic year 2019-20 was a milestone in the history of Keraleeya Samajam (Regd.) Dombivli’s Model College as UGC, New Delhi and University of Mumbai conferred Autonomous Status to the College.

Our distinction lies in the pursuit of high academic attainment through encouragement, praise and motivation. Our institution enhances the students’ emotional growth along with intellectual excellence. We all strive for excellence by preparing students for earning beyond their College years and assisting them in becoming lifelong learners.

While studying at Model College (Autonomous) students are groomed to be confident, articulate and enlightened citizens ready to step into a competitive world with honour, dignity and rectitude.

We all stakeholders of our institution, strongly believe that education is the perennial collaborative effort that involves professional management, dedicated teachers, committed non-teaching staff and motivated students.

The vision that we work with is to offer cohesive teaching techniques clubbed with technology to ensure holistic growth of a student because success comes to those who work hard and stays with those who don’t rest on the laurels of the past.

Our College provides excellent infrastructural facilities. Cultural wing, Sports wing and N.S.S. are the pillars of our College. The placement cell of our College with its dedicated
staff provides appreciable placement assistance along with arrangement of adequate in-
house training which helps students to excel in their on and off campus interviews.
We try to build self-confidence and self-esteem of the students so that they are well prepared
to face the challenges and plunge into the ocean of opportunities that are in front of them.
It gives me immense pleasure and pride to acknowledge the contribution of all the members
of teaching and non-teaching staff to various endeavors undertaken by the College. Together
we plan to reach richer and higher landmarks in future.
We always strive hard for the development of Research activities as knowledge constantly
needs to be updated. Today’s knowledge is tomorrow’s ignorance. India has witnessed a
series of reforms in economic and social sectors since the last general elections.
The winds of reforms have changed the fundamentals of economy. The Government
appeared to be keen on bringing forward the social reforms. Government has taken note of
the fact that, world is rapidly growing into a global village and globalization is inevitable.
The one day seminar has offered an opportunity to the participants express their views on
major reforms that have transformed the nation in the last few years.
Model College (Autonomous) Dombivli managed by Keraleeya Samajam (Regd.) Dombivli
epitomizes high standards of higher education. I am sure that this conference will provide
the right platform to the researchers, academicians, corporate experts and students through
deliberations, discussions, presentations and academic exchanges.
On this occasion, I convey my best wishes to the seminar.

Dr. Vinay G. Bhole,
Principal,
Keraleeya Samajam (Regd.), Dombivli’s
Model College (Autonomous),
Dombivli (East).
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A STUDY ON ROLE OF E-COMMERCE APPLICATIONS IN RE-INVENTING

THE LEARNING ENVIRONMENT

Aasha Pani Malar M. Nadar,
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Model College, Dombivli (East)

Abstract:
There has been a tremendous development in e-commerce sector. Education has also adopted the e-commerce platform to diversify its reach and move out from classroom learning to pocket learning. This has reduced the boundaries and included pupil of any age and from anywhere to get the benefits of the e-learning. Use of android phones have changed the tide and many apps are launched for helping the learners to cope up with their education. The study is based on apps developed for facilitating e-learning and its contribution toward the growth of the nation. Certain apps focus on added features for school level studies and covers various boards and some apps are for providing further education with tie ups from various Universities. The e-commerce platform is not only changing the learning environment but also is a source of income leading to tremendous contribution to the national income.

Key Words: e-learning, e-commerce, education, applications, income

Introduction:
E-commerce is the ‘thing’ in today’s commercial scenario. Using internet for connectivity and conducting business online, reaching out to customers worldwide has redefined the boundaries of conducting business. It has given a huge platform for start-ups which has innovative means of bringing a solution to problems with optimum results by using limited resources. Many sectors are now turning to tap the advantage of e-commerce into their systems and enhance their level of reach and profitability. One such sector which is using the concept of e-commerce is education, which has enhanced its learning process via linking itself with technology.

E-learning is termed as a network enabled transfer of skills and knowledge, where the delivery of education is made to a large number of recipients at the same or different time as per the availability of learners. This has become possible due to introduction of computers, android phones and internet, thereby giving opportunity to open up new avenues and share content worldwide. It has enabled the shift from classroom learning to pocket learning.

Initially, it had it fears in the mind of masses due to lack of human involvement in the learning process. But gradually this notion is ruled out due to the improvement and advancement of technology. Many educationists are now using e-commerce platforms for providing e-learning contents across the globe and sharing more comprehensive knowledge to the learners at a nominal charge.

Need for the study:
The Indian education system has been vibrant in preparing young minds for the future growth and development of the country. Gradually e-commerce and e-learning are getting importance and it is changing the tides in the
economy by way of increasing learning opportunities and income generation. It’s the need of the hour to focus on the contribution of e-learning methods to the national income of the economy

**Objectives of the study:**
To know and understand the role of E-Commerce Applications in re-inventing the learning environment.

**Review of literature:**
Dr. Rajasekar and Sweta Agarwal (2016), investigated the impact of E-commerce in India’s commerce. They found out that the growth of E-commerce is low as compared to USA or France but it is growing at an unprecedented rate adding around 6 million users every month. There is explosive growth of smart phone users, soon to be second largest smart phone users base.

Mitra Abhijit (2013) states, that E-commerce has unleashed another revolution by changing the way of commerce activities. It will open new avenues for larger as well as smaller organisations and the government has to devise a legal framework for these transactions as it will optimise the trade horizons.

**Research Methodology:**
It is an exploratory research and the data used are from secondary sources from research reports, websites, articles and online journals.

**Limitations of the study:**
1. The research study has limitation of time.
2. The Information collected is purely based on secondary data.

**Scope of E-learning:**
E-learning has made its impact in the corporate sectors, especially in areas of training programs conducted by MNC’s. Employees across the globe acquire important skills through training provided by professionals online. The government has enabled the concept of e-learning in various avenues of its operation. It provides training to its employees and has implemented techno-savvy services in most of its operations.

Schools, colleges and even universities have opened up the scope of teaching learning process. Many online additional courses are offered to the students and faculties at a nominal charge. Many apps are developed targeting the syllabus followed in schools and colleges. A descriptive version of the content is provided for making the concepts simple and understandable in an easy way. The usage of apps for e-learning is becoming popular with today’s generation.

Students and parents have become a heavy market for these educational apps.

**Analysis of educational apps in India:**
As people are getting technology oriented, almost everyone has a smart phone. In India every two out of three people have smart phone and Android is the most used OS in India. It offers a variety of apps which enables learning at any point of time.

**Contribution to the National Income:**
According to a report published by NASSCOM and PwC, India’s E-commerce industry is expected to contribute 4% of GDP by 2022.

The National report on E-commerce Development in India claims that this industry was worth ₹ 351 billion in
2011 and ₹ 1257 Billion in 2015, indicating a growth of almost 37%. The future prospect of E-commerce sector’s contribution to the income of the country is tremendous.

**Functions of an educational app**

a. **Learn:**
   The apps have redefined the learning process through various methods of providing video lectures, direct reading material as well as online discussions.

b. **Interact:**
   It has provided for dynamic interactions as per the availability of the learner and the provider.

c. **Engage:**
   It has engaged the learners with its dynamic content and ways of delivering the content by providing mock tests, quizzes, self-assessment and discussions.

d. **Growth and Development:**
   The apps have given growth and development in the education sector, as it provides freedom for the learner to choose his area of interest as well as the teachers with a source of income.

e. **Skill development:**
   E-learning has facilitated the development of skills of the pupil with enhanced explanation of the content.

f. **Human capital development:**
   By crossing the boundaries these apps provide course which has global acceptance and enables the pupils to get knowledge and skills which are globally competent. Thus, they result in human capital enhancement and get at par with industry requirement.

**Educational apps business in India**

1. **Meritnation**
   It is one of India’s largest online education platform which covers 9 countries with 8.2 million students ranging from KG to 12th. It covers various courses from CBSE and ICSE and state boards of Maharashtra, Tamilnadu, Kerala and Karnataka as well as various competitive exams. It has a business of Value of ₹50 crores and reported a revenue of ₹ 21.59 crores in 2015.
   Various services are provided to the learners such as online mock tests, dashboard feed, provision of sample tests, revision etc. through this app. It has blended the learning and teaching environment at school level and has contributed towards employment and improving the skill sets of students through versatile approach to education.

2. **BYJU’S – The Learning App**
   The app has over 35 million registered users and 2.4 million paid subscribers in 2018. It provides video lessons for learners with special modules of ICSE and CBSE, sample papers, mock tests and competitive examinations. It also provides personal mentors for learners who are preparing for competitive exams. This app has won many awards such as CNBC TV18 Crisil Emerging India Award for education, Deloitte technology Fast 50 India and fast 500 Asia Award also NDTV profit business service excellence award. It has reported a revenue of ₹490 crores in the financial year 2018.
3. Coursera: Online Courses

It is an education provider that provides access to Massive Open Online Courses (MOOC’s). It has partnered with 192 institutions from 43 countries and offers more than 3200 courses in 13 languages. It has around 40 million users in 2019. The estimated revenue is about $ 140 million in 2018. It provides more than thousand online courses in various fields such as computer science, data science, accounting, marketing, robotics, art and many more for degree students, business and government. It streams lecture videos online any time and enables downloading for offline viewing. Teachers can get registered and upload their contents and learners of any age can do any course of their choice without any restrictions. Some courses are offered for free and some with a nominal charge.

4. Swayam (Study Webs of Active learning for young aspiring minds):

It is an initiative by the government of India which covers from class 9 till post-graduation. It has more than 10 million users and provides more than 2000 courses. It has about 203 partnering institutes with 2748 completed courses. It provides instructions to learners in 4 quadrants namely video lecture, reading material, self-assessment and discussion. The courses are offered for free of cost to the learners, however a fee is charged for certification. There are nine co-ordinators appointed by government of India. They are AICTE, CEC, IGNOU, IIMB, NCERT, NIOS, NITTTR, NPTEL and UGC. The success of SWAYAM can be seen in its exam registrations with 915538 registrations with 654664 successful certifications.

The estimated revenues and users can be summarised in the following table:

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<th>APPS</th>
<th>Estimated Users</th>
<th>Estimated Revenue</th>
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<td>Meritnation</td>
<td>8.2 Million</td>
<td>21.59 crores (₹)</td>
</tr>
<tr>
<td>BYJU’s</td>
<td>35 Million</td>
<td>490 Crores (₹)</td>
</tr>
<tr>
<td>Coursera</td>
<td>40 Million</td>
<td>140 Million ($)</td>
</tr>
<tr>
<td>Swayam</td>
<td>12 Million</td>
<td>Not available</td>
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Conclusion

The mobile applications have re-invented the process of learning with its unique features of providing instructions anywhere and anytime. The learners are able to download the content and view it later. It is a growing market in India and is moving with technology. With many users of android phones and technology it can increase its market base. The e-learning process has also contributed to skill development which is a basic goal of the nation. Simultaneously this area is contributing towards the income generation for the country.

Recommendations:

1. This market should target towards rural areas as well.
2. The government should take up more initiatives as e-learning platform can contribute for human capital development which is the need for the nation.
3. The corporate sector should take the advantage and can use it for training purposes.
4. The educators must support this sector and widen its realms.

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7. https://swayam.gov.in/
Abstract:
Robots are used widely in industries and even homes, for ease of work. The robots or robotic arm has different number of degree of freedoms to rotate as per user’s requirement. The implemented robotic arm is controlled by human voice, to move its arm. The system is implemented using Arduino Uno microcontroller. The Bluetooth module is used for connection of the robotic arm with the mobile device from where voice commands are given. Servo motors are used to rotate the robot and BO motors are used to rotate the arm of the robot. The robot can perform many functions depending on the inputs given to it in the form of voice commands. The natural language of humans is recorded and converted into simple commands for its execution. The voice operated robot proves to be a valuable device to reduce human effort. It can be used in industrial applications with much more efficiency.

Keywords: Arduino Uno, robot, robotic arm, voice controlled, Bluetooth module.

1. INTRODUCTION
With the rapid increase in the flow of information, people are now guided to search for different markets and have entered the competition to manufacture quality products cheaply. Automation systems are required to minimize errors and produce cheap products that can be used by common man for their day to day activities. Several industries as well has adopted machines instead of human labour as strength of people are not enough to carry certain tasks. These machines, which are operated with the need for human assistance in advance, have been made to operate spontaneously without the need of human power with the progress of technology. One of the most used components of automation systems is robots. Robots can be used in homes and even industries to carry out certain tasks instructed to it. This motivated us the need to make a robot using Arduino that can be controlled by voice command using Bluetooth module. This system can be used by elderly and sick people at homes where it can help them pick some small items like tea, coffee etc and bring it to them just on the command of voice. The system can also be used in industries and other areas by increasing the lifting capacity of the robotic arm.

2. LITERATURE SURVEY
Mr. Vedant Chikhale et. al. [1] aims at achieving successful surveillance at places where human intervention is at high risk. It aims to achieve various through voice commands. The voice commands are sent using Bluetooth module via android app to the system. Camera is used to carry out surveillance with night vision mounted on it. A gripper or robotic arm is mounted at the front of the system which will help in making any changes in the environment. Speed of the system is controlled using motor driver. Microcontroller used in this system is Arduino. An ultrasonic sensor is used to detect obstacles to protect the system from obstacles. Live streaming is possible. Cost of creating this project is high. A robot requires a standard controller which acts as brain.
C. Dhachinamoorthi et al.

[2] uses Arduino which is free and user friendly. Smart phone is used to get input or commands from user. Communication between robot and smartphone is carried using Bluetooth module. Sensors are used to detect barriers coming in the way of the system. Motor driver controls the speed of the system. System is protected because of obstacle detecting sensor. Wireless serial communication is possible due to Bluetooth module. External voice can cause disturbance while the command is sent. The system proposed by Aarti Ghadage et al. [3] allows controlling a robotic arm by an Android device where the human voice or Android app may specify continuous control signals to operate a robotic arm. The Android device is used to send voice commands. Communication between Android application and microcontroller is carried using Bluetooth module. Microcontroller used in this system is 8051. The 8051 microcontroller controls the motor to move the robotic arm vehicle as per command. Changes in the environment is possible using arm/gripper. No protection from obstacles as no sensors used to detect obstacle. Delay in transmission and reception of commands is high. The system designed by R. Aswinbalaji et al.

[4] is divided into 3 parts namely: Voice recognition module, Robotic Arm and Platform. Arm withVoice Recognition is to create a wireless voice-controlled arm which can be operated through a range of 10 to 50 meters using ZIGBEE transmitter and receiver. The robotic arm in this portable and can move from one place to another. Various sensors are being used in this program. Cost of creating the system is high because of the various sensors being used. This system designed by I. A. Dalyop et al.

[5] to pick and place robotic arm vehicle uses an Android application to control the robot through voice commands. The integration of control unit with Bluetooth device is done to read the voice commands. The robotic vehicle operates as per the command received via Android application. The device is designed to lift a maximum combined mass of 250g and it communicates at maximum distance of 12m with high precision. Voice commands are transmitted and received through wireless serial communication. Range of Bluetooth technology is up to 10 meters only. Delay in transmission and reception of commands is high. The robotic arm which is proposed by Abhinav Salim et al.

[6] is a lightweight model controlled by 4 motors. The motors used are geared motors which are basically dc motors. Rotation in two directional. The automatic speech recognition system helps to understand spoken words which are recognized by a mike. The speech recognizer depends basically on HM2007 processor which is the heart of the speech recognizer. The analog voice input is transformed to digital commands. These commands are used as input to the Arduino. Voice commands are transmitted and received through wireless serial communication. The cost of the project is feasible. It is a steady model.

3. DESIGN AND METHODOLOGY

The voice controlled robotic arm use different hardware given below:

1. Arduino Uno
Fig 3.1 Arduino Uno

Arduino Uno in Fig 3.1 is a microcontroller board based on the ATmega328P. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB, a power jack, an ICSP header and a reset button.

2. Servo Motor

Fig 3.2 Servo Motor(9g)

The TowerPro SG90 9g Mini Servo in Fig 3.2 is 180° rotation servo. It is a Digital Servo Motor which receives and processes PWM signal faster and better. It equips sophisticated internal circuitry that provides good torque, holding power, and faster updates in response to external forces.

3. Bluetooth Module

Fig 3.3 Bluetooth Module(HC-05)
HC-05 module in Fig 3.3 is an easy to use Bluetooth Serial Port Protocol module, designed for transparent wireless serial connection setup. The HC-05 Bluetooth Module can be used in a Master or Slave configuration, making it a great solution for wireless communication.

4. BO Motors

![Image of BO Motor](image1)

**Fig 3.4 Bo Motor**

BO (Battery Operated) in Fig 3.4 is a light weight DC geared motor which gives good torque and rpm at lower voltages.

5. Motor Driver

![Image of Motor Driver](image2)

**Fig 3.5 Motor Driver(LD298)**

The L298 Driver in Fig 3.5 is a high voltage, high current dual full bridge driver designed to accept standard TTL logic levels and drive inductive loads such relays, solenoids, DC and stepping motors. Two enable inputs are provided to enable or disable the device independently of the input signals. The emitters of the lower transistors of each bridge are connected together the corresponding external terminal can be used for the connection of an external sensing resistor. Other components used are breadboard, jumper wires, tyres, batteries and castor wheel.

3.1 Flowchart

After setting the connection of robot, it is initialized by connecting Bluetooth module through a smartphone. Voice commands are sent through smartphone. If the commands are valid robotic arm moves accordingly
otherwise it does not move and the user has to re-input the voice command. Fig 3.6 shows the flowchart of the robotic arm.

![Flowchart of the robotic arm](image)

**Fig 3.6 Flowchart of the robotic arm**

BO motors are connected to the motor driver and it is connected to Arduino board and batteries. Bluetooth module is connected to transmit the voice commands. Commands are sent through smartphone and if command is valid i.e. it is from predefined sets of command then the car moves according to command. Fig 3.7 shows the flowchart of car.

![Flowchart of car](image)

**Fig 3.7 Flowchart of car**

4. IMPLEMENTATION AND RESULT

The system is integrated and voice commands are given using smartphone.
4.1 Movements of robotic arm

Command 1: “right” This command moves the arm of the robot in right direction. Fig 4.1 shows the movement of robotic arm in right direction.

![Fig 4.1 Arm in Right Direction](image1.jpg)

Command 2: “left”
This command moves the arm of the robot in left direction. Fig 4.2 shows the movement of robotic arm in left direction.

![Fig 4.2 Arm in Left Direction](image2.jpg)

Command 3: “front”
This command moves the arm of the robot forward. Fig 4.3 shows the image of arm moving in forward direction.
Command 4: “back”
This command moves the arm of the robot backwards. Fig 4.4 shows the image of arm moving backwards.

Command 5: “grab”
This command grabs the object in front of the robot. Fig 4.5 shows the image of robot picking up an object.
Command 6: “release”
This command releases the object by expanding the claw of the robot. Fig 4.6 shows the image of robot releasing the object.

Command 7: “up”
This command moves the arm of the robot in upward direction. Fig 4.7 shows the image of arm moving upwards.
Command 8: “down”
This command moves the arm of the robot in downward direction. Fig 4.8 shows the image of arm moving downwards.

Command 9: “forward”
This command moves the car in forward direction. Fig 4.9 shows the image of car moving in forward direction.
4.2 Movements of car

Command 1: “backward” This command moves the car in backward direction. Fig 4.10 shows the image of car moving in reverse.

Command 2: “alpha” This command is used to turn the car in right direction. Fig 4.11 shows the image of car turning right.
Command 3: “beta”
This command is used to turn the car in left direction. Fig 4.12 shows the image of car turning left.

Command 4: “stop”
This command stops the movement of the robot.
5. APPLICATIONS
This system can be used for industrial, military, agricultural purposes. The implemented system is very useful for people with disabilities in their day to day life.

6. CONCLUSION
This project completely reforms the robotic vehicle and gives it a new dimension. It can recognize the voice commands and run smoothly. Robotic assistants reduces the manual efforts being put by humans in their day-to-day tasks. The voice commands are processed in real-time, using an offline server. The speech signal commands are directly communicated to the server over a wired network. The effect of the distance between the mouth and microphone on the robot, the performance of the robot, effect of noise on the speech to text conversion are some of the areas that can be further explored. The accent of the speaker does affect the operation of the robot.

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https://weathermonitorblog.wordpress.com/2016/12/03/developing-pcb/

Abstract:
As digital capabilities improve and connectivity becomes omnipresent, technology is poised to quickly and radically change nearly every sector of India’s economy. That is likely to both create significant economic value and change the nature of work for tens of millions of Indians. From large private enterprises to the public sector, midsize businesses to startups, the pace of digital transformation across the board is incredible. In fact, digitalization of every sector is one of the Central Government’s ten leading targets for the next decade. The idea of digitalization will gradually turn us into an economic powerhouse by cutting down paperwork and decrease our dependency on government employees which will help cut down corruption.

On the international scene, we can see a radical experiment to create new models of community governance, institution-building, and management of resources. At the heart of all these efforts is the blockchain technology. Blockchain is a promising and revolutionary technology because it helps reduce risk, stamps out fraud and brings transparency in a scalable way. It is the record-keeping technology behind the Bitcoin network.

Keywords – Indian economy, Blockchain, Bitcoin, Distributed Ledger Technology, Economic development

Objectives of the Study
● To have an understanding of the Blockchain technology.
● To study the opportunities, scope and challenges of blockchain technology in relation to economic development.

Research Methodology
The method of research is mainly textual analysis of matter collected across various resources. The source of data is mainly secondary from journals, articles, books and research papers related to the subject.

Introduction
Blockchain is digital information (the “block”) stored in a public database (the “chain”). Blockchain, sometimes referred to as Distributed Ledger Technology (DLT), makes the history of any digital asset unalterable and transparent through the use of decentralization and cryptographic hashing. It is the decentralized ledger-keeping system that underpins the digital currency bitcoin and promises a more reliable, immediate way to trace transactions.

The whole point of using a blockchain is to let people — in particular, people who don't trust one another — share valuable data in a secure, tamperproof way.

Blockchain is a technological option that started to emerge during 2016-2017. It is touted to change the world of IT the same way open source software did or as Linux changed the modern application development, some years ago. Blockchain will take a few years to become a lower cost, more efficient way to share information and
data between open and private business networks. It is a Distributed Ledger Technology that allows data to be stored digitally over thousands of servers, while letting everyone in the network see each other’s entries – which makes it difficult for any individual user to gain control over the network. In simple words, blockchain is a distributed ledger. It records transactional data and stores it across many different computers. Each block is linked to the block before and after it, thus creating a “chain.”

Cryptocurrency is a medium of exchange, created and stored electronically in the blockchain, using encryption techniques to control the creation of monetary units and to verify the transfer of funds. Bitcoin is the best-known example.

From a business perspective, we can think of blockchain technology as a type of next-generation business process improvement software. It promises the ability to improve the business processes that occur between companies, significantly lowering the ‘cost of trust’. For this reason, it may offer higher returns for each investment dollar spent than most traditional internal investments. Financial institutions are exploring how they could also use blockchain technology to upend everything from clearing and settlement to insurance.

From sourcing raw materials delivering the finished product, blockchain can increase transparency and trust at every stage of the industrial value chain. Financial institutions are now experimenting with blockchain to create smart contracts between parties.

The potential of blockchain can be captured in an exhaustive list of possible use cases:

- Inviolable property registries, which people can use to prove that they own their house, cars, or other assets.
- Real-time, direct, bank-to-bank settlement of securities exchanges, which could unlock trillions of dollars in an interbank market that currently passes such transactions through specialized institutions in a process, that takes two to seven days.
- Self sovereign identities, which don't depend on a government or a company to assert a person's ID.
- Decentralized computing, which replaces the corporate business of cloud computing and web hosting with hard drives and processing power of ordinary uses computers.
- Decentralized internet of things transactions, where devices can securely talk and transact with each other without the friction of an intermediary, making possible big advances in transportation and decentralized energy grids.
- Blockchain based supply chains, in which suppliers use a common data platform to share information about their business processes to greatly improved accountability and efficiency.
- Decentralized media and content, which would empower musicians and artists, and anyone who post information of value to the Net- to take charge of their digital content, knowing they can track and manage the use of this digital asset.

In order for a block to be added to the blockchain, however, four things must happen: 1) A transaction must occur. 2) That transaction must be verified. 3) That transaction must be stored in a block. 4) That block must be given a hash.

Following are a few areas where the blockchain technology poses remarkable advantages.
1. **Blockchain and Cyber security**

Blockchain technology provides one of the best tools we currently have to protect data from hackers, preventing potential fraud and decreasing the chance of data being stolen or compromised.

In order to destroy or corrupt a blockchain, a hacker would have to destroy the data stored on every user’s computer in the global network. This could be millions of computers, with each one storing a copy of some or all the data. Unless the hacker could simultaneously bring down an entire network, which is nearly impossible - undamaged computers, also known as “nodes”, would continue running to verify and keep record of all the data on the network. The impossibility of a task like taking down a whole chain increases along with the amount of users on a network. Bigger blockchain networks with more users have an infinitely lower risk of getting attacked by hackers because of the complexity required to penetrate such a network.

This complex structure provides blockchain technology with the ability to be the most secure form of storing and sharing information online that we’ve discovered so far. That’s why innovators have begun applying the technology in different sectors to prevent fraud and increase protection of data.

2. **Blockchain and E-commerce**

The E-Commerce industry has disrupted the way we shop & live, and blockchain is on its path to disrupt E-Commerce. Blockchain has been enjoying a good run in the financial industry for quite some time now. According to a recent report, the global blockchain market is expected to see a surge of more than 400% by 2021.

a) Reformed Payment Methods

Blockchain witnessed its first implementation in currencies powered by its technology (like Bitcoin, Etherum, and Ripple). Bitcoin and other cryptocurrencies provide numerous advantages over traditional currencies. This shift is due to the relative ease of implementation and the fact that they are decentralized.

b) Decentralized

Blockchain isn’t regulated by any central authority which basically implies that the buyer and seller only control blockchain operations. If the economy of a country is to collapse one day, their currencies would terribly suffer but not the cryptocurrencies, because geopolitics does not influence its operation. Blockchain-based currencies give users absolute freedom to perform transactions without any cap on the spending limit. Also, a virtual currency wallet is absolutely free.

c) Improved Supply Chain Management

Blockchain can be applied to solve supply chain issues like record-keeping, tracking of products etc. as a less corruptible and a better alternative to the centralized database. Most of these retailers use the blockchain to eliminate the paper and manual work associated with international product shipping. For example, data from a bill for cargo shipments can be entered on the blockchain at each stage of the supply chain, eliminating the lengthy and expensive administrative process of approvals and receipt guarantees. This allows all participants to track the shipment through its journey.

d) Transparency

By applying blockchain technology in the e-commerce marketplace we can establish a decentralized
environment where any wrongdoings on the part of the business or merchant can be efficiently monitored.

e) Security
There has been almost negligible reporting of security breaches in blockchain-powered networks. Apart from this, blockchain-based currencies never exhibit personally identifiable information. The only distinguishing data linked to each user’s wallet is a randomly-generated unique identifier.

3. Banking
The blockchain could potentially save banks billions in cash by dramatically reducing processing costs. Banks are keen to take the opportunity to reduce transaction costs and the amount of paper that they process. Implementing blockchain would be a step to making banks increasingly profitable and valuable. It prevents tampering with current and also past transactions, because the database is cryptographically secured. Blockchain is being recognized as the new technology that would reduce fraud in the financial world where 45% of financial intermediaries like stock exchanges and money transfer services are prone to financial crimes routinely. Most banking systems in the world, built on a centralized database, are more vulnerable to cyber attack because once hackers attack the one system they get full access. This technology would get rid of some of the current crimes committed online today against our financial institutions.

Blockchain and Indian Economy
Currently, just about 0.5 percent of the people in India are into Bitcoin, the cryptocurrency that popularized the Blockchain technology. However, on the national level, a lot of work is going on to integrate Blockchain technology into various sectors of the economy – including the financial and health sectors. In 2016, the Indian bank, ICIC Bank, announced that it had completed a cross-border transaction executed on a Blockchain. Given the present scenario that the demonetization policy in India has yielded increased digital transactions, it’s reasonable that the Indian government will double down on its drive to grow a cashless economy.

In essence, for you to run a cashless economy, you’ll need an alternative to traditional financial services. This is a good entry point for Blockchain. The Blockchain technology almost entirely eliminates the need to belong in the traditional financial system, in order to be financially included.

Building on the recent surge in digital payments in India, a number of Blockchain projects, like BitIndia, are rising to aid the growth of digital payments in India. BitIndia offers digital wallets that can hold cryptocurrencies including Bitcoin, Ethereum, Litecoin and Ripple. The vision of the project is to create a “cryptocurrency exchange for the streets of India.” In essence, the project is aiming to help the average Indian embrace digital payments, solving the problems of financial inclusion, costs and transaction times in one platform.

The potential of blockchain technology is enormous and the promise it holds to root out corruption is simply too great to ignore, in a world scarred by recurrent corruption scandals. It can solve critical challenges, such as the point of entry, and can help strengthen integrity in government. For all its uncertainties and risks, it could add a layer of security to records and transactions that are particularly exposed to high corruption risks.

Conclusion
In order for India to achieve its dream of a $5 trillion economy in the next 5 years, it is important that it adopts
blockchain technology for international payments. Payments from non-resident Indians are crucial to the daily livelihood of millions of Indians and to their ability to afford things like food, rent and other essentials. They also contribute to a large chunk of our country’s balance of payments and assist in the stimulation of domestic consumption levels in this country, which consequently supports various industries and enterprises. In spite of this, the average cost of sending money to India is 5.63 percent of each transaction. This is far higher than the Sustainable Development Goal target which stands at 3 per cent. Considering the fact that India receives the most remittances, the requirement for a more effective method for inbound remittances is absolutely essential. Development of our economy, to some extent, is also related to the problem associated with international payments. A great solution is to adopt blockchain technology and virtual currencies for rapid, affordable, effective remittances.

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‘INITIATIVES, OPPORTUNITIES AND CHALLENGES IN E-COMMERCE TOWARDS ONLINE SELLERS OF INDIA’

Ms. Jyotsana S. Agarwala

Abstract:
The said research paper involves a study of ‘Initiatives, Opportunities and Challenges in E-Commerce towards online sellers’. E-Commerce referred to as Electronic Commerce, is the trading of several goods & services over a wide area of electronic means. After LPG, India being an underdeveloped country started the journey towards a self enabled developed nation. But it got wings to fly in 1995 when information technology was introduced in the market of Indian trade and commerce through six cities in India. A sudden boom in the Indian market got noticed. Earlier e-commerce businessman in India used the internet as an effective medium for facilitating matrimonial alliances, tour and travel-related transactions and recruitment process. In recent years, witnessing a rapid growth in e-commerce business, customers are experiencing “empowerment” in marketing. Few initiatives are taken by Indian government towards e-commerce in India. A plethora of business opportunities will be opening in front of sellers and they will learn a lot of skills in various areas like Cross-selling, Product marketing, Customer acquisition, Upselling, Pricing and profit management, and Supply chain. But there are some challenges also which can be faced by the online sellers in India. But the e-commerce industry is bound to face certain challenges ranging from economical to technological down to the social sphere. The objectives of the study is to understand the initiatives taken by Indian Government towards online sellers and its effectiveness, to know the opportunities, challenges and barriers in e-commerce in Indian trade and commerce. This research work is based on both primary and secondary data. The questionnaires are followed by five likert scale method and chi-square test analysis being used for the same. Secondary data are collected through various research findings, online journal, abstracts, report and books. The study concludes that there are many initiatives taken by the government for better future of the Indian entrepreneur. As a rapidly developing country, India has a huge opportunity to explore the electronic commerce in the field of online business of providing goods and rendering services to the end users. But there are few challenges faced by the seller as literacy rate, poor IT infrastructure and low connectivity system and lack of awareness about e payment gateway.

Keywords: E-commerce, Sellers, Entrepreneurs, Recent initiatives, Challenges, Opportunities

Introduction:
The said research paper involves a study of ‘Initiatives, Opportunities and Challenges in E-Commerce towards online sellers’. E-Commerce referred to as Electronic Commerce, is the trading of several goods & services over a wide area of electronic means. After LPG, India being an underdeveloped country started the journey towards a self enabled developed nation. But it got wings to fly in 1995 when information technology was introduced in the market of Indian trade and commerce through six cities in India. A sudden boom in the Indian market got noticed. Earlier e-commerce businessman in India used the internet as an effective medium for facilitating
matrimonial alliances, tour and travel-related transactions and recruitment process. In recent years, witnessing a rapid growth in e-commerce business, customers are experiencing “empowerment” in marketing. That is, the market players not only offer high-end products at competitive prices, but also compete among themselves to satisfy customer needs through assured and timely home delivery of products with guarantee as well as return of goods after delivery at no cost to customers. Building client trust through a secured online payment system using high-speed internet has also helped drive up sale of goods and supply of services, both tangible and intangible. E-commerce started offering wide platform to the sellers to sale their products and service in such a market where there was no geographical limitations. Just through a click of button, businessmen were able to market and sale their product to a wide range of end users. A major part of marketing cost, logistic expenses, human resource and operating expenses got eliminated and the benefit of the same transferred to the customers in the form of lower sale price. Not only a better market is provided but also a secured and authenticated market base was prepared to eliminate the risk of frauds through e-commerce. Sellers need to follow the procedure to provide different authenticated document to enter into the market. Through this, customers are safeguarded and a trust is build that e-commerce is fully secured and provides better platform to do online transaction. Few initiatives are taken by Indian government towards e-commerce in India (Mocking Fish, December 2019):

a) The Indian government under the portfolio of Finance Ministry has approved the creation of a “Government e-Marketplace” (GeM) through the department of Directorate General Supply and Disposal (DGS&D) for government purchases.

b) The Government of India started an online trading platform for farmers in order to connect them to a network of wholesale agricultural markets. In the beginning, only 12 different farm commodities were traded on the online platform but now 21 regulated wholesale markets (mandis) from eight different states have integrated into this platform.

c) Apart from this, the Government of India under the Ministry of Women and Child development launched an e-Commerce portal for women entrepreneurs known as Mahila e-haat. This e-Commerce marketplace platform allows women to enlist and showcase their products online without any additional cost.

d) In order to increase the participation of foreign players in the e-Commerce field, the Indian Government hiked the limit of foreign direct investment (FDI) in the e-Commerce marketplace model for up to 100%.

Earlier television was only a means of entertainment; mobiles were used only for making calls. But now all electronic gadgets are used for electronic commerce. A wide opportunity can be seen in coming future in e-commerce in India as the young generation is more users friendly in online transactions. Access to technology, foolproof system of logistics, and big investments are required to put such arrangements in place. A plethora of business opportunities will be opening in front of sellers and they will learn a lot of skills in various areas like Cross-selling, Product marketing, Customer acquisition, Upselling, Pricing and profit management, and Supply chain (Sardana). Sellers will always be in a sphere of polishing their soft skills. And with time they will learn about seeing things from the customer perspective. And sellers will end up being a great storyteller that is much needed for the e-commerce industry. Opportunities like UI/UX Developer, Content Management, Interactive Designer, Search Engine Optimization, Social Media Marketing, Logistics Management, Digital Marketing and
E-commerce Merchandising are the highlights of the hour (PTI WEB TECH, 2019). The e-commerce has transformed the way business is done in India. The Indian e-commerce market is expected to grow to US$ 200 billion by 2026 from US$ 38.5 billion as of 2017. Much growth of the industry has been triggered by increasing internet and smart phone penetration. The ongoing digital transformation in the country is expected to increase India’s total internet user base to 829 million by 2021 from 636.73 million in FY19. India’s internet economy is expected to double from US$ 125 billion as of April 2017 to US$ 250 billion by 2020, majorly backed by ecommerce. India’s E-commerce revenue is expected to jump from US$ 39 billion in 2017 to US$ 120 billion in 2020, growing at an annual rate of 51 per cent, the highest in the world. Since 2014, the Government of India has announced various initiatives namely, Digital India, Make in India, Start-up India, Skill India and Innovation Fund. The timely and effective implementation of such programs will likely support the e-commerce growth in the country. The e-commerce industry been directly impacting the micro, small & medium enterprises (MSME) in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well. The Indian e-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest e-commerce market in the world by 2034. Technology enabled innovations like digital payments, hyper-local logistics, analytics driven customer engagement and digital advertisements will likely support the growth in the sector. The growth in e-commerce sector will also boost employment, increase revenues from export, increase tax collection by ex-chequers, and provide better products and services to customers in the long-term. E-retail market is expected to continue its strong growth, by registering a CAGR of over 35 per cent and to reach Rs 1.8 trillion (US$ 25.75 billion) by FY20. (IBEF, December 2019). India’s total internet user base is set to grow from 665 million in 2019 to 829 million by 2021. So, the inherent potential of the market is undeniable (economictimes.indiatimes.com, Jan 03, 2020). So, being a seller in e-commerce area, there is a big market waiting for the entrepreneur to run their business easily.

But there are some challenges also which can be faced by the online sellers in India. The e-commerce industry as a newcomer is bound to face certain challenges ranging from economical to technological down to the social sphere. There are the four major challenges faced by start-ups in the ecommerce industry (Mahajan, The Emerging Challenges For E-commerce Startups In 2020, 03 Jan 2020).

a) Direct Competition with the Big Brands: The big brands are the first and one of the biggest challenges a newcomer will face in this business. Companies such as Walmart, Amazon and eBay, who are giants in the online retail sector will easily knock a start-up off the market.

b) Managing Shipping, Delivery and Returns: Newcomers or start-ups in the e-commerce industry face a lot of challenges when it comes to a seamless flow of transactions after orders have been placed and paid for, shipping charges, on-time delivery or return policies may pose a serious threat to the business.

c) Expensive Marketing and Advertisement: With the growing competition, digital marketing and advertising is getting expensive every day. Most start-ups made the mistake of spending their entire budget on website development and ignored the marketing aspect.
d) Staying Up To Date: The trendsetters are the big brands, they are the ones who bring up innovations, create new ideas, then smaller companies have to catch up, which most times is capital intensive or just way above their reach.

These challenges need to be faced strategically and a solution towards the problem should be taken up.

**Review of Literature:**

1. Mr Kumar Anuj, Mr. Fahad Fayaz and Ms Namita Kapoor published a paper titled ‘Impact of E-Commerce in Indian Economy’ ([Mr. Kumar Anuj, May 2018](#)). The objectives of the study to analysis the present trends of e-commerce in India, Government initiatives and different scheme in growth of e-commerce in India and impact of e-commerce on literacy rate and employment rate in India. The research is descriptive and exploratory research. Secondary data are used. They found that there is an increase in a digital penetration in India and it tend to increase e-commerce growth in India. There is increase in internet penetration in India. Government is initiating necessary incentives and schemes to promote digitalization and thus encouraging e-commerce growth in India. E-commerce of the nation is linked with the literacy rate of the nation. With more literacy and educated people there will be more e-commerce growth in a country. Government has also played huge role through different laws and policies towards the growth of sales via internet.

2. Dr. Naveen Kumar published a paper titled ‘E – Commerce in India: An Analysis of Present Status, Challenges and Opportunities ([Kumar](#)). The objectives of the study are to analyze the present status of E-Commerce in India, to examine the barrier of E-Commerce in India and to discuss the future of E-Commerce in India. In the paper, the secondary source of information has been used. The data has been collected from journals, books and websites. The author found that the E-Commerce has made shopping easy. The E-Commerce Industry in India is growing rapidly despite many challenges. E-commerce industry is one of the largest growing industries in India at present. The sale of ecommerce industry is expected to grow by almost four times by 2021 than the sales of 2015. This unprecedented growth in E-Commerce is due to increase in smart phones and internet users, 3G/4G internet services, awareness in public, government initiative of digitalization, advanced shipping and payment options, entry of foreign e-business players etc. Government should take steps to provide a proper legal framework so that hurdles in the growth of e-commerce are reduced to minimum.

3. Mr. Nitin Kumar, Mr. Jhensanam Anusara, Md Altab Hossin, Md Kamruzzaman Sarkar, Mr. Bouasone Chanthamith, Ms. Sita Shah and Md Imrul Hasan Russel published the paper titled ‘Challenges and Opportunities of E-Commerce in India: Pathway for Sustainable E-Commerce’. ([Mr. Nitin Kumar, Mar-Apr, 2018](#)). The objectives of the study is to discover the present scenario of e-commerce in India, to recognize the Challenges and opportunities of ecommerce in India and to demonstrate some measures to conquer the challenges based on research or findings. The study is based on the meta-analysis. The secondary materials have been extensively used for this study the secondary data has been collected from various websites, books, journal articles, thesis, daily newspaper, and magazine. The author found that E-commerce as an alternative marketing channel, is making slow but steady progress in India. With the spread of education and increasing number of people becoming technology friendly, they are slowly gaining confidence in online services. Infrastructural
bottlenecks, economic disparity, vulnerabilities of the payment gateway systems, inadequate legal framework are challenges that need to be addressed by all stakeholders to promote e-commerce in the country.

Objective of the study:

a) To understand the initiatives taken by Indian Government towards online sellers and its effectiveness.
b) To know the opportunities in e-commerce in Indian trade and commerce
c) To know the challenges in e-commerce from sellers point of view.
d) To study the barriers of sellers at e-Commerce platform.

Hypothesis of the study:

H01- There is many initiatives taken by Indian Government towards online sellers.
H02-There is a huge opportunity for entrepreneur in Indian e-commerce field.
H03 –There are challenges and barriers for sellers in e-commerce platform in India.

Research Methodology:

This research work is based on both primary and secondary data. Primary data are collected through questionnaires. The questionnaires are followed by five likert scale method. 100 responded were targeted for the study and sample method of chi-square test analysis being used for the same. Secondary data are collected through various research findings, online journal, abstracts, report and books.

Data Analysis:

Table No. 1. Analysis of data collected – X axis = Questions, Y Axis = Respondent

Research finding:

From the data analysis it is found that

H01: The Chi-square value is 34.71 with Degree of Freedom is 2 and P value is <.0001 which is less than 0.05.
So, the hypothesis is accepted.

H02: The Chi-square value is 54.75 with Degree of Freedom is 2 and P value is <.0001 which is less than 0.05.
So, the hypothesis is accepted.

H03 – The Chi-square value is 41.43 with Degree of Freedom is 2 and P value is <.0001 which is less than 0.05.
So, the hypothesis is accepted.

Conclusions:

The study is based on initiatives, opportunities and challenges in e-Commerce towards online sellers of India,
where it is clear that there are many initiatives taken by the government for better future of the Indian entrepreneur. As a rapidly developing country, India has a huge opportunity to explore the electronic commerce in the field of online business of providing goods and rendering services to the end users. But it is to be accepted that the literacy rate, poor IT infrastructure and low connectivity system and lack of awareness about e payment gateway are the real challenges for the growth of e-Commerce. These challenges are faced by online sellers every day. So, for them there is a need to take precautions while developing the business strategies.

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BIOREMEDIATION OF TEXTILE WASTEWATER USING PSEUDOMONAS AND BACILLUS SPP

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Abstract:

There are many industries that use synthetic dyes for the textile, leather tanning, paper as well as in food industry. Synthetic dyes frequently employed on industrial scale; Azo dyes, Anthraquinones, Triarylmethanes are most widespread. Textile dyes represents a serious environmental concerns because of their chemical inertness. Thus, a remedy for this problem is Bioremediation. Microbial degradation of textile wastewater contaminated with dye has achieved more attention as it is cost effective, environmentally friendly and cleaner. The current study is to explore the usability of micro-organisms i.e., bacteria for the bioremediation of textile waste water and for the removal of the dyes. Samples were collected from five different Textile Industries from MIDC, Dombivli. And tested for Dye degradation assay, color degradation assay and physicochemical properties like pH, BOD, COD, TSS, TDS. Standard Laboratory cultures Bacillus and Pseudomonas were used to check bioremediation. Dye degradation assay was performed for industrial dyes Reactive Black B and Crystal Violet. Color Degradation assay was performed for the samples. The physicochemical properties such as pH, BOD, COD, TSS and TDS were determined before inoculation and at specific time after inoculation. Results showed that these two bacterial strains degrade the dyes as well as samples with high % efficiency. The Bacillus species is more efficient than the Pseudomonas spp. There is a prominent decrease in BOD, COD, TSS, TDS of samples. Therefore, these bacteria have tremendous strain for decolorization of textile dye effluent and it can be used as a practical alternative in the treatment of textile wastewater.

Keywords- Textile Dyes, Bioremediation, Bacillus and Pseudomonas, Reactive Black B, pH, BOD, COD, TDS, TSS.

*Poster presented in National Seminar-cum-Event on Biotechnology Entrepreneurship in India: Recent Trends and Challenges at University of Mumbai.

Introduction:

Rapid industrialization has necessitated the manufacture and use of different chemicals in day-to-day life (16). Synthetic dyes are colorants mainly used in textile industries which generate huge amount of wastewater in the process of dyeing (2). Textile industries utilize substantial volumes of water of chemicals for wet processing of textiles (12,6,). These chemicals ranging from inorganic compounds and elements to polymer and organic products are used for desiring, scouring, bleaching, dyeing, printing and finishing (12). There are more than 8000 chemical products associated with the dyeing process. Approximately 10,000 different dyes and pigments are used industrially and over 0.7 million tons of synthetic dyes are produced annually. These dyes include several structural varieties of dyes such as acidic, reactive, basic, disperse, azo, diazo, anthraquinone-based and metal-complexes dyes. Each year, India produces 64,000 tonnes of dyes, 7,040 tonnes of which are directly
Colored industrial effluent is the most obvious indicator of water pollution and has to be removed before discharging into water bodies or on land (15). The presence of even trace concentrations of dyes (10-50 mg/L) in effluent is highly visible and affects the aesthetic value, transparency of water and gas solubility of water bodies (O₂) affecting aquatic ecosystem (14,6). Dyes are more difficult to treat because of their synthetic origin and complex aromatic molecular structures often synthesized to resist fading on exposure to sweat, soap, water, light or oxidizing agents (10,3). Moreover, it is very difficult to treat textile industry effluents because of their high BOD, COD, heat, salinity, TSS, TDS, color, pH and presence of metal ions (such as Cd, Cr, Zn, Cu, Fe, Ni, Mn, etc) and recalcitrance of organic compounds such as azo dyes and gives the river intense colouration (20). Azo dyes are the most common class of industrial textile dyes and are characterized by the presence of one or more azo (– N=N–) bonds. Example of azo dyes is Crystal violet, Malachite green, Carbol fuschin, Reactive Black, Reactive Red, etc. These Dyes contain chromophoric groups and auxochromes that cause or intensify the color of the chromophore (12). Majority of these dyes are either toxic or mutagenic and carcinogenic, and poses a potential threat to all forms of life (10,19). They are considered as xenobiotic compounds that are very recalcitrant to biodegradation processes (9).

Textile azo dyes are found difficult to degrade completely and the conventional physico-chemical treatment processes are not suitable for their complete degradation (11). This increases the chemical oxygen demand (COD) and biochemical oxygen demand (BOD) as well as alters the pH of the effluent (22). Therefore, the treatment of textile wastewater is essential before discharging the wastewater into a natural water body (7).

Several methods are used to treat textile effluents to achieve decolourization. These include physicochemical methods such as adsorption, ultra-filtration, coagulation, carbon activated, chemical flocculation, oxidation, ultrasonic mineralization and electrochemical methods (7,13). These methods are effective but have inherent drawbacks such as high cost, Difficult in handling , Requirement of high capital cost, intensive energy requirements, formation of hazardous by-products and generation of sludge which causes secondary pollution (9). The conventional aerobic wastewater treatment process usually cannot efficiently decolorize the effluents contaminated with azo dyes, because of their strong electron- withdrawing group, which protects them against attack by the oxygenases.

Biological processes such as Bioremediation provide an alternative to existing technologies because they are more cost-effective, environmentally friendly, and do not produce large quantities of sludge (8, 21). Many microorganisms belonging to the different taxonomic groups of bacteria, fungi, actinomycetes, etc. have been reported for their ability to decolorize azo dyes. (4). Bioremediation of dyeing industry effluent by using microorganisms has proved to be the best solution. Numerous bacterial species including Bacillus, Pseudomonas, Enterobacter, Halobacter, and Aeromonas have been reported to exhibit tremendous capability to decolourize and detoxify a wide range of azo dyes. Bacterial decolorization is associated with involvement of various enzymes such as lignin peroxidase, Laccase, Azoreductase and biotransformation enzymes (19). In most cases, bacteria disintegrate azo bonds of the dyes, which result in the formation of colourless amines and subsequently simpler compounds. Azoreductases of different microorganisms are useful for the development of
biodegradation systems as they catalyze reductive cleavage of azo (-N=N-) groups (11, 17, 18). A wide range of aromatic amines are aerobically biodegraded rapidly and hence they are unlikely to remain in the environment for a long time. Therefore microbiological treatment of textile waste water is the best way for detoxification. The most widely researched bacteria in regard to dye degradation are *Bacillus spp.* and *Pseudomonas spp.* (19). They are utilized in bioremediation but their effectiveness in decolorization of textile effluents has not yet been reported (1). Thus, the main aim of the present study deals with the Bioremediation of textile wastewater using *Pseudomonas* and *Bacillus spp.* It involves the use of two dyes- Crystal Violet and Reactive Black B and textile effluent. The degradation of this dye was done by dye degradation assay and color degradation assay. The physico-chemical properties such as pH, BOD, COD was determined.

**Materials and Methods**

a) **Sample Collection**: Wastewater sample contaminated with the dye from textile industry effluent was collected from Synthetic dyes and chemicals industries, M.I.D.C, Dombivli. The wastewater sample was collected in sterile glasswares. An industrial dye Reactive Black B was obtained from colorant industry, M.I.D.C, Dombivli. The pH and temperature of the sample was measured.

b) **Storage**: The wastewater sample was collected in sterile glassware and stored at 4°C.

c) **Culture used**: The two standard lab cultures *Pseudomonas aeruginosa* and *Bacillus cereus* were used. They are streaked onto the agar medium and were biochemically tested.

d) **Dyes**: Reactive Black B (RBB) and Crystal violet (CV)

e) **Dye degradation assay**

**Materials used**:
- Media: Nutrient broth media
- Cultures: *Pseudomonas aeruginosa* and *Bacillus cereus*
- Dyes: RBB and CV
- Glasswares: conical flask 50ml each
- Instrument: colorimeter at 450nm and 530nm

**Methodology** - The dye degradation assay was done for two dyes:
- Industrial dye named Reactive Black B (RBB)
- Laboratory dye named Crystal Violet (CV).

Using this two dyes, the decolorization activity of bacterial cultures- *Pseudomonas areuginosa* and *Bacillus cereus* was performed. The bacterial cultures were inoculated into Nutrient broth containing 5mL of dye concentration of RBB and CV in 50mL of Nutrient broth individually. The flasks were inoculated with 5mL of 24hrs old bacterial cultures and incubated at R.T. Medium without dye severed as a blank. Uninoculated dye medium served as control. After incubation, 8mL of medium was centrifuged at 2000rpm for 20min and supernatant was recovered.

Decolorization was assessed by measuring absorbance of the supernatant at wavelength maxima (λmax) of respective dye (RBB= 450nm and 530nm & CV= 450nm and 530nm). Percentage of decolorization was
calculated by using the formula:

\[
\% \text{ Decolorization} = \left( \frac{\text{Initial OD} - \text{Final OD}}{\text{Initial OD}} \right) \times 100
\]

f) Color degradation assay:

Materials used:
- Media: Nutrient broth media
- Cultures: *Pseudomonas* and *Bacillus*
- Sample: effluent sample
- Glasswares: conical flask 50ml each
- Instrument: colorimeter at 450nm and 530nm

Methodology:
The color degradation assay for sample i.e., industrial effluent was also performed using two bacterial species- *Pseudomonas* and *Bacillus*. The bacterial cultures were inoculated into Nutrient broth containing 5mL of sample effluent concentration in 50mL of Nutrient Broth. The flasks were inoculated with 5mL of 24hrs old bacterial cultures and incubated at R.T. Medium without dye was used as a blank. Uninoculated effluent medium served as control. After incubation, 8mL of medium was centrifuged at 2000rpm for 20min and supernatant was recovered. The change in color was observed every 24hrs.

g) Physico-chemical test:
The physico-chemical test of the collected effluent was done. The physico-chemical test such as pH, BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen demand), TDS (Total dissolved solids), TSS (Total Suspended solids) was performed. The determination of BOD of the sample was done by Winkler’s method. The BOD value of uninoculated and inoculated was determined and the percent efficiency was calculated. The COD in the effluent samples was measured by potassium dichromate method. The difference between COD values of uninoculated sample and inoculated sample was measured and % efficiency was calculated. TSS is the dry-weight of particles trapped by a filter. The % efficiency of biodegradation of organic matter present in the sample. TDS was measured by Gravimetric analysis. The difference between the values of uninoculated and inoculated samples gives the % efficiency.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Permissible limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>30mg/L</td>
</tr>
<tr>
<td>COD</td>
<td>250mL/L</td>
</tr>
<tr>
<td>TSS</td>
<td>100mg/L</td>
</tr>
<tr>
<td>TDS</td>
<td>2100mg/L</td>
</tr>
</tbody>
</table>

Results:
1. Collection of Effluent water from five different Textile Industries
The effluent was collected from five different textile industries. The collected effluent was measured for pH, temperature and color at the site of collection. The results for color, pH and temperature is presented in the following table no.
2. **Culture used:** The two standard lab cultures *Pseudomonas aeruginosa* and *Bacillus cereus* were used. They are streaked onto the agar medium and were biochemically tested.
3. Dye degradation test:

The dye degradation assay was done for two dyes: i) Industrial dye named Reactive Black B (RBB) ii) Laboratory dye named Crystal Violet (CV). Using this two dyes, the decolorization activity of bacterial cultures- *Pseudomonas* and *Bacillus* was performed.

<table>
<thead>
<tr>
<th>Dyes</th>
<th>Organisms</th>
<th>$\lambda_{max}$</th>
<th>O.D at 0hrs</th>
<th>O.D at 24hrs</th>
<th>O.D at 48hrs</th>
<th>O.D at 72hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Black B</td>
<td>Bacillus</td>
<td>450nm</td>
<td>0.86</td>
<td>0.57</td>
<td>0.32</td>
<td>0.02</td>
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<tr>
<td></td>
<td>Pseudomonas</td>
<td>450nm</td>
<td>0.77</td>
<td>0.61</td>
<td>0.36</td>
<td>0.05</td>
</tr>
<tr>
<td>Crystal violet</td>
<td>Bacillus</td>
<td>450nm</td>
<td>0.81</td>
<td>0.59</td>
<td>0.38</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>450nm</td>
<td>0.72</td>
<td>0.61</td>
<td>0.43</td>
<td>0.09</td>
</tr>
</tbody>
</table>

4. Color degradation assay:

<table>
<thead>
<tr>
<th>Samples</th>
<th>Organisms</th>
<th>$\lambda_{max}$</th>
<th>O.D at 0hrs</th>
<th>O.D at 24hrs</th>
<th>O.D at 48hrs</th>
<th>O.D at 72hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>Bacillus</td>
<td>450nm</td>
<td>0.21</td>
<td>0.20</td>
<td>0.18</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>450nm</td>
<td>0.18</td>
<td>0.17</td>
<td>0.15</td>
<td>0.14</td>
</tr>
<tr>
<td>Sample 2</td>
<td>Bacillus</td>
<td>450nm</td>
<td>0.53</td>
<td>0.38</td>
<td>0.31</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>450nm</td>
<td>0.48</td>
<td>0.45</td>
<td>0.39</td>
<td>0.23</td>
</tr>
<tr>
<td>Sample 3</td>
<td>Bacillus</td>
<td>450nm</td>
<td>0.91</td>
<td>0.79</td>
<td>0.53</td>
<td>0.21</td>
</tr>
<tr>
<td>Sample</td>
<td>Organisms</td>
<td>450nm (Uninoculated)</td>
<td>450nm (Inoculated)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>----------------------</td>
<td>--------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample 4</td>
<td>Pseudomonas</td>
<td>0.87</td>
<td>0.82</td>
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<tr>
<td></td>
<td>Bacillus</td>
<td>0.96</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>0.88</td>
<td>0.71</td>
<td></td>
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<tr>
<td>Sample 5</td>
<td>Bacillus</td>
<td>0.97</td>
<td>0.68</td>
<td></td>
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<tr>
<td></td>
<td>Pseudomonas</td>
<td>0.69</td>
<td>0.51</td>
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</table>

5. **Physicochemical test:**

a. **BOD**

<table>
<thead>
<tr>
<th>Samples</th>
<th>Organisms</th>
<th>Uninoculated (0hrs)</th>
<th>Inoculated (72hrs)</th>
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</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>Pseudomonas</td>
<td>514</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>518</td>
<td>178</td>
</tr>
<tr>
<td>Sample 2</td>
<td>Pseudomonas</td>
<td>510</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>520</td>
<td>132</td>
</tr>
<tr>
<td>Sample 3</td>
<td>Pseudomonas</td>
<td>566</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>590</td>
<td>190</td>
</tr>
<tr>
<td>Sample 4</td>
<td>Pseudomonas</td>
<td>520</td>
<td>184</td>
</tr>
</tbody>
</table>
### b. COD

<table>
<thead>
<tr>
<th>Samples</th>
<th>Organisms</th>
<th>Uninoculated (0hrs)</th>
<th>Inoculated (72hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>COD value</td>
<td>COD value</td>
</tr>
<tr>
<td>Sample 1</td>
<td>Bacillus</td>
<td>2632</td>
<td>320</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>2616</td>
<td>456</td>
</tr>
<tr>
<td>Sample 2</td>
<td>Bacillus</td>
<td>2656</td>
<td>352</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>2608</td>
<td>552</td>
</tr>
<tr>
<td>Sample 3</td>
<td>Bacillus</td>
<td>2624</td>
<td>336</td>
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<td></td>
<td>Pseudomonas</td>
<td>2584</td>
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<td>Sample 4</td>
<td>Bacillus</td>
<td>2680</td>
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<td>Pseudomonas</td>
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<td>512</td>
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<td>Sample 5</td>
<td>Bacillus</td>
<td>2648</td>
<td>312</td>
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<tr>
<td></td>
<td>Pseudomonas</td>
<td>2608</td>
<td>552</td>
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### c. TDS

<table>
<thead>
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<td></td>
<td></td>
<td>TDS value</td>
<td>TDS value</td>
</tr>
<tr>
<td>Sample 1</td>
<td>Bacillus</td>
<td>15.2</td>
<td>11.0</td>
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<td>Pseudomonas</td>
<td>14.4</td>
<td>10.9</td>
</tr>
<tr>
<td>Sample 2</td>
<td>Pseudomonas</td>
<td>18.0</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>17.4</td>
<td>8.5</td>
</tr>
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<td>Sample 3</td>
<td>Pseudomonas</td>
<td>27.6</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>25.6</td>
<td>15.3</td>
</tr>
<tr>
<td>Sample 4</td>
<td>Pseudomonas</td>
<td>25.0</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
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<td>13.2</td>
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<td>Sample 5</td>
<td>Pseudomonas</td>
<td>17.0</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>15.7</td>
<td>10.4</td>
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**d. TSS**

<table>
<thead>
<tr>
<th>Samples</th>
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<th>Inocualted (72hrs)</th>
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<tbody>
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<td></td>
<td></td>
<td>TSS value</td>
<td>TSS value</td>
</tr>
<tr>
<td>Sample 1</td>
<td>Bacillus</td>
<td>3.3</td>
<td>1.9</td>
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<tr>
<td></td>
<td>Pseudomonas</td>
<td>4.3</td>
<td>3.1</td>
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<tr>
<td>Sample 2</td>
<td>Pseudomonas</td>
<td>16.2</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>15.6</td>
<td>6.8</td>
</tr>
<tr>
<td>Sample 3</td>
<td>Bacillus</td>
<td>23.6</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>24.5</td>
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<td>Pseudomonas</td>
<td>11.9</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Bacillus</td>
<td>12.5</td>
<td>4.7</td>
</tr>
<tr>
<td>Sample 5</td>
<td>Bacillus</td>
<td>11.6</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Pseudomonas</td>
<td>12.0</td>
<td>5.8</td>
</tr>
</tbody>
</table>

**Discussion:**
Bioremediation of textile wastewater using *Pseudomonas* and *Bacillus* was done. The two synthetic dyes - Reactive Black B and Crystal violet were used. The two lab cultures were enriched and were biochemically tested and found to be *Pseudomonas aeroginosa* & *Bacillus cereus*. The decolorization ability was confirmed by the dye decolorization assay and color degradation assay. Both the cultures decolorized the dye to a great extent. The % efficiency for RBB by *Bacillus* and *Pseudomonas* was found to be 97.6% and 94.2% whereas for CV was 90.1% and 84.75. Also, there was reduction in the levels of BOD, COD, TSS and TDS. The research work done by Mohammed. N (2014) showed color degradation by *Bacillus* and *Pseudomonas* by 85% and 90%. From his work, it can be concluded that our lab cultures *Pseudomonas* & *Bacillus* showed more degradation ability for the effluent. In other reference, Ratu.S et.al (2015) showed that *Bacillus* helped to reduce the levels of BOD, COD, TSS by 67%, 66%, 77%. From this, it can be said that our cultures are more efficient in decreasing the levels of BOD by 89%, COD by 74%, TSS. As there is significant decrease in dye and color and also decrease in the levels of BOD, COD, TSS and TDS. It can serve as a best tool in bioremediation method.

**Conclusion:**
Bioremediation of textile wastewater using *Pseudomonas* and *Bacillus* was done. The two bacterial strains *Pseudomonas aeroginosa* & *Bacillus cereus* showed the ability to decolorize both the dyes to a great extent. The percent efficiency of degradation for RBB by *Bacillus* and *Pseudomonas* was found to be more than the CV. There was decrease in the levels of BOD, COD, TSS and TDS. Thus, Overall findings suggested that the
Bacillus spp. shows maximum decolorization ability than the Pseudomonas spp. Hence, it can be great choice in wastewater treatment for the removal of dyes.

References:
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A STUDY ON THE IMPACT OF USING NEW TRENDS AND TECHNOLOGIES IN INFORMATION TECHNOLOGY IN THE AGRICULTURE SECTOR

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Abstract:
The purpose of the paper is to study how new trends in information technology can help to enrich Indian farmers and for their overall empowerment. Since Agriculture sector has major impact on Indian economy, farmer’s empowerment and enrichment will definitely have great impact on agriculture sector. This paper is to mainly focus on two major apps that are “Kisan Suvidha” app launched by Indian Government and another “Kisan Abhiman” app launched by Zee Marathi which are very much useful for Indian farmers to get connected with customers to directly sell their products and also for people to get better quality products at comparatively low price.

Introduction:
Now a days entire world is connected through internet. Number of Android apps are available for people. Recently various Apps like Kisan Suvidha, KisanAbhiman are launched. How these two apps are beneficial for enriching the Indian farmers and also its direct impact on Agriculture sector. The use of Information Technology can definitely help in empowerment of Indian farmers and thereby diverting them from committing suicides.

Need For the study
Contribution of Agriculture sector in Indian economy is much higher than world's average (6.1%). Many industries use agricultural products as raw materials hence agricultural sector has to be made more vibrant to meet their needs. Use of latest apps like Kisan Suvidha and Kisan Abhiman app certainly would add more value to agriculture sector and also to enrich Indian farmers. Hence the present study is on impact of Using information technology in AGRICULTURE SECTOR.

Objectives
1. To study the overview of KisanSuvidha App & KisanAbhiman App.
2. To study the challenges and opportunities of use of information technology in agriculture sector.
3. To offer useful suggestions in the light of the findings.

Research Methodology
The study is based on secondary data. The data has been extracted from sources like research articles and authenticated websites.

Two major free apps which are beneficial for Indian Farmers and in-turn agriculture sector.

1) KisanSuvidha App
Pitching for the second green revolution in the country based on science, technology and modern inventions in
the agricultural sector, Prime Minister Narendra Modi launched the KisanSuvidha app for the farmers in 2016. It was developed by CDAC – Mumbai. This mobile app provides information on weather, market prices, seeds, fertilisers, pesticides and agricultural machinery.

KisanSuvidha is an omnibus mobile app developed to help farmers by providing relevant information to them quickly. With click of a button, they can get the information on weather of current day and next 5 days, dealers, market prices, agro advisories, plant protection, IPM Practices etc. Unique features like extreme weather alerts and market prices of commodity in nearest area and the maximum price in state as well as India have been added to empower farmers in the best possible manner. Total Number of downloads of this app are nearly 10,00,000. The government aims to double the average income of farmers by 2022.

**Following facilities are available on KisanSuvida App.**

- **Weather** - provides weather report for that day and weather forecast for next five days of a selected district. Extreme weather alerts are also provided.
- **Dealers** - Name, Mobile number and Address of the dealers of Seeds, Pesticides, Fertilizer and Farm Machinery are provided.
- **Market Prices** - information about rates of various crops in different mandies are provided.
- **Plant Protection** - Crop specific information related to pest management are provided. If the condition of crop is not normal, farmers can upload a picture/photo of the crop and send it through kisansuvidha app to agriculture experts for advice.
- **Agro Advisories** - Information from agriculture experts of districts regarding the advisories about activities to be undertaken and precaution to be taken staring from sowing to harvesting.
- **Contact KCC** - This option provides facility to speak to Kisan Call Centre (KCC).
- **Soil Heath Card** - option gives information about Soil Health Card, so that farmers can use fertilizer and pesticides judiciously having regard to minerals available in a particular land/farm.
- **Cold Storage and go downs** - information about warehouse and cold storage available in the district like warehouse / cold storage, name of manager, address, storage capacity and phone number etc are provided.

**2) Kisan Abhiman App**


- Zee Marathi’s KisaanAbhiman app was introduced in 2019 with the singular purpose of improving the lives of farmers, having nearly 1,00,000 downloads and over 40,000 registrations in its inaugural year. Available in 10 languages, the app hopes to better the lives of all farmers across India.
- As rural economy is majorly driven by agriculture, taking a step forward, this platform brings all the stakeholders related to farm products together i.e. farmers, wholesalers, retailers, customers, agro-product manufacturers & so on. The thought behind the initiative is to make the life of farmers better and truly become a source of pride for farmers.
● The website/app allows anyone to get listed as sellers e.g. farmers, wholesalers etc. or as buyers e.g. individual customers, retailers, organizations, hotels etc. The seller can list the products they want to sell, and the buyer can directly buy from the seller.

● This establishes direct connection facilitating both to get a better deal on farm products. It also provides easy access of information from local to national markets.

● One of the other key features is that it is available in 10 major Indian languages. It means the person can navigate through the website/app in a language they are comfortable in.

**Major challenges in use of information technology in agriculture sector**

1) Information Technology illiteracy in rural area.

2) Language Barrier.

3) Need of smart phones to use the app which is not affordable in rural area.

4) Need of internet connection.

5) Lack of knowledge of using advanced technology in rural area.

**Opportunities of use of mobile apps in agriculture sector.**

Mobile apps are not only limited for buying and selling of grains and vegetables but can also be used for various agriculture based products which will be helpful for farmers in rural area to develop their own small scale industries and can have direct connection with the customers.

**Findings of the study**

Various mobile apps have given a digital platform which is very much useful to enrich farmers by providing knowledge of advanced technology and also direct market to sale their products which almost doubles their average income.

**Suggestions :**

These apps can also facilitate farmers in rural area to borrow expensive tools on rental basis which are not affordable for them to buy. Also apps can provide the facility to place the order in the form of voice message or video call so that it will be more user friendly.

**Conclusion**

Use of Information Technology in agriculture sectors will definitely help in enriching farmers and empowerment of Indian farmers.
Abstract:
The Indian Pharmaceutical industry was valued at USD 33 Billion in 2017. The exports from India alone stood at USD 17.27 Billion. The industry is expected to grow at a CAGR of 22.4% between 2015-2020 and achieve a market size of USD 55 Billion, of which the domestic generic market is expected to contribute USD 27.9 Billion. India has also become a popular destination for outsourced contract research and manufacturing service. The industry is typically involved in four types of businesses- marketing of generic medicines, marketing of branded generic medicines, marketing of innovator medicines, and manufacture and supply of active pharmaceutical ingredients which are used as ingredients in medicines as well as finished formulations. This also complies with various innovation like Nano Technology & 3D Printing etc.

Key words: Nano Technology, API, CAGR

Introduction:
The pharmaceutical industry discovers, develops, produces, and markets drugs or pharmaceutical drugs for use as medications/medicines to be administered (or self-administered) to patients, with the aim to cure them, vaccinate them, or alleviate the symptoms. Pharmaceutical companies may deal in generic or brand medications and medical devices. They are subject to a variety of laws and regulations that govern the patenting, testing, safety, efficacy and marketing of drugs.

The modern pharmaceutical industry began with local apothecaries that expanded from their traditional role distributing botanical drugs such as morphine and quinine to wholesale manufacture in the mid-1800s, and from discoveries resulting from applied research. Intentional drug discovery from plants began with the isolation between 1803 and 1805 of morphine - an analgesic and sleep-inducing agent - from opium by the German apothecary assistant Friedrich Sertürner, who named the compound after the Greek god of dreams, Morpheus. By the late 1880s, German dye manufacturers had perfected the purification of individual organic compounds from tar and other mineral sources and had also established rudimentary methods in organic chemical synthesis. The development of synthetic chemical methods allowed scientists to systematically vary the structure of chemical substances, and growth in the emerging science of pharmacology expanded their ability to evaluate the biological effects of these structural changes.

History of Indian Pharmaceuticals

Indian pharmaceutical sector was not a part of the global revolution. The capital, new technologies were major factors affected on the growth of Indian sector. The government of India tried to attract multinational companies to invest in India. As a result of liberalizations in government policies, many foreign companies invested in Indian sector. With the government efforts and investment of global entrepreneurs, Indian pharmaceutical sector could achieve the growth of Rs 35 crore in 1952 from Rs 10 crore in 1947.
This growth was mainly contributed by manufacturing the bulk drugs rather than final product. When Government of India observed that in the pharmaceutical sector the multinational companies (MNCs) were behaving just like trade agents, i.e. importing drugs and marketing in India and were not engaged in activities that would build domestic competence, a new strategy with the lead role assigned to the public sector firms was devised for building up the pharmaceutical industry.

The Industrial Policy Resolution of 1956 classified industries into three categories based on their priorities. “Schedule A” industries were exclusively reserved for the public sector and “Schedule B” consisted of industries, where the public sector would play a lead role and the private sector was expected to supplement the efforts of the State. “Schedule C” consisted of the remaining industries whose future development was left to the private initiatives. The pharmaceutical industry fell under Schedule B. Private industry was also encouraged, though strictly regulated through industrial licensing.

The licensing was granted under the supervision of The Directorate General of Technical Development for setting up the new units or expansion of the existing units keeping into an account of the medicinal need of the country.

As a result of this policy many MNCs expanded their units and many new Indian companies established. With this the Indian pharmaceutical sector could achieve the growth up to Rs 100 crore in 1962.

Scope of Pharmaceutical Industry in India

The pharmaceutical sector was valued at US$ 33 billion in 2017. The country’s pharmaceutical industry is expected to expand at a CAGR of 22.4 per cent over 2015–20 to reach US$ 55 billion. India’s pharmaceutical exports stood at US$ 17.27 billion in 2018 and have reached US$ 19.14 billion in 2019.

Top 10 Indian Pharmaceutical companies list (2018)

<table>
<thead>
<tr>
<th>S No.</th>
<th>Company</th>
<th>Market Capture</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sun Pharma</td>
<td>₹ 1,38,489</td>
<td>₹ 7,948</td>
</tr>
<tr>
<td>2</td>
<td>Cipla</td>
<td>₹ 49,205</td>
<td>₹ 11,445</td>
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<tr>
<td></td>
<td>Aurobindo Pharma</td>
<td>₹ 45,402</td>
<td>₹ 10,303</td>
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<tr>
<td>4</td>
<td>Lupin</td>
<td>₹ 38,610</td>
<td>₹ 10,088</td>
</tr>
<tr>
<td>5</td>
<td>Dr Reddy Labs</td>
<td>₹ 40,100</td>
<td>₹ 9,359</td>
</tr>
<tr>
<td>6</td>
<td>Cadila Healthcare</td>
<td>₹ 37,136</td>
<td>₹ 5,810</td>
</tr>
<tr>
<td>7</td>
<td>Divi's Labs</td>
<td>₹ 39,024</td>
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<tr>
<td>8</td>
<td>Biocon</td>
<td>₹ 37,752</td>
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<tr>
<td>9</td>
<td>Torrent Pharma</td>
<td>₹ 27,467</td>
<td>₹ 4,248</td>
</tr>
<tr>
<td>10</td>
<td>Glenmark</td>
<td>₹ 17,758</td>
<td>₹ 6,432</td>
</tr>
</tbody>
</table>
Innovations in India Pharmaceutical Industry

1. Nano Technology
Nanotechnology in a drug is a buzz-topic for already over 20 years. By definition, Nanotechnology is a multi-disciplinary, scientific effort, which involves creation and utilization of essence devises or system on Nano meter scale. A medical application of nanotechnology is called nanomedicine. A lot of professionals from Pharma Industry hope that Nanotechnology is going to unleash breakthroughs in genetic engineering, medicine, diagnosis and in various types of dosage forms in pharmacy. One out of many nanomedicine examples is Genexol-PM by Samyang – the anticancer nanomedicine. Genexol-PM fights the breast cancer and non-small lung cancer. It is a sterile, lyophilized polymeric micellar formulation of paclitaxel that employs a colloidal carrier system to allow intravenous delivery of paclitaxel. There is a hope, that soon we will live the time, when we are able to have a heart surgery by swallowing a pill of nanorobots.

2. Personalized Medicine and Customization
At the moment we buy drugs that have been designed for millions of people, without taking into account everyone’s genetic differences. In the nearest future, the patient will enter pharmacy and based on patient’s medical records and examinations, the pharmacist will print out the customized drugs and will suggest the
additional treatments. At the moment, this practice is getting adopted mostly by oncology and genetic diseases focused pharma companies.

3. **3D Printing**

3D Printing in Pharma goes along with the trend of personalized medicine and customization. With the rapid development of 3D printers and their adaptation for Pharma Industry, soon patients and pharmacists will be able to print out needed medicine at any time and under any circumstances. In the year 2015 the first drug was printed by 3D printer. The drug is called Spritam (ownership belongs to pharmaceutical company Aprecia) and is meant to manage the epilepsy. Officially it is the first 3D-printed product that the FDA (US Food and Drug Administration) has approved for use inside the human body. Spritam pill is made by 3D-printing layers of the powdered drug, binding the layers of powder together, and then blowing away the excess powder. The drug’s unique structure allows it to dissolve considerably faster than the average pill, which is a big help to seizure sufferers who often are prescribed large, hard-to-swallow pills.

4. **Artificial Intelligence and Cognitive Computers**

With the help of Artificial Intelligence and cognitive computers, people are able to gather and classify unimaginable amounts of information in seconds. This tackles the problem, that the current drug discovery process is too lengthy and very expensive. Using Artificial Intelligence and cognitive computers, Pharma companies finally will be able to run cognitive trials in seconds instead of a decade or for longer periods of time. Furthermore, this shorter time of testing will save up billions of dollars, which will have an impact on decreasing the drug prices. Now patients who live in hope to get their drug on time, will be able to get it much sooner. Furthermore, this could be the end of animal or human experimentation. The example here is the company called BenevolentBio. They have developed the Artificial Intelligence based Judgement Correlation System (JACS), which is able to review billions of sentences and paragraphs from millions of scientific research papers and abstracts.

5. **Body Sensors**

Following the trend of Artificial Intelligence (AI), there is stepping in the trend of body sensors. Integrated body chips, wearables, digital tattoos, mini robots and the other body sensors can obtain the information of the patient and send it immediately to the healthcare professionals, which can immediately indicate what drugs are required. This allows us making informed decisions. As an example, company Emulate develops the Organs-on-Chips technology, to create an integrated system that provides a high-fidelity window into the inner-workings of the human body. The system integrates micro-engineering with living human cells, offering a new method of modelling human biology. It offers researchers and product development teams a new standard for predicting human response, with greater precision and control than today’s cell-culture or animal-based testing approaches.

**Literature Review**

Rory Horner (2013) reported that the Indian pharmaceutical industry, where a selective and short-term strategic decoupling and subsequent recouping has played a crucial role in the development of what is now the largest such industry in the Global South, this article explores how decoupling from GPNs may lead to positive
development outcomes. The experience of India and the pharmaceutical industry shows that a sequence of decoupling and recoupling can be an alternative to strategic coupling as a route to economic development.

Kumar et al. (2012) attempts to measure the effect of change in capital structures on the cost of capital of various pharmaceutical companies. Similarly, this study analyses the significance of cost of capital for the period 2007-2011. He concludes that the capital structure decision of the pharmaceutical companies has very little effect on cost of capital, because companies are becoming the risk averse with passage of time, therefore the company is using maximum equity financing in the recent period as compared to previous period. Similarly, the analysis of the study evident the implications of Traditional approach of capital structure in the later stage in the company’s financial planning. At last it can be said that the cost of capital is an important factor to determine the optimal capital structure to have the maximum firm value

Saktivel, (2011) attempted to analyse the value creation in Indian Pharmaceutical Industry from 1997-98 to 2006-07 by using regression analysis. From the inferences of the entire results, it is found that the companies with high level of EVA are very highly valued and differ from valuation of companies with low and moderate EVA groups. So, it is clear that there is significant association between MVA and EVA for companies under pharmaceutical industry. It is strongly concluded that there is significant difference in mean value creation across low, moderate and high total productivity for pharmaceutical companies. In regression analysis, it is found that total productivity does not have explanatory power on value creation in short-term, but it has some influence on value creation in the long-run in respect of pharmaceutical companies. It is found that EVA is only variable which has unique influence on MVA of Pharmaceutical companies. Hence, it is concluded that Economic value added has positive significant impact on Value Creation for Pharmaceutical companies.

Anand (2004) made a study based on the survey conducted in 2001 of 81 CFO’s drawn from a large (based on market capitalization) cross section of 474 private sector and 51 public sector firms of corporate India. The study supported the findings of Lintner’s study on dividend policy. The dividend policy was designed in a manner to take into consideration the investors’ preference for dividend and clientele effect. In addition to its dividend policy was used as a signaling mechanism to convey information on the present and future prospects of the firm indicating that the same does affect the market value.

Research Methodology

Selection of data
To know the growth prospects of pharmaceutical industry. Secondary data has been used from various magazines, books, published journals, websites. Etc.

Objectives
To study Indian Pharmaceutical Industry
To study innovations in Indian Pharma industry

Results and Findings

Exports from India
It is expected to grow by 30 per cent to reach US$ 20 billion by the year 2020.

In 2018-19, top importers of India’s pharmaceutical* products were USA (US$ 119.18 million), Russia (US$ 10.33 million), UK (US$ 9.83 million), South Africa (US$ 3.63 million) and Nigeria (US$ 1.71 million).

India is expected to rank amongst the top three pharmaceutical markets in terms of incremental growth by 2020.

India is the largest supplier of generic medicines globally (20 to 22 per cent of global export volume)

India has one of the lowest manufacturing costs in the world. It is lower than that of USA and almost half of Europe.

**Government Initiatives**

Some of the initiatives taken by the government to promote the pharmaceutical sector in India are as follows:

- In October 2018, the Uttar Pradesh Government announced that it will set up six pharma parks in the state and has received investment commitments of more than Rs 5,000-6,000 crore (US$ 712-855 million) for the same.

- The National Health Protection Scheme is largest government funded healthcare programme in the world, which is expected to benefit 100 million poor families in the country by providing a cover of up to Rs 5 lakh (US$ 7,723.2) per family per year for secondary and tertiary care hospitalisation. The programme was announced in Union Budget 2018-19.

- In March 2018, the Drug Controller General of India (DCGI) announced its plans to start a single-window facility to provide consents, approvals and other information. The move is aimed at giving a push to the Make in India initiative.

- The Government of India is planning to set up an electronic platform to regulate online pharmacies under a new policy, in order to stop any misuse due to easy availability.

- The Government of India unveiled ‘Pharma Vision 2020’ aimed at making India a global leader in end-to-end drug manufacture. Approval time for new facilities has been reduced to boost investments.

- The government introduced mechanisms such as the Drug Price Control Order and the National Pharmaceutical Pricing Authority to deal with the issue of affordability and availability of medicines.

**Road Ahead**

Medicine spending in India is projected to grow 9-12 per cent over the next five years, leading India to become one of the top 10 countries in terms of medicine spending.

Going forward, better growth in domestic sales would also depend on the ability of companies to align their product portfolio towards chronic therapies for diseases such as cardiovascular, anti-diabetes, anti-depressants and anti-cancers that are on the rise.

The Indian government has taken many steps to reduce costs and bring down healthcare expenses. Speedy introduction of generic drugs into the market has remained in focus and is expected to benefit the Indian pharmaceutical companies. In addition, the thrust on rural health programmes, lifesaving drugs and preventive vaccines also augurs well for the pharmaceutical companies.
India is a fast-growing economy. The Indian economy is rapidly getting bigger. The real GDP growth reached 9% in March 2008. In the year to March 2009, growth eased to 6.7%. Reserve Bank of India (RBI) anticipates growth improving to 6% in the year ending March 2010, and expects robust growth of 7.8% p.a for the next ten years. Forecasts such as those of Goldman Sachs suggest that India will be the only emerging economy to maintain such an outstanding pace over the longer term, i.e. to 2050.

India’s economy in the pharmaceutical market has been increasing as the years passed. Based on the graph, India’s GDP growth will overtake Brazil, China and Russia ultimately. This brings large income for India to grow and the country is moving forward, thereby attracting more countries to collaborate with India.

Conclusion

There has never been a more important time for India's government and its drug producers, both multinational and domestic, to work together in partnership for the good of the industry and the nation. India has the potential to become the region's hub for pharmaceutical and biotechnology discovery research, manufacturing, exporting and health care services within the next decade. However, in order for this to happen, it is imperative that the regulatory environment continues to improve. Otherwise, India needs to look to the achievements of China, where the government's strong commitment pro-industry policies have produced a positive environment that not only offers drug manufacturers a product patent regime but also, and crucially, data protection. The goals set out in the Indian government's draft National Pharmaceuticals Policy for 2006 in terms of domestic market development are ambitious, and will require a positive pricing environment if the country's 1 billion people are to be able to access the life-saving and innovative medicines they need. Again, partnership is key: industry leaders are keen to work with government on issues of affordability and point out that price controls will do nothing to increase access to new and effective treatments. For foreign investors, collaborations with India
present a huge opportunity both in terms of joint production for the global market and supply of the growing domestic market.

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A STUDY OF INITIATIVES UNDERTAKEN BY THE GOVERNMENT TO PROMOTE DIGITAL LEARNING ENVIRONMENT IN INDIA

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ABSTRACT:
Knowledge will be the foundation of India’s $5 trillion digital economy, and building this foundation will require improving learning outcomes among students. Researches have shown that adopting assisted digital delivery models can help improve the effectiveness of classroom education. Digital content and channel will provide a powerful opportunity to bridge the gap between access and improvement of learning outcomes. Also, digital channels can help to reach students in remote locations with poor infrastructure and safety. In this paper, we shall understand more about digital learning, especially in the present context and to briefly discuss the major government initiatives to promote digital learning.

KEYWORDS: Digital learning, Trillion dollar economy, MHRD, NMEICT.

INTRODUCTION
The Ministry of Electronics and Information Technology (MeIT), Government of India, recently launched its vision for 5 Trillion-Dollar digital economy by 2025. Based on the study conducted in collaboration with McKinsey and company, it is said that since 2014-15 India is the 2nd fastest growing digital economy amongst 17 other emerging mature digital economies. Large scale digital transformation is possible in India. The digital adoption rate in India has increased mainly due to public digital platforms like Aadhaar, UPI and the latest fastag. Also, the success of this mission can lead to the creation of projected new 60-65 million jobs. However, achieving this herculean task is not impossible on its entirety, but it will require collaborative action by government and businesses in a ‘Team India’ spirit.

The vision outlines 30 digital themes, which if scaled up nationally, can increase India’s progress in nine key areas that include – IT and telecom infrastructure and software services, E-governance, healthcare for all, quality education, energy for all, next-generation financial services, farmer’s income, Make in India/ Make for India and Make for the world and jobs and skills for all. This study is done with special reference to one of these spheres – quality education. The main objective of this research paper is to understand the schemes undertaken by the Government to promote digital learning in India, to review them and to uncover the challenges associated with digital learning.

OBJECTIVES OF THE STUDY:
- To understand the concept of digital learning.
To discuss the various digital learning initiatives introduced by the Government of India.

To examine the challenges to be overcome in e-learning scenario.

**METHODODOLOGY OF THE STUDY:** The study was mainly done with the help of secondary data. The main sources referred was websites, newspapers and journals. A lot of published literature was studied in depth to gain a deeper understanding of the subject.

**NEED FOR THE STUDY**
India was once known as Vishwaguru and knowledge-seekers from all over the world used to come to study at renowned learning centres like Nalanda and Takshashila. Our students must draw inspiration from our glorious past to create a glorious future. With 1.5 million schools, 8.7 million school teachers, 250 million school students and about 800 universities, 41000 higher education colleges and about 30 million students in higher education, India is one of the largest education systems of the world. \(^{(2)}\)

Thanks to the efforts of the government that the Gross Enrolment Ratio (GER) in higher education has increased from 19 per cent in 2010-11 to 25.8 per cent by 2017-18 and to 26.3 per cent by 2018-19. \(^{(3)}\) The targeted GER is to achieve 30 per cent by 2020.


\(^{(3)}\) The Hindu Business line - Published on August 21, 2019.

But a mere increase in GER is not just enough as the quality of education is more important than the increase in numbers. In fact, education as human capital needs more emphasis as Government of India has set a cherished goal of achieving the US $5 trillion economy in the coming years. Development of knowledge and skills of manpower in general and the educated youth, in particular, is the key strategy for accelerating economic growth of the nation.

**DIGITAL LEARNING**

**Meaning**
Digital learning or E-learning signifies the use of ICT in the learning process. Various tools and technologies such as e-mails, multimedia, internet, video streaming and virtual classrooms can be applied for this purpose.

**Popularity**
The popularity of digital learning can be identified from the following reasons-
- Every day, increasingly people make use of the internet for gaining information.
- Online courses have mushroomed like never before.
- The number of students registering for such courses has shot the roof.
- Virtual classrooms are on the rise.
- Digital learning has become a training tool for the freshers in the corporate sector.

**Benefits**
- E-learning does not demand students to be present physically in the classrooms. One can take the courses from the comfort of their homes. This saves a lot of travelling time. Therefore, it is cost-effective and time-
saving.

- A very limited physical infrastructure is required for conducting such courses. Additionally, such courses cater to a large audience spread wide. Therefore, distance is no longer a hindrance in the process of education.

- One of the biggest benefits of e-learning is that there is no need to rush through the concepts. It facilitates self-paced learning, which enables to overcome the biggest difficulty of catering simultaneously to a variety of learners, in Indian classrooms.

- Many studies have concluded that e-learning results in higher knowledge retention. Game-based learning, inquiry-project based learning, peer-to-peer coaching etc. have resulted in better understanding and retention of concepts, as result of which learning becomes more productive.

- E-learning provides enough room for the learners to manage their tasks as and when they find it convenient. Therefore there is no scope for lagging behind in the class in an e-learning environment.

- The content of e-learning is very appealing to the learners, as it is supplemented with videos, spreadsheets, and other such aids.

- Also, many digital courses allow learners to join them based on their interests, irrespective of their educational background.

- Step-by-step explanation makes the courses suitable for any level of comprehensive skill.

- Most of the e-learning platform provides discussion forums, which encourages sharing of the acquired knowledge through the online communities.

DIGITAL LEARNING INITIATIVES OF GOVERNMENT OF INDIA

1) **SWAYAM**: Under the ‘Digital India’ initiative one of the thrust areas is ‘Massive Online Open Courses (MOOC)’. Under this initiative Government has launched ‘Study Webs of Active and Young Aspiring Minds’(SWAYAM), this program is designed on three cardinal principles of Education Policy- access, equity and quality. The main objective behind SWAYAM was to take the best teaching-learning resources to all. SWAYAM seeks to bring to the mainstream of knowledge economy to those learners who have remained aloof of the digital revolution. It provides a platform for hosting of courses ranging from class 9th till post-graduation to be accessed by anyone, anywhere and anytime.

2) **SWAYAM PRABHA**: It is a group of 32 DTH channels devoted to telecasting of high quality of educational programmes on a 24X7 basis using the G-SAT-15 satellite. Every day there will be new content for at least four hours which would be repeated five more times in a day, allowing the students to choose their time of convenience.

3) **DIKSHA**: The MHRD has recently announced a national platform DIKSHA that will provide a full range of tools for teachers to create digital content for supporting in-class resources, peer-training material and assessment aids. Though this initiative is still at its initial stages, adaptive learning solutions could be utilised for teacher training, improving teacher’s grasp of the course content, and will enable them to learn more effective teaching-learning solutions like role-playing or gamification.
4) **Operation Digital Board:** MHRD has launched operation digital board in lines with operation blackboard to started in 1987 (to supply bare minimum crucial facilities to all primary schools). This initiative is to leverage technology to boost quality education in the country. Digital boards have been introduced in all government schools from class 9th onwards as well as higher education. It aims at converting classrooms into digital classrooms. This will ensure availability of e-resources to students anytime. It will help in provisioning personalised adaptive learning as well as intelligent tutoring.

5) **Virtual Labs:** MHRD under its NMEICT has initiated the idea of virtual labs. This project is a consortium between twelve participating institutions and IIT Delhi being the coordinating institute. The main objective behind this initiative is to provide a remote-access to Labs in various disciplines of science and engineering for students ranging from undergrad level till research scholars. It attempts to carry out actual lab experiments remotely. This will enable the sharing of costly lab equipments and resources, which are otherwise available to a limited number of users.

6) **E-Kalpa (D’source):** This is a project on 'Creating Digital-learning Environment for Design' also called 'e-Kalpa' is sponsored by the Ministry of Human Resources, Government of India as part of the National Mission in Education through Information and Communication Technology. The main intention is the creation of new learning environments that will provide access to the acquisition of critical knowledge, skills, and abilities in the field of design. This project presents three initiatives – providing digital content for design, a social networking environment for design and creating a digital resources database on design.

7) **ePathshala:** E-Pathshala is a joint initiative by MHRD and NCERT for showcasing and disseminating all educational e-resources including textbook, audio, video, periodicals and a variety of digital resources. Students, Teachers, Educators and Parents can access eBooks through multiple technology platforms like mobile phones and tablets (as epub) and from the web portal through laptops and desktops (as Flipbook). ePathshala also allows users to carry as many books as their device supports. Features of these books allow users to pinch, select, zoom, bookmark, highlight, navigate, share, listen to text using text to speech (TTS) apps and make notes digitally.

8) **e-PG Pathshala:** It is yet another initiative by MHRD being executed by UGC. It is a web-based portal that provides high-quality curriculum-based, interactive e-content in 70 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural and mathematical sciences etc.

9) **National Digital Library of India (NDL India):** The MHRD under its National mission for education through ICT has developed in collaboration with IIT Kharagpur, has developed the NDL. It is an all-digital library that stores information (metadata) about different types of digital content including books, articles, videos, audios, thesis and other such materials pertinent for users from varied educational level and capabilities. It provides a single-window search facility to access digital content currently available in India.

10) **E-Shodh Sindhu:** This is yet another initiative by MHRD, to provide a current as well as archival access to more than 15000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines for the benefit of the academic and research community in the country as
well as to all the educational institutions at lower rates of subscription. The main objective behind this initiative is to bridge the digital gap and create an information-rich society.

11) Vidwan: Vidwan is the premier database of profiles of scientists/researchers and other faculty members working at leading educational institutions and other R&D organisations involved in teaching and researches in India. It provides information about the expert’s background, contact address, experience, scholarly publication, skills and accomplishments, researcher identity etc. This database will be instrumental in the selection of panels for various committee, taskforce established by Ministries or Government. It will help to identify peer reviewers for articles and research proposal, discover prospective collaborators for ongoing researches, to create information exchanges and networking opportunities among scientists.

Challenges to overcome in this process:

- People commonly resist change. They might not accept that tech-driven education can be as effective as interacting with a physical instructor.
- There is a lack of awareness of e-learning initiatives started by the MHRD among students, parents, teachers and many educational institutions as well.
- Another important limitation is that there is a lack of good quality e-learning content due to lack of expertise, money and time constraint.
- Also, there is a lack of proper digital infrastructure in many places due to the enormous financial resources needed.
- Due to poor internet connectivity and bandwidth, there are problems in downloading the content which makes the process slower.
- Internet availability and devices are only enablers. Teachers and students have to be trained in ICT.
- Also, E-learning requires a very high degree of self-motivation, and not many learners possess this quality.
- Online courses in India also ignore the content around basic literacy and primary education needs of the marginalized poor rural population.
- Another important obstacle is that distance learning is still not considered at par with classroom learning. For eg., AICTE does not recognise many technical degrees earned purely through distance medium. Digital learning is classified as distance learning.

CONCLUSION

The cherished dream of Trillion-Dollar economy is not that far fetched if all that is planned by the Government is effectively implemented as well. The same is true for the field of digital education. The literacy rates, as well as learning outcomes, can be improved largely if digital learning reaches the masses. Digital learning platforms will not just improve the engagement at primary and secondary levels, but it will be beneficial for higher education students and budding researchers as well. Also, better learning outcomes can be achieved, when teachers will supplement their traditional methods of instruction with digital content like interactive media, graphics and virtual labs. Another reason why awareness about digital learning initiatives is important is that it will help to review the research works of several researchers and improving the quality of the publications. This
free flow of information among communities can help to develop an information-rich society which in turn will be the foundation of the sustainability of the Trillion Dollar Digital economy.

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APPLICATION OF TIME FRACTIONAL KdV EQUATION IN IMMERSIVE TECHNOLOGY

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ABSTRACT
In this paper, I developed the fractional order Adomian Decomposition Method to solve the time fractional KdV equation. It is known that KdV equation is useful to describe application of sensors and sensors are very important physical device in Immersive Technology. This paper will highlight the relationship among KdV equation, Sensors and Immersive Technology. The aim is to solve time fractional KdV equation which may help the researchers for their work. Time fractional derivatives are considered as Caputo fractional derivatives. Example is solved which shows the efficiency and convenience of Adomian Decomposition Method. Also, solution is shown graphically by using mathematica software.

KEYWORDS: Time fractional KdV equation, Immersive Technology, Sensor, Caputo fractional derivative, Adomian Decomposition Method, Mathematica Software.

Section-1: Introduction
It is rightly said by our honorable Prime Minister Narendra Modi that innovation, aspiration and application of technology will fuel India’s $5 trillion economy. Out of which technology is one of the pillar of foundation of progress in 21st technology. India has an ambitious target of raising its economy to $5 trillion in five years. Technology can increase the productivity of business & agriculture, education and healthcare standards. Technology that creates a new reality by leveraging the 360 space. It refers to technology that attempts to emulate a physical world by creating a sense of immersion. The different types of immersive are Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR) and Extended Reality (XR). These technologies are creating a new environment where physical & virtual objects are integrated at different levels. They are playing a key role in several industries such as retail, tourism, education, healthcare, entertainment and research [1].

Immersion technology is developing more with the development of related technologies such as advanced sensors, computer graphics, real-time registration, tracking etc. Various sensors used in Immersive technology devices can analyze and understand a user’s environment. Sensor data can be collected by target tracking process. Target tracking process can be defined as a set of algorithm and the algorithm is based on a nonlinear KdV equation as a moving target detector.

Target tracking process can be defined as a set of algorithm and the algorithm is based on a nonlinear KdV equation as a moving target detector. In the paper [3] it is proved that the solutions of inhomogeneous KdV equation helps to get the right information about moving targets by using soliton resonance method. A novel neural architecture named "Spectral network" is being proposed for detecting targets in a cluttered background.
and results can be interpreted in terms of resonances by KdV equations.[4]

It shows the importance of KdV equation in target tracking process which is important for sensor data analysis and leads to application in immersive technology. In this paper time fractional KdV equation is solved. Several methods are used to solve fractional differential equations such as Laplace transform method, Fourier transform method, Perturbation method, Iteration method etc. In this paper Adomian Decomposition Method is used to solve time fractional KdV equation.

The KdV equation is given by
\[ \frac{\partial w(x,t)}{\partial t} + \epsilon w(x,t) \frac{\partial w(x,t)}{\partial x} + \mu \frac{\partial^3 w(x,t)}{\partial x^3} = 0, \quad 0 < x < L, \quad t > 0 \]  

[1.1]

Here \( w(x,t) \) is the dependent variable, \( x \) and \( t \) are independent variables. The parameters \( \epsilon \) and \( \mu \) are real constants.

Consider the following time fractional homogeneous KdV equation:-
\[ \frac{\partial^\alpha w(x,t)}{\partial t^\alpha} - 6 w(x,t) \frac{\partial w(x,t)}{\partial x} + \frac{\partial^3 w(x,t)}{\partial x^3} = 0, \quad 0 < x < L, \quad 0 < \alpha \leq 1, \quad t > 0 \]

The aim of this paper is to solve time fractional KdV equation by using Adomian Decomposition Method. Some formulae and theorem are explained in Section 2 which are used in our calculations. Section 3 is devoted for ADM to solve time fractional KdV equation. In section 4 numerical problem is solved and presented graphically.

**Section -2:- Basic Preliminaries**

Definition 2.1 The Caputo time fractional derivative of order \( \alpha, \ (0 < \alpha \leq 1) \) is defined as follows
\[ \frac{\partial^\alpha U(x,t)}{\partial t^\alpha} = \frac{1}{\Gamma(1-\alpha)} \int_0^t \frac{\partial U(x,t)}{\partial \xi} \frac{d\xi}{(t-\xi)^\alpha}, \quad 0 < \alpha < 1 \]
\[ \frac{\partial U(x,t)}{\partial t}, \quad \alpha = 1 \]

**Section -3:- Fractional Adomian Decomposition Method (FADM)**

To demonstrate Time Fractional ADM to solve KdV, we consider following time fractional KdV equation-
\[ \frac{\partial^\alpha w(x,t)}{\partial t^\alpha} - 6 w(x,t) \frac{\partial w(x,t)}{\partial x} + \frac{\partial^3 w(x,t)}{\partial x^3} = 0, \quad 0 < x < L, \quad 0 < \alpha \leq 1, \quad t > 0 \]

initial condition \( w(x,0) = f(x) \)

Operating with the operator \( J^\alpha \) on both sides of equation, we have
\[ J^\alpha \left( \frac{\partial^\alpha w(x,t)}{\partial t^\alpha} - 6 w(x,t) \frac{\partial w(x,t)}{\partial x} + \frac{\partial^3 w(x,t)}{\partial x^3} \right) = 0 \]

Now, we decompose the unknown function \( w(x,t) \) into sum of an infinite number of components given by the decomposition series
\[ w(x,t) = \sum_{n=0}^{\infty} w_n \]
The nonlinear terms $N w(x,t)$ are decomposed in the following form:

$$N w(x,t) = \sum_{n=0}^{\infty} A_n$$

Substituting the decomposition series and using, ADM, we get

$$w_0(x,t) = w(x,0)$$

$$w_{k+1}(x,t) = \int^1_0 [6A_k - D_x^3 w_k(x,t)] d\alpha$$

Where each component can be determined by using the preceding components and we can obtain the solution in a series form by calculating the components $w_n(x,t)$, $n \geq 0$. Finally, approximating the solution $w(x,t)$ by the truncated series.

**Section-4 : Application**

Consider the following time fractional KdV equation:

$$\frac{\partial^\alpha w(x,t)}{\partial t^\alpha} - 6 w(x,t) \frac{\partial w(x,t)}{\partial x} + \frac{\partial^3 w(x,t)}{\partial x^3} = 0, \quad 0 < \alpha \leq 1, \quad t > 0$$

Initial condition: $w(x,0) = 6x$

From above solution we have $w_0(x,t) = 6x$

$$w_1(x,t) = \int^1_0 [6A_0 - D_x^3 w_0(x,t)] d\alpha$$

Substituting values and solving, we have –

$$w_1(x,t) = 6^3 x^\alpha \frac{t^\alpha}{\Gamma(\alpha + 1)}$$

Similarly-

$$w_2(x,t) = 2 * 6^5 x^{2\alpha} \frac{t^{2\alpha}}{\Gamma(2\alpha + 1)}$$

Therefore we have –

$$W(x,t) = w_0(x,t) + w_1(x,t) + w_2(x,t) + \ldots\ldots and presented graphically as follow-

\begin{align*}
\{\alpha, 0, .8\}, \{t,0,100\} & \quad \{\alpha,0,1\}, \{t,0,100\}
\end{align*}
Conclusions:-

1) Time fractional KdV equation is solved by using ADM and it is found that ADM is very efficient and powerful technique to find solution of nonlinear fractional partial differential equation.

2) The obtained results demonstrate the reliability of the algorithm and its wider applicability to linear and nonlinear fractional partial differential equations.

3) This work may be useful in next generation of sensors which are explained by using fractional differential equation.

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Abstract:
The continuous amalgamations of technology into the increasing facets of everyday life are conducive to encouraging cyber-crimes, cyber-security solutions. As the information has become one of the biggest challenges in the present day. Whenever we think about the cyber security the first thing that comes to our mind is 'cyber crimes' which are increasing immensely day by day. This paper mainly focuses on challenges faced by cyber security on technologies. It also focuses on latest cyber security techniques, ethics and the trends changing the face of cyber security.

Key Words: Cyber Security, Cyber Crime, Social Media, Hacker, Cyber Ethics.

Introduction:
Cyber security is the combination of policies and practices to prevent and monitor computers, networks, programs and data from unauthorized access or attacks. Today man is able to send, receive any form of data just by the click of a button. But did he ever think how secure his data is being sent to the other person safely without any leakage of information? The answer is hidden in cyber security. As we all know today, we are using Internet on large scale for various technologies like cloud, E-commerce, android and hence these days cyber-crimes are increasing day by day. Today more than 70 percent of total commercial transactions are done online, so this field requires a high quality of security for transparent and best transactions. Thus, Cyber security has become latest issue and it is not only related to IT but also other sectors also. Now a day’s governments are imposing strict laws on cyber securities in order to prevent the loss of important information or data. Every individual must also be aware about Cyber security laws for any Cyber Crime. And every one must be trained to save their data or information from unauthorized access.

Cyber Crime:
Cyber Crime is any Criminal activity that involves a computer, network, device. There are basically 3 types of cyber-crimes which are very common in today’s world which are as follows:

- Crime in which computer device is target example: Hacking the network.
- Crime in which computer is used as a weapon example: Credit card frauds.
- Crime in which the computer is used as an accessory to a crime example: using a computer to store illegally data.
- In common man’s language cyber crime may be defined as crime committed using a computer and the internet to steal a person’s identity or sell contraband or stalk victims all of which are subject to Indian Penal Code. As technology is increasing day by day the rate of Cyber crime also increases.
- Cybercrime now accounts for more than 50% of all crimes in the UK (National Crime Agency)
Malicious hackers are now attacking computers and networks at a rate of one attack every 39 seconds (University of Maryland)

78% of surveyed organizations were affected by a successful cyber attack in 2018 (Imperva 2019 Cyberthreat Defense Report)

Figure 1: Frequency of successful attacks by year.

Cyber security:
Privacy and security of the data will always top the security measures that any organization takes care. We are now in a world where all the information is in a digital form. Social networking sites provide a space where users feel safe as they interact with friends and family. In the case of home users, cyber-criminals would continue to target social media sites to steal personal data. Not only social networking but also during bank transactions a person must take all the required security measures while performing any Bank transaction. According to the survey of U.S 98% of companies are maintaining or increasing their Cyber Security resources. There will be new attacks on Android based devices, but it will not be on massive scale. The fact tablets share the same operating system as smart phones means they will be soon targeted by the same malware as those platforms. The number of malware specimens for Macs would continue to grow, though much less than in the case of PCs.

TRENDS CHANGING CYBER SECURITY:
Web servers:
Cyber criminals distribute their malicious code web servers they’ve compromised. But data-stealing attacks, many of which get the attention of media, are also a big threat. We also need a greater emphasis on protecting web servers and web applications. As this is best platform for these cyber criminals to steal the data.
Mobile Networks

We are able to connect to anyone in any part of the world with network for these mobile networks security is a very big concern. These day firewalls and other security measures are becoming porous as people are using devices such as tablets, phones, all of which again require extra securities apart from those present in the applications used. Mobile networks are highly prone to these cyber-crimes a lot of care must be taken in case of their security issues.

Encryption of the code

Encryption is the process of encoding messages (or information) in such a way that eavesdroppers or hackers cannot read it. In an encryption scheme, the message or information is encrypted using an encryption algorithm, turning it into an unreadable cipher text. This is usually done with the use of an encryption key, which specifies how the message is to be encoded. Encryption at a very beginning level protects data privacy and its integrity. But more use of encryption brings more challenges in cyber security. Encryption is also used to protect data in transit, for example data being transferred via networks (e.g. the Internet, ecommerce), mobile telephones, wireless microphones, wireless intercoms etc. Hence by encrypting the code one can know if there is any leakage of information.

Hacker:

In common a hacker is a person who breaks into computers, usually by gaining access to administrative control. There are basically 3 type of hacker

- White Hat Hacker: A white hat hacker is a computer security specialist who breaks into protected systems and networks to test and assess their security. White hat hacker’s use their skills to improve security by exposing vulnerabilities before malicious hackers (known as black hat hackers) can detect and exploit them.

- Grey Hat Hacker: It refers to a computer security expert who may sometimes violate laws or typical ethical standards.

- Black Hat Hacker: A black hat hacker is an individual with extensive computer knowledge whose purpose is to breach or bypass internet security. Black hat hackers are also known as crackers or dark-side hackers. The general view is that, while hackers build things, crackers break.

SOCIAL MEDIA IN CYBER SECURITY

Social media plays a huge role in cyber security and will contribute a lot to personal cyber threats. Social media adoption among personnel is skyrocketing and so is the threat of attack. Since social networking sites like Facebook, twitter, Linkin are almost used by all age of person every day. So it has become a huge platform for the cyber criminals for hacking private information and stealing valuable data for this site.

Today we share our personal information, companies have to ensure they are just as quick in identifying threats, responding in real time, and avoiding a breach of any kind. Since people are easily attracted by these social media the hackers use them as a bait to get the information and the data they require. Thus people must carefully while dealing with social media in order to prevent the loss of their information. In addition to giving anyone the
power to disseminate commercially sensitive information, social media also gives the same power to spread false information, which can be just being as damaging.

Though social media can be used for cybercrimes these companies cannot afford to stop using social media as it plays an important role in publicity of a company. Instead, they must have solutions that will notify them of the threat in order to fix it before any real damage is done. However companies should understand this and recognize the importance of analyzing the information especially in social conversations and provide appropriate security solutions in order to stay away from risks.

**CYBER SECURITY TECHNIQUES**

*Access and password security*

The concept of user name and password has been basic way of protecting our information from cyber Criminal. If you change your Password every 2-3 months it will be more secure.

*Data Authentication*

The documents which we receive must always be authenticated i.e. before downloading it should be checked if it has originated from a trusted and a reliable source. Authenticating of these documents is usually done by the anti-virus software present in the devices.

*Firewalls*

A firewall is a software program or piece of hardware that helps screen out hackers, viruses, and worms that try to reach your computer over the Internet. All messages entering with internet pass through the firewall present, which examines each message and blocks those that do not meet the specified security criteria. Hence firewalls play an important role in detecting the malware and viruses.

**CYBER ETHICS**

If we practice the cyber ethics there are good chances of us using the internet in a proper and safer ways. The below are a few of them:

- Use of Internet to communicate and interact with other people.
  Email makes it easy to stay in touch with friends and family members, communicate with work colleagues.
- Don’t be a bully on the Internet. Do not call people names, lie about them, send embarrassing pictures of them.
- Internet is considered as a largest library which contains information on any topic, so using this information in a correct and legal way is always essential.
- Never try to send any kind of malware to other’s systems and make them corrupt.
- Never share your personal information to anyone on social media as there is a chance of others misusing it and finally you would end up in a trouble.
- When you’re online never pretend to the other person, and never try to create fake accounts on someone else as it would land you as well as the other person into trouble.

The above are a few cyber ethics one must follow while using the internet.
CONCLUSION

Computer security is a vast topic that is becoming more important because the world is becoming highly interconnected, with networks. Cybercrime continues to diverge down different paths with each year passes and so does the security of the information. Technologies, with the new cyber tools and threats that come to each day, are challenging organizations with not only how they secure their infrastructure, but also how to save the Personal information in new Platform. There is no solution for cybercrimes but we should try our level to minimize them in order to have a safe and secure future in cyber space.

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SKILL ENHANCEMENT THROUGH NSS: A STUDY OF THANE DISTRICT

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Keraleeya Samajam Dombivli’s (Regd.) Model College

Abstract:
For the development of a nation or an economy, social change or bringing innovations, human resource is considered as the key element. With the objective of developing the youth in their early years and to bring about the social consciousness and personality development the Ministry of Youth Affairs launched the scheme of National Service Scheme popularly known as NSS in the year 1969. The present study is an attempt made to assess the contribution of NSS programmes and NSS residential camp in the overall skill enhancement of students.

Key Words: NSS, NSS Volunteers, Skill Enhancement

An Introduction:
The National Service Scheme (NSS) was launched in the year 1969 on September 24th by Education Minister then Dr. V.K.R.V. Rao, this Scheme then was launched in 37 Universities covering all the states, around 40,000 volunteers were enrolled in these universities in 1969. The programme was started during the Gandhi Centenary Year as it was Gandhi ji who inspired the Indian youth to participate in the movement for Indian independence and the social uplift of the downtrodden masses of our nation. The cardinal principle of the programme is that it is organised by the students themselves and both students and teachers through their combined participation in social service, get a sense of involvement in the tasks of national development.

Community service rendered by university and +2 level students has covered several aspects like adoption of villages for intensive development work, carrying out social surveys, sanitation drives, adult education programmes for the weaker sections of the community, organising blood donation camps, etc. NSS volunteers did commendable relief work during natural calamities/emergencies such as cyclones, floods, famine, earthquake, et. From time to time all over the country. The NSS students have also done useful work in organising campaigns for eradication of social evils, and popularization of the nationally accepted objectives like nationalism, democracy, secularism, social harmony and development of scientific temper.

Some of the objectives of National Service Scheme (NSS) are:

- To understand the community in which the volunteers work.
- To understand themselves in relation to their community.
- To identify the needs and problems of the community and involve them in problem-solving
- To develop among a sense of social responsibility among NSS volunteers
- To develop in volunteers, competence required for group-living and sharing of responsibilities
- To help volunteers in acquiring leadership qualities.
- To develop capacity to meet emergencies and natural disasters.
About NSS Programme:
The students who enrol under the NSS two-year programme must contribute towards various activities conducted. These activities are aimed at providing helping hand to the community for addressing their issues and challenges, social upliftment, creating social awareness and many more. Some of the activities under NSS regular activities programme include:

- Blood donation camps
- Health and hygiene related projects (various sessions and check-ups)
- Swachh Bharat project
- Traffic management and road safety programmes
- Water and electricity conservation
- Voters awareness programmes
- Plastic and E-waste management

Objectives of the Study:
The objectives for the purpose of this study are outlined as follows:

- To assess the overall impact of NSS regular activities on the skill enhancement of the volunteers.
- To study the preferences of volunteers towards various NSS Projects
- To check the contribution of NSS Camp in the Personality development of volunteers.

Hypothesis of the Study:

- H0: There is no relationship between NSS regular activities and skill enhancement of NSS Volunteers
- H1: There is a relationship between NSS regular activities and skill enhancement of NSS volunteers
- H0: There is no relationship between NSS Residential Camp and Skill enhancement of volunteers
- H1: There is a relationship between NSS Residential Camp and skill enhancement of volunteers

Review of Literature:
Dr. B Lal (June 2015) in his study on 200 NSS volunteers found that the NSS programme contributes in Increase in self-confidence and self-esteem, increase in awareness levels about the society and community. Voluntary participation in community activities like laying roads, planting trees conserving environment,
construction of water harvesting structures, donations to the victims of natural calamities helping to reduce crime against girls & women,

Dr Syed (June 2019) in his study has stated that NSS has been helpful in making the students aware of the state of the society in our country. It is responsible to a large extent in moulding the character of the youth and also in cultivating the values of love, compassion and courage in them. The dedication with which the NSS volunteers render service during national calamities is truly commendable.

Khandare and Desai in their study showed that the NSS training enabled students acquire specialized competence in communication skill. A good improvement in confidence, interaction skill and negotiation was found in Ayurvedic undergraduate students, the study also exhibited a significant improvement in leadership qualities.

Nath B et.al (March 2014) in their study have suggested that Involvement of all the medical colleges of the country in the NSS activities would contribute significantly to the health status of the country, due to the sheer number of the volunteers that would be available for the cause.

**Research Methodology:**

**Type of Research:** The present study is Descriptive in nature.

**Data collection:** The data or purpose of the study has been collected by primary as well as secondary sources. Primary data has been collected from NSS Volunteers of different colleges located across thane district.

**Scope of Study:** There are around 48000 students enrolled under Mumbai University as NSS Volunteers for academic year 2019-20 out of which around 10,000 belong to thane district colleges The study covers those colleges of thane district in which NSS programme is offered to students, these colleges have to register with Mumbai University for an academic year and they seek permission to enroll a selected number of students under them ( 1 unit of NSS = Maximum 100 students). The university can revise the allotted units for the colleges from time to time. These units get the funding from central government to conduct the activities throughout the year however some colleges under thane district also have self-financed NSS units.

Present statistics about Thane District (for 2019-20)

<table>
<thead>
<tr>
<th></th>
<th>Central Government Funded</th>
<th>Self-financed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Colleges</td>
<td>52</td>
<td>21</td>
<td>73</td>
</tr>
<tr>
<td>No of Units</td>
<td>99</td>
<td>23</td>
<td>122</td>
</tr>
<tr>
<td>No of Students Enrolled</td>
<td>8050</td>
<td>1500</td>
<td>9550</td>
</tr>
</tbody>
</table>

Source: Above information is obtained from the NSS District Co-ordinator of Thane District for 2019-20

**Method of Data Collection:** The primary data for the purpose of this study was collected by adopting convenient random sampling technique through creation of Google form, and the secondary data was collected by referring websites and research articles and papers.

**Sample Size:** The study is based on data collected from 425 NSS volunteers enrolled in various colleges across Thane district.
Data Analysis and Interpretation:

The analysis and interpretation of the information collected randomly from 425 NSS volunteers of thane district colleges is as below:

- Number of students who have completed two years successfully in NSS:

- Active participation by volunteers in NSS activities:
The volunteers were asked their preference or liking towards the various programmes conducted under NSS and it was found that out of all the programmes following are the most liked activities by them:

- Out of total volunteers, 42% were also serving as NSS Leader in their respective college.

- Around 41% of the volunteers also participated in other camps apart from their college residential camp.

- Participation by volunteers in various camps other than the college residential camp:

<table>
<thead>
<tr>
<th>Programme</th>
<th>Participation</th>
</tr>
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<tbody>
<tr>
<td>National Integration Camp</td>
<td>13</td>
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<tr>
<td>Adventure Camp</td>
<td>23</td>
</tr>
<tr>
<td>Avhaan Camp</td>
<td>14</td>
</tr>
<tr>
<td>University Level camp</td>
<td>19</td>
</tr>
<tr>
<td>State Level Camp</td>
<td>43</td>
</tr>
<tr>
<td>Leadership Training Programme Camp</td>
<td>60</td>
</tr>
</tbody>
</table>

Most Liked Programmes

- Road Safety Awareness: 236
- Disaster Management: 162
- Street plays on social Issues: 219
- Health and Hygiene: 234
- Swachh Bharat Activities: 304

Participation in Various Camps
• Change witnessed by volunteers after taking NSS and participating in the activities

![Pie chart showing 92.9% Yes and 7.1% No]

**Area of Change Witnessed after NSS Regular Activities**

- Gained confidence: 230
- Better Communication skills: 250
- Sharing of responsibilities: 213
- Working in team: 213
- Better Behaviour towards family & society: 280
- Overall Personality Development: 288

• NSS activities make you more sensitive towards the community?

![Pie chart showing 97.4% Yes and 2.6% No]

• seven days Residential camp Contributes in your overall skill development?

![Pie chart showing 91.5% Yes and 8.5% No]
Conclusion:
Special emphasis should be given to NSS projects undertaken at college and university level because the quality of such projects can prove to be a key contributor in developing a certain set of skill in the NSS volunteers. The colleges should consider NSS at par with the other alternatives available for bringing the personality changes in students.

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INNOVATIVE TRENDS IN ADVERTISING

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Abstract:
Advertising is a paid form of non-personal communication, influencing audience towards a particular brand, product, service or idea. The competition for marketers has increased on a very high scale, there are successful brands which are always in the mode of change to give something new to their audience, because advertising is not only for creating awareness among consumers but it is a source of entertainment for a large number of audience. There are people who are not interested in buying but watching advertisements can be a fun because it motivates them to think out of the box. It takes lots of efforts and brainstorming for the marketers to present something new to the target which attracts their mind and pulls them towards the product or service. It is very difficult for companies to survive in the market without innovations and unique marketing communication; this has given rise towards unique and extra-ordinary presentation on T.V., Radio, Social media and outdoor channels by the advertisers. This paper covers various new and interesting trends in different modes of advertising specially targeting towards Indian market consumers.

Keywords: Advertising, Marketing, Innovative/Creative, T.V., Social Media

Introduction:
Advertising is the most common way of product or service recall and a tool for spreading awareness, but just by spreading awareness today the companies cannot achieve success because the number of brands and sub brands have increased on a large scale which increases competition and apart from this the inflation in the market also discourages buyers to think before taking a purchase decision, the government regulations, political unrest, are some other factors which demotivates consumers towards free hand buying. All these reasons make a marketer to think out of the box and create a different position for self in such a growing and dynamic economy like India.

Every now and then the trends are changing it is difficult for the companies to survive, if the way of presentation for a brand is not innovative, it is difficult for a customer to remember a common aspect. Earlier there was a hype that celebrities are the important element for a product to be sold, but it has turned out to be a myth today as most of the Indian consumers are smart and are well aware about the tactics of the marketers so a celebrity in an advertisement may not influence a large audience, but an innovative form of presenting a product or service really plays a lot of role in emphasizing the buying decision of the consumers. Companies like TATA group, ITC and Patanjali has created vibrant atmosphere in the field of marketing and advertising by adding some social values and environmental needs with their products and services, some advertisers like Syska, Philips, Polycab wires come up with differentiation strategy by showing some additional benefit which their competitor companies are not providing which also gives them a competitive advantage in market.
Review of Literature:

1) Turkay Bulut and Aysun Yurdaişik (1984) carried out a study on —“Visual Semiotics and Interpretation in the Television Commercial”. The objective of the study was to understand the relationship between visual semiotics and its interpretation in Television commercials. According to the study —Visual communication does not include language codes; it leaves the visual message and the recipient alone. This study concentrates on the construction of meaning from visual messages in advertising through a semiotic analysis outlook which can also be studied through viewer responses to recognize patterns of meaning construction.

2) Haseeb Shabbir and Des Thwaites (2007) carried out study on —”The use of humour to camouflage deceptive advertising”. The basic objective of the study was to find out how humour can be used as a marketing device for mask advertising claims. A Content analysis on 238 advertisements has been done to find out if humour was used to make any unreliable claims.

Objective of the Study:

1) To know about recent developments in the field of advertising.
2) To highlight various new and innovative methods of advertising and marketing by Indian and foreign companies.
3) Unique advertising strategies and concepts used to cater the competition and attract the consumers.

Research Methodology:

The study on Innovative trends in the field of advertising is a research paper made through secondary data sources like newspapers, T.V., books, journals, and websites, also some general perspective, experiential know-how about surrounding market and direct observation by self has been contributed towards information provided in this paper.

Need of Creative Advertising in today’s contemporary society:

1) It creates a memorable and long lasting impression in the minds of the audience.
2) Creates a competitive advantage for the company
3) Provides entertainment value for the consumers
4) Advertisers and Ad agencies are bestowed towards providing uniqueness in the product or service.
5) Customers are benefitted in the form of better quality and add on features or advantages in the product.
6) It gives a different appeal and artistic value towards the brand, which overcomes the traditional image of the company.
7) Due to a unique method of advertising the originality of the brand is preserved.
8) Product differentiation is achieved and it also provides enhanced brand value, name and identity in domestic and foreign market.
9) Use of various channels or modes for advertising to reach a large number of audiences.
10) Helps in selecting proper target market and reaching out to same in less time with a different appeal as compared to the competitors.
11) Allows linking products and services with different ideas and uses.
Tips for making Creative Advertisements:

1) **Personalise:**
With more and more businesses coming up with variety of merchandise, it becomes vital for the companies to create personal connections with the audience, by including personal messages in various marketing tools.

2) **Include Discounts and other benefits:**
The customers today are in search of more value and benefits from the products, in that perspective companies are trying to give add on discounts, warranties, after delivery services, coupons and rebates for the buyers.

3) **Appealing graphics and images:**
Brands are using different variations in colour combinations, logos, mascots, animations and illustrations in a unique way which catches eye movement while scrolling ads on internet channels and also while exploring a print media option which attracts the attention of the audience.

4) **Solve a problem:**
The product or service must be such that it solves some problem or issue of the customers and gives convenience in using the same, which portrays an additional value like in Philips ad it clearly gives the message of innovations and ease of usage and their tagline also says “Innovations and you”.

5) **Comic or entertainment value:**
Some companies are trying to present themselves in a comic image which appeals the market in a positive way as it creates more attention by making the audience laugh and also creates more recall value among the consumers, companies like Centre fresh, Five star, Fevicol and Happy Dent are always known for their comic timing in T.V. commercials.

**Recent Innovative Ad examples:**

1) **TVC commercial for Cipla Omni Gel:**
India’s no.1 pain recovery gel – Omnigel, which hails from the Cipla family launches its first-ever TVC to strike a chord with Indians while reinforcing that Omnigel keeps you pain-free and uninterrupted, and empowers you to fulfill your desires. Acclaimed for its medicinal and healing benefits, the commercial aims to spread awareness about its beneficial outcomes which are powered by a Diclofenac formula and lead to speedy recovery whilst working on the root cause of the pain.

This heart-warming television commercial (TVC) speaks volumes about the essential needs of the common layperson suffering from body aches arising due to varied day-to-day activities and how Omni gel is specially designed to provide recovery from physical pain. Set in a picturesque location of a small town, the commercial depicts the story of a young married couple attending a funfair, with the wife facing a physical ordeal while partaking in activities. It then focuses on the husband advising her to use Omni gel, to enable twice as fast recovery than any other gel available in the market, and provide instant relief.

The advertisement ends on a jovial note, with the pain simply vanishing after applying Omni gel, and the wife swinging back into action. Within a short time-span, the TVC showcases the myriad benefits provided by the gel, and how it aims at curbing the chances of the pain from reoccurring, thus preventing a relapse. It vividly conveys the message in line with the brand’s tagline, “Omni gel Dard ko Jadd se mitata hai”. Further, even after
earning the trust and credibility of its vast user base, this is the first time the brand is communicating directly with its consumers through a television commercial.

The primary objective of this television commercial is to inform individuals about not missing out on the little joys of life due to any kind of body pain, for which easy and immediate solutions are available. Omnigel stands for not only providing relief but also promises recovery whilst treating the root cause of the pain.

2) Cadbury Five Star:
Cadbury Five Star has always emphasized more on comic ads where characters like Ramesh and Suresh have entertained the audience and created a different market for Five star in chocolate industry. The recent ad of Five star shows that an old lady is sitting in a public area on a bench where she drops her walking stick, unable to get up easily due to old age she approaches a young man standing nearby and eating Five star, the boy nodes to pick up the stick for her but is so much engrossed in eating the chocolate that ignores the lady and just indulge in enjoying the chocolate, in distress the lady herself gets up and take the stick, during this a big piano falls exactly on the same bench where she was sitting, the old lay takes a sigh of relief because she would have been crushed under the piano if she would not get up to take the stick, she tanks the young boy for not doing anything, the moral of the ad says that sometimes by not doing anything you do some better things which may be help someone. This type of marketing can be considered under Guerrilla marketing where an unconventional event is used to promote the product which catches attention of the audience in a unique way.

Innovative Advertising/Marketing Strategies:
1) Guerrilla Marketing
It is an unconventional method which connects a creative moment to products and services to make your brand memorable and enjoyable all among the people.

Reasons for increase in this type of marketing-
- Less investment for setting up a campaign.
- Memorable and effective.
- Gives great results
- Good exposure
- More surprising moments that attract the people
- Increases promotion through word of mouth
- Accurate targeting publicity.
- It targets people’s emotions, which makes this strategy more effective.

2) Presume Marketing
The companies use this advertising concept of product placement in TV shows, movies and social media sites. However, it is pretty much similar to conventional marketing, but the presentation of the product is done in such a way that it increases the recognition of product in public places.

3) Abush Marketing
This advertising strategy uses a concept in which the promotion of the products is done in a covert way. Mainly large events like the cricket world cup and football are targeted for this marketing campaign.
4) Viral marketing

When a business product becomes viral by any medium like email, website then that type of marketing technique is called ‘viral marketing’.

Findings and Conclusion:

1) Most of the users are using internet today for more than 2 hours which gives the advertisers a chance to promote themselves through internet media channel and social networking sites.

2) Creative ads are more essential for success as audience today hardly have time to explore various modes, the more an ad is creative more the chances of catching attention of buyers.

3) The ads must be such that it tells about a story of a brand or provides an intrinsic value of the product, gives a social message or adds on knowledge of the consumers.

4) Environmental benefits added to a product or service are gaining more importance today as day by day the world is suffering through various environmental issues.

5) Recent developments and current trends in market are also found to be fruitful for connecting with a product and presenting in the form of advertisement.

6) Innovative advertisements saves a lot on companies investment as these ads are spread organically through a positive word of mouth in the market.

7) The recall value of customers towards creative ads is more as compared to use of traditional aspects and modes.

8) Online marketing and social media marketing has gained a lot of focus in recent times and helped many brands to create a different position in the competitive atmosphere.

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A CRITICAL REVIEW OF ONLINE CROWDFUNDING IN INDIA: ITS IMPLICATIONS AND EFFECTS ON INDIAN ECONOMIC SCENARIO

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Abstract:
Crowdfunding is the recently developed innovative practice. It is used for funding a new project or venture. The idea is to raise funds by appealing masses. A large number of laymen contribute small funds through online transfer of money. For common cause collective efforts are taken. Here, people network and contribute collectively for some common cause. On prima facie it looks as a fund raising campaign for some common cause, but in reality it is the collective effort taken with the aim to earn intangible or monetary gains. In 1908 Lokmanya Tilak adopted this concept by making appeal to people to contribute only one paisa. Through this ‘Paisa Fund’ near Pune at Talegaon for the poor and draught affected farmers help was made by the establishment of a glass factory. The present research paper aims at throwing more light on crowdfunding as a practice in the entrepreneurial finance. It is the new wave in the world of seed financing. It is required for various entrepreneurial projects. It is still in India at its infant stage. But very soon the mass acceptance of social media and spread of internet facility through cell phones, in time to come crowdfunding will be a very attractive medium for young entrepreneurs to raise funds for entrepreneurial finance. The said paper aims at study of various avenues of crowdfunding, different platforms available to approach to masses, the present and probable models for crowdfunding and the mind set of entrepreneurs and the investors.

Keywords: Crowd funding, Online investments, Entrepreneurial Finance.

Introduction:
Crowdfunding is a comparatively new, unique and innovative term of raising funds for creative, innovative and novel projects. It is the source of raising funds for dance, music, films, publications, preservation of archeological monuments and publicity to historical monuments and so on. It is raised purely for the cause of public interest. It’s a drive to raise funds for benevolent or a public venture. It is purely for co-operative or socio-cultural initiatives of the society. The contributors to the crowd funds are generally in hundreds or even in thousands. Such funds are raised through online portal. Promotion campaigns of such ventures are done through social media.

In simple words, crowd funding is a process of raising funds from laymen and to support a commercial idea or a business venture. It can develop a big business project. It aims at connecting people with money to the people who are in need of the same. It is the collective wallet of the crowd. This unique term many a time replaces banks and financial institutions when need to raise the funds arises.

When in 1908 drought affected poor farmers in Pune district were in need of employment and additional source of livelihood. Lokmanya Bal Gangadhar Tilak appealed general public to donate only one paisa and not more than...
that though many were willing to donate more. The idea was, one should not claim right of ownership on the factory or business. Similarly, all will have feeling of oneness and contribution to the noble cause. On the similar grounds, at Mount Abu a community hall is constructed by ‘Prajapita Brahmakumari Vishwavidyalay’ by collecting one rupee from masses. The time has changed but the term remained the same and now it has come before us in a new fashion. The crowd funding in the modern times is an internet model. It has simplified the idea. It has made fund raising easy and a valid authorized source of capital formation.

At the international level in 1997 British Rock Group Marillion raised $ 60,000 from the crazy fans in North America. The British group was on tour to North America. The opportunity was capitalized by the group in an efficient manner. The first US based company to broadcast the idea of Crowd funding through its website was the Artist Share. Now it has become a well-established and well accepted terminology.

Crowd funding is an innovative and novel idea of funds raising. It’s a convenient model as through on line appeal the funds are collected through on line methods only. To help young enterprising persons crowd funding is the best media. It is best suited for seed capital. For startups and infant projects, it is best suited. It assists boosting the real economy.

**The Statement of Problem:** The research study is focused on crowd funding in India. It is a commonly used funding pattern used all over the world. However, in India still it is at its infant stage. Indian investors and general public do not use this avenue due to ignorance or due to limited use of online money transfer. Many of the needy first-generation entrepreneurs, project manager and venture capitalists are not aware of this convenient resource.

**Research Objectives:** The following research objectives were taken into account:

1. To study International popularity and scenario of crowdfunding.
2. To analyze Indian pattern and popularity of crowdfunding.
3. To study the crowdfunding platforms available in India.
4. To study, evaluate and justify the various models of crowd funding.
5. To estimate the future of crowdfunding in India.
6. To evaluate the effect of crowdfunding on Indian economic scenario.

**Research Methodology:** The said research paper is prepared by taking into account the practical aspect of crowd funding. However, it is completely based on theoretical study. The primary data is collected from hands on experience shared by crowdfunding experts.

Whereas, the secondary data is collected from various websites, reports published by SEBI, banks and financial institutions. The newspaper articles are also taken into account.

**Review of Literature:** It is difficult to get reliable and authentic material on the said subject. The articles written by some of the experts like Michael Pape (2014), Dr. Hetal Jhaveri and Prof. Anjali Choksi (2015), Babita Bhatt (2017) JafarIqubal (2017) are taken into account for the reference. Most of the research papers throws light on different business models, ideas of funding, platforms available, facilities available in foreign countries and so on. But no one has attempted to study the impact of crowdfunding.

**Model of Crowd Funding:** As per the report of IOSCO (International Organization of Securities Commissions)
there are basically four models of crowdfunding:

1. **Equity Based Crowdfunding:** Under this pattern, funds are collected from the investors and in return equity shares are issued to them. It is similar to the model applied by Joint Stock Companies.

2. **Donation Crowdfunding:** Here, the funds are collected for activities like social, cultural, arts, culture, sports, philanthropic and similar purposes.

3. **Peer to Peer Funding:** Here, the online platform brings together funds of investors and the borrowers. The funds are provided as unsecured loans. Sometimes, funds are pooled to supply them to small entrepreneurs.

4. **Reward Crowd Funding:** In this method, the investors get some reward. It is generally in the form of future tangible reward. Sometimes, it is in the form of consumer product.

**Classification of Crowd Funding Model as per the Return and Service to the Investor:** The crowdfunding can be classified as:

1. **Crowd Donating:** Donations are made with philanthropic motive. It is with the motive of helping in non-profit organizations. No returns are expected from such investments.

2. **Crowd Sponsoring:** General public contributes for the creation of ideas. It is for the development of social activities.

3. **Crowd Lending:** Funds are provided like private loans to the startups. Investors get in back their own funds with a reasonable amount of interest.

4. **Crowd Investing:** Equity investment is made in the business. It is like silent partnership. The investor becomes equity holder and becomes eligible for the cash flow in near future.

**International Standing of Crowdfunding:** In the year 2018 the total transactions value at the international level was US $ 9,370. It is expected to have annual growth of 28% per annum till 2022. Some of the major crowd funding platforms are:

1. **Indiegogo:** It has the live campaigns and innovative product shipping. It offers flexible finances.

2. **Kickstarter:** It is an important global community. It is built around creativity. Creative projects are supported and funded by them.

3. **Patreon:** It is a platform where monthly subscription is collected.

4. **G Fund Me:** On this online platform people make their own fund-raising campaigns. The funds are raised from members of family, friends and relatives. It is collected as charity.

5. **Crowd Rise:** It is a nonprofit making organization. It raises huge funds for charity and social cause.

**Indian Scenario of Crowd Funding:** India has huge population. Indian economy is a growing economy. SEBI has taken a lot of efforts to promote crowd funding. Startups and SMEs are getting picked up in India. Crowd funding has now bright future in India.

**Some of the platforms dealing with Crowd Funding in India are as follows:**

1. **Rang De:** This platform was founded at Bangalore in 2008. It arranges micro finance and low-cost loans. It has been established with 25 field partners in 16 states of India.

2. **Fair cent:** It is located at Gurgaon in state of Punjab. It is a peer to peer financing platform. It provides
funds at a reasonable rate.

3. **Ketto**: It was founded in 2012 at Mumbai. It helps the fund raising programmes of social organizations, charitable trusts, movies, music, personnel and for other creative causes.

4. **Wishberry**: It was founded at Mumbai in 2010. It is established for the dance, design, photography, theatre, film production, publishing etc. Those who contribute are compensated with premier shows of films, limited edition merchandise etc.

5. **Catapooolt**: It was founded in 2013. The objective of the platform is to finance sports, political activities, social causes, startups etc.

**Challenges faced by Crowdfunding Platforms in India**: The best example of crowdfunding in India is, a number of holy places are established by collecting money from masses. However, there are many challenges for the same in India:

1. People are still reluctant to accept this novel concept.
2. It is difficult to raise the funds as the business and industrial houses are not investor friendly.
3. There is no trust on such online projects, as many online frauds have come up in India.
4. E-commerce in India is still at its infant stage. Public awareness is needed to boost the same.
5. Collapse of portal is a common problem.
7. Online frauds can’t be completely stopped.
8. In some cases, the online platforms are used for money laundering. It’s a crime as per the provisions in law.
9. SEBI has imposed many new restrictions on crowdfunding so as to have proper tax provisions

In the light of the above limitations, to make the idea of crowdfunding popular is a very difficult task.

**Advantages of Crowdfunding**: There are a number of advantages to the crowdfunding terminology:

1. It develops culture of entrepreneurship.
2. Like minded investors, borrowers and entrepreneurs come together.
3. Those who do not have access to the traditional finance or those who do not have trust in the traditional ways of funds, collection are able to raise finance through crowdfunding.
4. In addition to the financial aid, a large number of non-profit making organizations are befitted due to involvement of supporters of idea.
5. Indian highly creative and innovative people only due to lack of money use to give up their projects but now due to measures like crowdfunding they get required support.
6. The time for raising funds can be minimized.
7. Investors can diversify their investments.
8. Due to fast communication and effective investments startups are promoted.

**Disadvantages of Crowdfunding**:

1. The time and money required for the campaigning sometimes discourages startups.
2. Uneducated people do not find it convenient to handle finance through the portals.
3. While collecting money, the enthusiasm in doing business is sometimes lost.
4. Many a times, the investors find the borrowers incompetent and inefficient after funding to him.
5. Disclosure of commercial information may not keep the trade secret intact.
7. Absence of cyber security norms and security issues create problems in the way to success.
8. Absence of standard rating of projects through online source becomes a hurdle.
9. Lack of legal environment and regulatory system discourages such platforms.

**Suggestions and Recommendations for the Growth of Crowd Funding in India:** Many advanced nations have passed laws and legislations for the crowdfunding. Govt of India has still reservations about crowdfunding. It is expected now from RBI and SEBI to have introduction of rules and regulations to make the crowdfunding a safe and secured way of financing. Safe and secured crowdfunding system can definitely play an important role in bringing startups into reality.

**Conclusions:** Crowdfunding platforms are now growing in all countries all over the world. Techno savvy young entrepreneurs have inclination towards the crowdfunding. These platforms support fundraising for social cause. Digitalization, e-commerce, popularity of internet has made the crowdfunding a popular one.

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AWARNESS OF HEALTH INSURANCE AMONG PEOPLE WITH REFERENCE TO KALYAN-DOMBIVLI

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Abstract:
Health insurance is rapidly growing as a vital mechanism to finance health care necessities of the human being. The need for an insurance system that works on the basic principle of pooling of risks of unexpected costs of persons falling ill and needing hospitalization by charging premium from a wider population base of the same community. The lack of health care insurance in India has compounded in creating a diverse number of problems which are further responsible for creating havoc in the country. The most condemning fact that must immediately be remedied is the catastrophic expenditure incurred by the patient during the course of the treatment due to the out of pocket expenditure. However, the middle socio-economic groups do have some access to the insurance plans; however, this does not hold true to the residence of India who is suffering poverty. Present study tries to find out the awareness of health insurance in a Kalyan-dombivli urban population and determinates of awareness of health insurance.

Key Words: Awareness, Health, Insurance

Introduction:
The health industry was launched in India in the year 1986. Since then, it has grown exponentially due to various aspects some of which are liberalization of the economy and general awareness amongst the masses. According to statistics more than a quarter of India’s population has access to some from insurance. This insurance may be given by the government or some other private stand-alone health insurers. Nonetheless, health insurance is being spread through creating awareness in the minds of the common people by conducting awareness campaigns by well-known organizations such as General Insurance Corporation of India and Insurance Regulatory and Development Authority.

Research Problem:
Health is a basic necessity of the human beings. The lack of healthcare insurance in India has compounded in creating a diverse number of problems which are further responsible for creating havoc in the country. The most condemning fact that must immediately be remedied is the catastrophic expenditure incurred by the patient during the course of the treatment due access to the insurance plans, however, this does not hold true to India who are suffering from poverty. Hence, researcher has been selected topic for research title “AWARNESS OF HEALTH INSURANCE IN KALYAN DOMBIVILI POPULATION – A STUDY”

Objectives:
1) To examine the awareness of health insurance among the Kalyan Dombivili population.
2) To find out association between awareness of health insurance and its determinants such as socio-economic status, type of family, occupation, family income, educational status.
3) To suggest measures and policy to awareness health insurance and better utilization of health care facilities.

**Hypothesis:**

1) There is a significance association between awareness of health insurance and its determinants such as socio-economic status, type of family, occupation, family income, educational status.

**Research Methodology:**

Cross-sectional study was carried out in the Municipal Corporation of Kalyan - Dombivili city. For present study primary and secondary data were used. Secondary data collected from various books, journals, magazine and Webpages. Primary data were collected through questionnaire from selected sample.

**Minimum sample size:** 

\[ n = \frac{Z^2 \times p(1-p)}{\varepsilon^2} \]

- Z is the z score,
- \( \varepsilon \) is the margin of error,
- p is the population proportion,
- Confidence interval = 95%, non-response error = 15%

**Final sample size:** 105.

**Statistical Analysis:**

Data were entered in to the computer database and excel for analyzing data. Data were analyzed to find out the association of health insurance and independent variables. Chi-square test has been carried out to test hypothesis.

**Analysis of study:**

**Table 01 awareness of health insurance**

<table>
<thead>
<tr>
<th>Awareness</th>
<th>No. of respondent</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>75</td>
<td>71.42</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>28.57</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data

Table 01 indicates the awareness of health insurance. 71.42 percentage of respondent were aware about health insurance.

**Testing of hypothesis:**

To test null hypothesis

H₀: There is no significance association between type of family and awareness of health insurance.

Against alternative hypothesis

H₁: There is significance association between type of family and awareness of health insurance.

**Table 02 association between type of family and awareness of health insurance.**

<table>
<thead>
<tr>
<th>Determinates</th>
<th>Aware</th>
<th>Not Aware</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>62</td>
<td>05</td>
<td>67</td>
</tr>
<tr>
<td>Joint</td>
<td>32</td>
<td>08</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>13</td>
<td>105</td>
</tr>
</tbody>
</table>

Source: Primary Data  d.f 02, 5% significant level
The calculated value of chi-square test is 3.958 is less than table value 5.99. So that Ho is accepted and H1 is rejected. Thus, awareness of health insurance is not influence by type of family.

To test null hypothesis
Ho: there is no significance association between income and awareness of health insurance.
Against the alternative hypothesis
H1: there is significance association between income and awareness of health insurance.

Table 03 association between income and awareness of health insurance.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Aware</th>
<th>Not aware</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,001-20,000</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>20,000-30,000</td>
<td>19</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>30,001-40,000</td>
<td>20</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>40,001-50,000</td>
<td>13</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>=&gt;50,001</td>
<td>14</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>30</td>
<td>105</td>
</tr>
</tbody>
</table>

Source: Primary Data  
d.f 04 , 5% significant level.

The calculated value of chi-square test 1.209 is less than table value 9.49. So that Ho is accepted and H1 is rejected. Thus, awareness of health insurance is not influence by income.

To test the null hypothesis
Ho: there is no significance association between occupation and awareness of health insurance.
Against the alternative hypothesis
H1: there is significance association between occupation and awareness of health insurance.

Table 04 association between occupation and awareness of health insurance.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Aware</th>
<th>Not aware</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>59</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td>Labour</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Business</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Retired</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>30</td>
<td>105</td>
</tr>
</tbody>
</table>

Source: Primary Data  
03 d.f , 5% significant level.

The calculated value of chi-square test is 30.473 is greater than table value 7.81. So, that Ho is rejected and H1 is accepted. Thus, awareness of health insurance is influence by level 0ccupation.

To test null hypothesis
Ho: there is no significance association between education and awareness of health insurance.
Against the alternative hypothesis
H1: there is significance association between education and awareness of health insurance.
Table 05 association between education and awareness of health insurance.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Aware</th>
<th>Not aware</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Higher secondary</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Graduate</td>
<td>22</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>28</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>Diplomas</td>
<td>11</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>30</td>
<td>105</td>
</tr>
</tbody>
</table>

Source: Primary Data  d.f 04, 5% significant level. Calculated value of chi-square test is 9.814 is greater than table value 9.49. So, that Ho is rejected and H1 is accepted. Thus, awareness of health insurance is influence by education level.

To test the null hypothesis

Ho: there is no significance association between socio-economic status and awareness of health insurance.

Against alternative hypothesis

H1: there is significance association between socio-economic status and awareness of health insurance.

Table 06 association between socio-economic status and awareness of health insurance.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Aware</th>
<th>Not aware</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>12</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Middle</td>
<td>57</td>
<td>22</td>
<td>79</td>
</tr>
<tr>
<td>Low</td>
<td>6</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>30</td>
<td>105</td>
</tr>
</tbody>
</table>

Source: Primary Data  d.f 02, 5% significant level,

The calculated value of chi-square test is 0.825 is less than table value 5.99. So, that Ho is accepted and H1 is rejected. Thus, awareness of health insurance is not influence by socio-economic status.

Finding:

- 71.42 % population is aware about health insurance
- Results of chi-square test validate the association between awareness of health insurance and its determinants such as higher level of occupation and education.
- Results of chi-square test invalidate the association between awareness of health insurance and its determinants such as socio-economic status, type of family, family income.

Conclusion:

- Education and occupation these are the two important factors which play important role in awareness of health insurance among the people.
- The middle and low socio-economic groups are a to be possible market which can be capture by health insurance industry because they are ready to make expenditure reasonable amount on premium per annum rather than huge medical expenses in case of any adversities.
Policy Implications:

- Government should introduce clear cut policy, where the people can be made to contribute voluntarily to health insurance scheme to ensure unnecessary out-of-pocket expenditures and also better utilization of their health care facilities.

- The health insurance companies should declare clear cut policy about the various benefits and risks involved in insurance policy. So that, people will get clear idea about insurance policy which will attract them to make investment in insurance policy.

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RURAL INFRASTRUCTURE: A STEP TOWARDS BETTER INDIA

Prof. Balachandra G. Shetty,
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Abstract:
India is very much committed to achieve Sustainable Development Goals (SDGs). Through infrastructural development, especially in the rural sector will stimulate action in the important areas like poverty, hunger, education, health and wellbeing, education, gender equality, water and sanitation, energy, economic growth and decent work, etc. The concept of PURA (Providing Urban facilities in the Rural Area) mooted by our former president Dr. APJ Abdul Kalam also shows the significance of rural infrastructure.

Still 60 percent of country’s population lives in the rural sector. Many of them deprived of the basic facilities like potable drinking water, good roads, better communication, and regular supply of electricity, better drainage system, good irrigation and suitable accommodation. All these are the part of rural infrastructure. Hence better infrastructural facilities can solve many problems in one stroke. The objectives of the study are:

- To understand the government efforts to improve rural infrastructure.
- To study the impact of government efforts in improving the rural infrastructure
- To identify the major issues related to rural infrastructure and suggest corrective actions.

This study makes an attempt to understand the preparations and efforts of India to develop rural infrastructure to achieve rural development and fulfill India’s commitment towards better India.

1. Introduction: India is very much committed to achieve Sustainable Development Goals (SDGs). Through infrastructural development, especially in the rural sector will stimulate action in the important areas like poverty, hunger, education, health and wellbeing, education, gender equality, water and sanitation, energy, economic growth and decent work, etc. The concept of PURA (Providing Urban facilities in the Rural Area) mooted by our former president Dr. APJ Abdul Kalam also shows the significance of rural infrastructure.

In India still 60 percent of country’s population lives in the rural sector. Many of them deprived of the basic facilities like potable drinking water, good roads, better communication, regular supply of electricity, better drainage system, good irrigation and suitable accommodation. All these are the part of rural infrastructure. Hence better infrastructural facilities can solve many problems in one stroke.

The following points highlight the significance of rural infrastructure:

- One of the reasons for poor health in the rural sector is the shortage of potable drinking water. By providing continuous and sufficient potable drinking water health of the rural population can be improved.
- Health is wealth. In the modern society people give prominence to preventive measures for good health. Better sanitation will help in improving health conditions in the rural sector.
- Good roads and transport facilities will improve the mobility of rural population and this enhances their connectivity with outside the rural sector. This will extend the market for agricultural output and other
produce like milk, fruits, vegetable and other agro products. It will increase the avenues of employment by encouraging agro- based industries. That will also improve the access of rural population to education and health services.

- Rural electrification will support the agriculture and agro based industries to improve their yield directly and indirectly this will improve rural education and health career facilities.
- Rural housing is one of basic necessities of life. Standard of living of the rural population can be improved by providing better accommodation to the rural population.

This study makes an attempt to understand the preparations and efforts of India to develop rural infrastructure to achieve rural development and fulfill India’s commitment towards sustainable development Goals.

2. Objectives of the study:

- To understand the government efforts to improve rural infrastructure.
- To study the impact of government efforts in improving the rural infrastructure.
- To identify the major issues related to rural infrastructure and suggest corrective actions.

3. Methodology: This study is based on secondary data. The sources of secondary data are government reports and government publications. The time period considered in the study is the FY 2009-10 to 2018-19. The period from 2009-10 to 2013-14 is considered as period prior to declaration of SDGs and 2014-15 to 2018-19 is considered as period after the implementation of SDGS. The important areas considered for study are rural electrification, rural drinking water, rural sanitation, rural roads and rural housing.

4. Analysis Government’s efforts towards improve rural infrastructure: The government has initiated various steps to improve rural infrastructure. In this study we have analyzed the Government’s efforts to improve basic infrastructural facilities like, rural electrification drinking water, rural sanitation, rural roads and rural housing.

4.1 Rural electrification: Rural electrification is the key for rural development. In the days of independence, a village was deemed to be electrified, “if electricity is being used within its revenue area for any purpose whatsoever.”

In 1997, the definition was modified slightly to include two additional words: “a village would be declared electrified if electricity is used in the inhabited locality within its revenue area for any purpose whatsoever.”

In 2004, this definition was changed to increase its scope: A village would be declared electrified if, 1. Basic infrastructure such as distribution transformer and distribution lines is provided in the inhabited locality and Dalit hamlets where it exists. 2. Electricity is provided to public places such as schools, panchayat offices, health centres, dispensaries and community centres, etc, and, 3. The number of electrified should be at least 10 percent of the total number of households in the village.”

In compliance with Electricity Act 2003, the Central Government has announced the rural electrification policy on 23rd August 2006. Under the National common minimum programme (NCMP), provision of access to electricity for all households is envisaged within five years and in order to achieve this objective the Rajiv Gandhi Gramin VidyutikaranYojana (RGGVY) has been launched in April 2005.
On July 25, 2015, Deendayal Upadhyay Gram Jyoti Yojana (DDUGJY) was launched. It was same as RGGVY but separated rural households and agricultural connections.

On September 25, 2017, the Saubhagya Yojana was launched to provide power connections to all the households not had a power connection

It is observed from the Table 1, that in 2009-10 83.86% of the villages were with electrical connection. It has increased to 95.80%, a growth of 12% in the span of 5 years till 2013-14. From 2014-15 to 2018-19 the percentage of electrified villages increased from 96.91% to 99.74% a growth of 4% in the later span of 5 years. This indicates that in India the work related to rural electrification as a part of the goal towards sustainable development started much prior to declaration of the global agenda.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Inhabited villages</th>
<th>Total (cumulative) Number of villages electrified till this year</th>
<th>Number of villages Electrified in the year</th>
<th>% of villages electrified till this year</th>
<th>Number of villages not electrified till this year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>593732</td>
<td>497950</td>
<td>1585</td>
<td>83.86</td>
<td>95782</td>
</tr>
<tr>
<td>2010-11</td>
<td>593732</td>
<td>537947</td>
<td>39997</td>
<td>90.60</td>
<td>55785</td>
</tr>
<tr>
<td>2011-12</td>
<td>593732</td>
<td>540228</td>
<td>2281</td>
<td>90.98</td>
<td>53504</td>
</tr>
<tr>
<td>2012-13</td>
<td>593732</td>
<td>569337</td>
<td>29109</td>
<td>95.89</td>
<td>24395</td>
</tr>
<tr>
<td>2013-14</td>
<td>597464</td>
<td>572414</td>
<td>3077</td>
<td>95.80</td>
<td>25050*</td>
</tr>
<tr>
<td>2014-15</td>
<td>597464</td>
<td>579012</td>
<td>6598</td>
<td>96.91</td>
<td>18452</td>
</tr>
<tr>
<td>2015-16</td>
<td>597464</td>
<td>586139</td>
<td>7127</td>
<td>98.10</td>
<td>11344</td>
</tr>
<tr>
<td>2016-17</td>
<td>597464</td>
<td>592135</td>
<td>5996</td>
<td>99.10</td>
<td>5329</td>
</tr>
<tr>
<td>2017-18</td>
<td>597464</td>
<td>593728</td>
<td>1593</td>
<td>99.37</td>
<td>3736</td>
</tr>
<tr>
<td>2018-19</td>
<td>597464</td>
<td>595949</td>
<td>2221</td>
<td>99.74</td>
<td>1515</td>
</tr>
</tbody>
</table>

Source: Open Government Data (OGD) Platform India, progress report of village electrification

*Till 2012-13 total number of villages taken into consideration on the basis of 2001 census. After 2013-14 2011 census data was considered

4.2 National Rural Drinking Water Programme (NRDWP): Most villages in India are without adequate facilities for drinking water. The Government envisaged this problem well in advance. To tackle this issue the central government introduced the National Water Supply and Sanitation Programme (NWSSP) way back in 1954. Further during Third plan period introduced the Village Water Supply Programme (VWSP). Thereafter in each Five year plan the Government gave priority to drinking water.

Under NRDWP, various efforts have been put safe drinking water to the rural masses. Habitations are classified into three categories as per their accessibility to drinking water.

1. Fully covered habitations: Habitations getting at least 40 LPCD of safe drinking water throughout the year available within 100 m (horizontal/vertical) from their households
2. Quality affected habitations: Habitation with at least one of the drinking water sources not meeting the parameters of chemical contamination (Arsenic, Fluoride, Iron, Salinity, Nitrate and Heavy Metals) as stipulated in IS:10500 and with remaining safe sources, service delivery level of 40 LPCD is not ensured.

3. Partially covered habitations: Habitations other than fully covered and quality affected categories.

The details of the rural households accessibility to drinking water is shown in the Table2.

Table2: Details of accessibility of drinking water to rural habitations under different category

<table>
<thead>
<tr>
<th>Year</th>
<th>Fully covered Habitations</th>
<th>Partially covered Habitations</th>
<th>Quality affected Habitations</th>
<th>Total habitations with drinking water facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>1166814</td>
<td>70.11</td>
<td>375871</td>
</tr>
<tr>
<td></td>
<td>2011-12</td>
<td>1231411</td>
<td>73.91</td>
<td>330504</td>
</tr>
<tr>
<td></td>
<td>2012-13</td>
<td>1161018</td>
<td>68.61</td>
<td>448439</td>
</tr>
<tr>
<td></td>
<td>2013-14</td>
<td>1249695</td>
<td>73.66</td>
<td>368463</td>
</tr>
<tr>
<td></td>
<td>2014-15</td>
<td>1270199</td>
<td>74.14</td>
<td>376343</td>
</tr>
<tr>
<td></td>
<td>2015-16</td>
<td>1306580</td>
<td>76.21</td>
<td>336871</td>
</tr>
<tr>
<td></td>
<td>2016-17</td>
<td>1325302</td>
<td>76.78</td>
<td>326005</td>
</tr>
<tr>
<td></td>
<td>2017-18</td>
<td>1336309</td>
<td>77.42</td>
<td>317058</td>
</tr>
<tr>
<td></td>
<td>2018-19</td>
<td>1368769</td>
<td>76.30</td>
<td>348022</td>
</tr>
</tbody>
</table>

SOURCE: Annual report Ministry of drinking water and sanitation

It is observed from the Table2, that in 2010-11, 70.11% of the rural habitations were under fully covered category. It has increased to 73.66%, in 2013-14, a growth of 3.5%. Further it has increased to 76.30% in 2018-19. It indicates that a marginal increase of 2.7% growth in the span of 5 years from 2014-15 to 2018-19. Performance of the government is not satisfactory with regard to safe drinking water. Still around 24% of rural population are deprived of safe and sufficient drinking water.

4.3: The rural sanitation programme: The rural sanitation programme in India was introduced in the year 1954. In 1986 Government of India introduced the Central Rural Sanitation Programme (CRSP) with the objective of improving the quality of life of the rural people. From 1999 the government launched a demand driven approach, Total Sanitation Campaign (TSC). Under this, financial incentives were provided to Below Poverty Line (BPL) households for construction and usage of Individual household latrines (IHHL). The Government also awarded the Nirmal Gram Puraskar (NGP) to recognize the efforts of Gram panchayats in keeping the villages open defection free. The Nirmal Bharat Abhiyan (NBA) was launched in 2012 to accelerate the sanitation coverage in the rural areas. Further to accelerate universal sanitation coverage the government launched Swachch Bharat mission (SBM) on 2ND October 2014.
It is observed from the above chart 1, that the construction of IHHL for both APL and BPL families are showing a declining trend during the period between 2010-11 and 2013-14. The period between 2014-15 and 2018-19 is showing a huge jump in the construction of IHHL for both BPL and APL households. Similar trend is also observed in the construction of sanitary complex. During the period between 2010-11 and 2014-15, the construction of IHHL for BPL is more than that of APL families. However, during the period between 2014-15 and 2018-19 the construction of IHHL for APL households outnumbered the BPL families.

4.4 Rural roads: According to 2011 census, India has around 6.5 lakh villages. The development of these villages depends on their connectivity with other cities and towns. This needs better transport facilities and good roads. According to government data till 1991-92, only one-third of the villages were well connected.

Since 5th Five year plan (1974-79), construction of rural roads for connectivity has been one of the components of Minimum Needs Programme (MNP). Programme continued in the 6th and 7th five year plans. Rural roads also received importance under various schemes like the Rural Landless Employment Guarantee Programme (RLEGP) and National Rural Employment Programme (NREP). To provide road connectivity through good all weather roads to rural habitations with population of more than 500 persons by the year 2007, the Government announced a centrally sponsored scheme called Pradhan Mantri Gram Sadak Yojana (PMGSY) in August 2000. The Government had to mobilize funds for the rural roads component of the Bharat Nirman Programme (BNP). Currently, the funds for rural roads come partly from the Cess on diesel and from external funding.

Table 3 shows that in 2009-10 total length of rural roads in India was 3178747kms. This has increased to 3304328kms in 2013-14, a growth of 4% in the span of 4 years, with average construction of 86kms per day. Further it is observed that in 2018-19 total length of rural roads was 3496616kms, a growth of 5.8% in the span of 5 years from 2014-15 to 2018-19 with average construction of 105kms per day. It shows that India is very much committed to achieve sustainable development goals especially related to infrastructure with reference to rural roads.
Table 3: year wise construction of rural roads

<table>
<thead>
<tr>
<th>Year</th>
<th>Total length of Rural roads in kms</th>
<th>Length of rural roads constructed in kms</th>
<th>Average length of roads constructed per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>3178747</td>
<td>60117</td>
<td>165</td>
</tr>
<tr>
<td>2010-11</td>
<td>3223856</td>
<td>45109</td>
<td>124</td>
</tr>
<tr>
<td>2011-12</td>
<td>3254919</td>
<td>31063</td>
<td>85</td>
</tr>
<tr>
<td>2012-13</td>
<td>3279081</td>
<td>24162</td>
<td>66</td>
</tr>
<tr>
<td>2013-14</td>
<td>3304328</td>
<td>25247</td>
<td>69</td>
</tr>
<tr>
<td>2014-15</td>
<td>3340665</td>
<td>36337</td>
<td>100</td>
</tr>
<tr>
<td>2015-16</td>
<td>3375815</td>
<td>35150</td>
<td>96</td>
</tr>
<tr>
<td>2016-17</td>
<td>3423259</td>
<td>47444</td>
<td>130</td>
</tr>
<tr>
<td>2017-18</td>
<td>3471978</td>
<td>48719</td>
<td>133</td>
</tr>
<tr>
<td>2018-19</td>
<td>3496616</td>
<td>24638</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: PMGSY Annual report

4.5 Rural Housing: Housing is one of the basic requirements of the human beings for their survival. Person deprived of this basic facility is discriminated and marginalized in the society. Rural housing assumed importance because it decides economic and social status of the person. According to the 2011 census, the overall shortage of rural housing in India was of around 430 lakh units.

The Central Government has been considering rural housing is one of the major anti-poverty measures for the marginalized. Construction of houses was one of the major activities under NREP and RLEGP which began in 1980 and 1983 respectively. The ministry of Rural Development to provide houses to the BPL families, launched the Indira Awaas Yojana (IAY) in 1985 and was restructured as Pradhan Mantri Gramin Awaas Yojana (PMGAY) in 2016. Table 4 shows the construction of rural houses during the period from 2009-10 to 2018-19

Table 4: The year wise details of physical achievements of rural housing

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Houses completed under IAY (in lakh)</th>
<th>Houses completed under PMAY-G (in lakh)</th>
<th>Total rural houses completed (in lakh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>33.86</td>
<td>-</td>
<td>33.86</td>
</tr>
<tr>
<td>2010-11</td>
<td>27.15</td>
<td>-</td>
<td>27.15</td>
</tr>
<tr>
<td>2011-12</td>
<td>24.71</td>
<td>-</td>
<td>24.71</td>
</tr>
<tr>
<td>2012-13</td>
<td>21.91</td>
<td>-</td>
<td>21.91</td>
</tr>
<tr>
<td>2013-14</td>
<td>15.93</td>
<td>-</td>
<td>15.93</td>
</tr>
<tr>
<td>2014-15</td>
<td>11.93</td>
<td>-</td>
<td>11.93</td>
</tr>
<tr>
<td>2015-16</td>
<td>18.23</td>
<td>-</td>
<td>18.23</td>
</tr>
<tr>
<td>2016-17</td>
<td>32.12</td>
<td>0.02</td>
<td>32.14</td>
</tr>
<tr>
<td>2017-18</td>
<td>6.36</td>
<td>38.18</td>
<td>44.54</td>
</tr>
</tbody>
</table>
Rural housing is one of the six components of Bharat Nirman Programme (BNP). Under BNP phase-I, construction of 72 lakh houses were the target during the four years from 2005-06 to 2008-09. Against this target, 71.76 Lakh houses were constructed. The target under BNP, phase II is of construction of 120 lakh houses over a period of five years starting from 2009-10. Against this target 123.56 lakh houses have been constructed.

The target under BNP, phase II is of construction of 120 lakh houses over a period of five years starting from 2009-10. Against this target 123.56 lakh houses have been constructed.

In the first phase of PMAY(G), Government was kept the target of constructing one crore rural houses. But till 31st March 2019 only 86 lakh houses were constructed and there is a backlog of 14 lakh houses are yet to be completed.

5. **Findings:** India’s commitment towards better India is visible through its actions related to rural infrastructure. The findings of the study are listed below:

- In the last decade the Government has initiated serious efforts to improve the rural electrification. The period from 2009-10 to 2013-14 is showing better performance as compared to the period between 2014-15 to 2018-19. This indicates that so far it is not possible to achieve 100% electrification. Further these information will not give clear idea about electrical connectivity to all rural households.

- Performance of the government is not satisfactory with regard to safe drinking water. Still around 24% of rural population is deprived of safe and sufficient drinking water even after 70 years of independence.

- The government initiative under NBA and SBM is quite remarkable in connection with construction of IHHL to improve rural sanitation. Awareness created through SBM is reaping the benefit, which is evident from remarkable rise in construction of IHHL by the APL families.

- The performance of the government in the construction of rural roads shows a significant rise, especially since 2014-15.

- The performance of the Government in connection with rural housing is showing a downward trend. Prior to 2014-15, under BNP phase I and II the government has achieved its targets. But since 2014-15, under PMAY(G) the government has failed to reach its targets.

6. **Conclusion:** The above study reveals that India is very much committed to achieve the target of sustainable Development Goals (SDGs). Performance with related to rural sanitation, rural roads and rural electrification is quite satisfactory. However, the performance related to rural housing and drinking water is not satisfactory and needs more attention.

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Census 2011 publication.
A REPORT ON CONSUMER PERCEPTION AND USAGE PATTERNS OF MOBILE BANKING APPLICATIONS.

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Abstract:
India’s Banking systems are transforming, peoples are also now moving from traditional banking to a more technology-driven banking system. The tech-savvy younger generation is reluctant to stand in the queue at any crowded Indian bank branches to complete any simple task. The Indian Govt. is also promoting several measures and incentives for complete digitalization of the Banking system. For example, the introduction of UPI payment system and IMPS for real-time money transfer, Online update of address, ATM PIN generation, Cheque book or ATM Card request, etc. And all you can do on the go, ie from your smart phone.

India’s smart phone base is growing at a robust pace with more than 1200 million active user base. Therefore, accomplishing banking tasks on mobile is a convenient option for everyone. Not only that Mobile Banking App also helps to reduce the work burden on Banks. The Indian private banking sector is the pioneer in this area. They have already introduced their mobile banking technology decades back and continuously improving these technologies integrating with Artificial Intelligence. The PSU banks are also lately following the Private Bank’s path and coming up with some good app for mobile banking in India. We generally don’t open Bank Account only on the basis of the Mobile Banking App. In fact, we never consider the usability of Mobile Banking or Net Banking option at the time of opening of Bank Account. But Banking is getting more digitalized nowadays. You can open a Digital Bank account at home with an internationally enabled Virtual Debit Card and complete all the banking transactions from home or smart phone. Therefore need for a good Mobile Banking App is must while considering opening any Bank Account in India.

The future of Banking will be based on technology, more specifically on mobile technology. Therefore, the banks which can provide better mobile banking technology will lead the market.

Key Words: Banking, Mobile, Apps, Consumer perception.

Objectives:
1. To study the mobile banking apps in India
2. To study the consumer perception of Mobile banking apps.
3. To study the usage patterns of banking apps.

Methodology:
- Primary research by a structured questionnaire method, surveying sample consumers.
- Secondary research using research papers, books and magazines

Introduction
India’s Banking systems are transforming, people are also now moving from traditional banking to a more technology-driven banking system. The tech-savvy younger generation is reluctant to stand in the queue at any
crowded Indian bank branches to complete any simple task. The Indian Govt. is also promoting several measures and incentives for complete digitalization of the Banking system. For example, the introduction of UPI payment system and IMPS for real-time money transfer, Online update of address, ATM PIN generation, Cheque book or ATM Card request, etc. And all you can do on the go, ie from your smart phone.

India’s smart phone base is growing at a robust pace with more than 1200 million active user base. Therefore, accomplishing banking tasks on mobile is a convenient option for everyone. Not only has that Mobile Banking App also helped to reduce the work burden on Banks. The Indian private banking sector is the pioneer in this area. They have already introduced their mobile banking technology decades back and continuously improving these technologies integrating with Artificial Intelligence. The PSU banks are also lately following the Private Bank’s path and coming up with some good app for mobile banking in India.

Mobile banking services can be classified into SMS Banking, Application (Software) oriented, Browser (Internet) based model and Mobile Apps. SMS Banking refers utilizing banking services through SMS from the registered mobile number of the customer. Application or Software oriented refers downloading the application developed by the bank for utilizing the mobile banking service that works in traditional mobile handsets. Browser based mobile banking refers Internet based mobile banking where the communication made to internet application which is optimized for mobile handsets. Mobile Apps refers mobile applications developed for Smart phones using Android, Windows, Java, etc.

With the rapid advances in technology and changing demographics and life-style of people, the traditional branch banking is giving way to electronic banking (e-banking) and more recently mobile banking (m-banking). However, numbers suggest that the rate of acceptance of technology is quite low. In India, as quoted by an RBI report (Report of the Technical Committee on Mobile Banking, 2014), 64 banks have commenced mobile banking operations and there are 22 million active mobile banking users, which is roughly 5% of the total bank accounts. Lack of awareness, security concerns and technical issues are considered as the major reasons behind customer resistance to mobile banking services.

The main advantage of Mobile Banking is that the people in remote area can also access the banking services at ease. This has become possible with the reach of mobile devices in the rural areas where the device can be purchased starting from few hundreds. The penetration of mobile in India has made rapid change in communication system. Apart from the reach of communication device; revolution in mobile technology like 2G, 3G, 4G are created more market where the potential people are adopting the latest technologies. One can see the impact of mobile banking types due to the advancement in technology. Operating system used in mobile device also plays an important role in development of Apps for easy access of various services.

Review of literature

Narasimham committee recommendation gave a new direction to Indian banking industry and many foreign banks were in the queue to invest in Indian banking sector. Kumbhar, has described the bi-directional correlation between the market condition and banking industry growth. He has also discussed the metamorphic growth of banking sector in the new millennium.

Barnes et al. suggest that M-banking is the result of recent telecommunication growth and innovation, which
provide a new access point to the customer. M-banking is a kind of m-commerce in which bank customer interact with bank through mobile and enjoying all facilities and services provided by banks via mobile applications. M-banking services are being offered through many channels such as Short Messaging Services (SMS), Interactive Voice Response (IVR), Mobile Application, and Wireless Application Protocol (WAP), etc. Banks are taking advantages of mobile innovation to provide its services to customers economically and profitably. The introduction of m-banking helps banks to perform its activity efficiently which leads to consumer satisfaction and loyalty. Cheong et al. identified mobile provide customers many low cost and secure self-service channels for banking activity. Bank should expand their services to m-banking as next step of e-banking as it provides immediate and more controlled financial services to bank consumer.

Mattila found that internet facility, complexity, compatibility, awareness and interest play crucial role in m-banking adaptation. Lack of knowledge and technological skills and culture are also hurdle in development path of electronic m-banking. Financial cost, usefulness, self-efficacy and credibility are the factors which influence consumer behavior regarding m-banking adaptation. Cost of internet connection is another barrier in adaptation of m-banking. Zhou et al. found that social impact, performance and task-technology fit affect speed of m-banking innovation adoption by consumers.

Suma Vally and Hema Divya (2018) have made an attempt to understand the Digital Payment in India with the perspective of consumer’s adoption. In addition, authors have aimed to be evaluated the impact of customers education on usage and the impact of customers income status on the usage of Digital Payments. The study adopted the descriptive techniques to analyse the perspective of consumer’s adoption of digital payment. Finally, the authors have concluded that the deployment of technology for digital payment has improved the performance of the banking sector.

Tiago Oliveira and et al., (2016) have made an attempt to understand the determinants of customer adoption and intention to recommend the technology of mobile payment among the customer in Portugal. The authors have applied UTAUT model to identify the various dimensions such as Performance Expectancy, Effort Expectancy, Social Influence, facilitating conditions, Hedonic motivation, Price value that influence the Behavioral intention to adopt and to recommend the Mobile Payment technology. The authors have discussed that the extent to which the adoption of Mobile Payment provides benefits in performing the payment tasks. Finally, the authors have concluded that factors that significantly influence the adoption and intention of Mobile Payment technology have not yet been comprehensively assessed. Sarika and vasantha (2018) have made an attempt to determine the influence of trust on mobile wallet adoption and its effect on users’ satisfaction. This study aimed at the trust of mobile wallet adoption and its effect on user satisfaction.

**Mobile Banking and Apps**

Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smartphone or tablet. Unlike the related internet banking it uses software, usually called an app, provided by the financial institution for the purpose. Mobile banking is usually available on a 24-hour basis. Some financial institutions have restrictions on
which accounts may be accessed through mobile banking, as well as a limit on the amount that can be transacted. Mobile banking is dependent on the availability of an internet or data connection to the mobile device.

Transactions through mobile banking depend on the features of the mobile banking app provided and typically includes obtaining account balances and lists of latest transactions, electronic bill payments, remote check deposits, P2P payments, and funds transfers between a customer's or another's accounts. Some apps also enable copies of statements to be downloaded and sometimes printed at the customer's premises. Using a mobile banking app increases ease of use, speed, flexibility and also improves security because it integrates with the user built-in mobile device security mechanisms.

To reduce the costs associated with managing bank accounts, the Basic Savings Bank Deposit Account (BSBDA) has been introduced by Indian banks, as advised by the Reserve Bank of India. This account requires ‘nil’ or very low minimum balance, involves no or minimal charges, and can be easily opened due to simplified Know Your Customer (KYC) 14 norms. The Pradhan Mantri Jan Dhan Yojana was launched by the Government of India in 2014 to make financial services (such as a basic savings bank account, credit, insurance, pension and remittance facilities) accessible and affordable to the poor sections of society. The banking sector has also been focusing on improving the coverage of brick-and-mortar bank branches and ATMs. Further, the Business Correspondent (BC) model of financial inclusion has been adopted, wherein banks deploy agents who provide basic banking services in more remote areas where setting up bank branches is difficult.

**Best Mobile Banking Apps in India**

We generally don’t open Bank Account only on the basis of the Mobile Banking App. In fact, we never consider the usability of Mobile Banking or Net Banking option at the time of opening of Bank Account. But Banking is getting more digitalized nowadays. You can open a Digital Bank account at home with an internationally enabled Virtual Debit Card and complete all the banking transactions from home or smart phone. Therefore need for a good Mobile Banking App is must while considering opening any Bank Account in India.

The future of Banking will be based on technology, more specifically on mobile technology. Therefore, the banks which can provide better mobile banking technology will lead the market.

Here is the list of Best Mobile Banking App in India according to its Rank. We consider, in-app features, usability, Ease of Use, availability of branches and innovativeness while ranking these Apps.

1. Kotak- 811 & Mobile Banking
2. iMobile from ICICI Bank
3. SBI Anywhere Personal – Yono Lite
4. Axis Mobile
5. M- Connect Plus from Bank of Baroda
Axis Bank Mobile App

Data Analysis and Interpretation

The researcher has surveyed various respondents for usage and awareness of Mobile apps. The Sample of 39 respondents was surveyed for the research. The respondents were all having bank accounts in various banks. A conditional structured questionnaire was prepared and used for the survey. A digital link was send to the respondents for the survey.

Q. Age Group

**Age Group**
39 responses

- 10 - 20: 71.8%
- 21 - 30: 12.8%
- 31 - 40: 0%
- 41 - 50: 0%
- 51 - 60: 0%
- Above 60: 0%
The respondents were from various age groups.
- Maximum respondents were from the age group of 31-40 years (71%).
- The other majority was from 21-30 years.

Q.2

Which type of bank do you have account with?

<table>
<thead>
<tr>
<th>Type of Bank</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government/semi Government</td>
<td>26</td>
<td>66.7%</td>
</tr>
<tr>
<td>Private</td>
<td>24</td>
<td>61.5%</td>
</tr>
</tbody>
</table>

The above graph shows that the respondents that responded were having accounts in Private and Government/Semi Government banks.
- There was no major difference in the number of respondents having accounts with Private banks (61%) and Government Banks (66%).

Q.3

What type of account do you have?

<table>
<thead>
<tr>
<th>Type of Account</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings</td>
<td>39</td>
<td>100%</td>
</tr>
<tr>
<td>Current</td>
<td>4</td>
<td>10.3%</td>
</tr>
<tr>
<td>Business</td>
<td>1</td>
<td>2.6%</td>
</tr>
<tr>
<td>Only Digital</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The above graph is clearly stating that all the respondents have savings bank account in Banks.
- There are some of the respondents who also have current and business accounts with banks.
Q.4

Have you used mobile banking app of your bank?
39 responses

- The above graph shows that there are maximum respondents who have used the mobile banking apps (82%).
- The rest of the respondents do not use the mobile banking apps (18%).

This section of the questionnaire was a conditional split of sections. The respondents who responded “YES” answered different set of questions and those who responded “NO” were asked different questions. The intention of the researcher is to identify the factors affecting both type of customers. Let us see some questions asked to the customers who used mobile banking apps.

Q.4

How frequently you use the app?
32 responses

- Maximum respondents used the mobile banking apps once in a week (44%).
- Many people also used the mobile apps every day (31%).
Q.5

Which transactions have you done in Mobile banking app?

Maximum respondents use the Mobile banking app for Money transfer and bill payments. (more than 80%)

Many people also use apps for investments.

Q.6

What are the reasons for which you use the mobile banking app?

Maximum respondents use mobile banking apps as they think it is very convenient. (97%)

Many people like using banking apps for anytime transactions.

There were some respondents who also were not using the mobile banking apps.

The study tried to find out the reasons for not using banking apps.
Q.7

Among the respondents who were not using banking apps, maximum respondents never used the apps. (57%)

There was also a risk of information leakage and privacy issues.

Q.8.

Maximum respondents are reluctant to change their bank account for a better banking app. (57%)

Conclusion
The internet penetration in India is increasing gradually. As of in 2020 India has 560 million internet users. But with only 36% of India’s population has access to internet, there is still a long way to go

The banking industry in India is booming. The initiatives like Jan Dhan yojana have increased the population in financial inclusion by multiple folds.

The banking transactions have gone digital. Many banking transactions of banks have come down to our palms in a smart phone.

The customers having bank accounts are studied in the research. Almost all banks today have their own banking app. It is found that the customers prefer to have a savings bank account. The customers are aware of the apps of
their banks. Maximum people use the apps. We can conclude that the marketing strategies of banks have increased the usage of Banking apps.

Maximum people like to use apps for fund transfers. This shows that the customers trust the banking apps. They also use the apps frequently, some once in a week or everyday.

People use Mobile banking app because it is convenient. It is available any time and have many facilities. The people who do not use the apps usually do not use as they have never used the app. It seems that ignorance is the only reason. They do not face internet or technical issues.

The respondents cannot surely tell weather they will open an account with other bank only for banking app. We can conclude that the awareness of apps is there in the customers. The banks are maintaining the apps smoothly without major glitches.

If the internet penetration increases in India, we can expect that more people will use mobile banking apps.

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EFFECT OF MEDIA ON THE MORAL VALUES OF TODAY’S YOUTH

Prof. Babita Jose

Abstract:
Almost everyone watches or listens to various forms of media every day, whether this comes in the form of television, radio, print, or movies. Not only is mostly everyone exposed to media, but also the typical Indian spends at least several hours a day in exposure to some kind of media. All this time Indians spend watching or listening to media raises the question: “If someone spends hours each day watching television or watching some other sort of media, is this going to have some sort of effect? Is it going to influence his decision making or change his opinion”? The media plays an integral part in influencing people’s behavior. Celebrities and media personalities tend to influence how their fans dress, walk, eat and talk. This research aims at establishing how media has affected the moral behavior of the Indian youth. Age groups 15 to 26 are taken into consideration as part of this study.

Introduction
The fabric that holds a community together is the morality of its people. However this has been threatened by the advent of media forms in all parts of the country. In this advanced technology era, social media is fast becoming a prominent part of everyone's life especially young adults. Many of these individuals spend vast amounts of time on various platforms which expose them to various vices. And although social media also has some positive impacts, studies have found that exposure to social sites is largely responsible for moral decay among these individuals. As a result, many of them are now involved in diverse immoral activities blindly aped from the various sites. It is important that we forge ways of bringing back moral values in our life. Young generations ought to be taught to reinforce good morals in their lives and seek ways to keep away from being influenced by what is portrayed on some social media sites. But while there’s been a lot of research done on how media exposure affects specific behaviors, relatively little has focused on how it influences our judgment of right and wrong. And that’s what this study will focus on.

Objectives
1. To examine the effect of popular media on the moral values of an Indian youth.
2. To study the effect on media on the morality and to suggest the major remedies to reduce its effect on the minds of Indian Youth.

Literature Review
This includes a review of current literature with relevance to the research questions and objectives regarding the influence of the young people among rural and urban media consumers in India.

Hypothesis
There is a significant association between the role of media and the reducing morality of an Indian youth. This research helps to understand the relevance, significance and the inter-relation between the changing morality of the young minds in this country and how media plays its role in shaping it.
Inter-relation of Media on various aspect :-

Violence and Possible Effects

Violence as a direct influence. The ideas communicated visually through television are thought by some to be very powerful, and to quote Uncle Ben in “Spider man,” “With great power comes great responsibility.” The most studied aspect of the effect of media is that of media violence on children. Mainstreaming American movies and reading blogs about their Life styles have led the Indian society to lean towards American culture. The behaviors noted include: eating out, going to bars, live-in relationships, affairs, and per-marital sex. The emergence of these behaviors is surprising because traditionally Indian communities had been very conservative until 1990s. In the past, Indian women, according to tradition, strove to be good housewives. Now, some women’s attitudes and lifestyles are changing, and many are career-minded, bolder, and assertive. Another form of potentially influential media is music. Many studies have related negative effects to music. For example: rap and heavy metal were related to deviance such as psychoticism, acceptance of racial and sexual discrimination, vandalism, drug use, violence, and aggression.

Sexual Promiscuity

The previous invaluable moral values and norms have regrettably been ruined, while immorality now reigns especially among the youths. Gone are the days when morality and discipline used to be virtues. Today it is the exact opposite. This is evident in the current level of sexual promiscuity among the youths in the country. Sexual immorality has become the talk of the day in the country as one is regarded as the greatest by the number of sexual partners he/she has in the name of lovers. As a result, per-marital sex, homosexuality and lesbianism are no more vices among our youth. Apart from this, social media sites have also served as avenue for some youths to share nude and sexual images, especially of themselves. This has encouraged sexual immorality and promiscuity in India.

Sexual content appears often on television, and this heightens the concern about its effects, especially to parents. There has been an increase in the number of sex scenes we see in television and films today but a very small percentage of these films explain that sex outside marriage is wrong.

Alcohol in the Media

Alcohol, especially advertisements for alcohol, appears often on television. Also, studies analyzing incidents of alcohol on television found that 89% of 267 primetime episodes analyzed in 2019 mentioned alcohol. Some think that media have a strong effect on how often people choose to drink. Several studies support this opinion and claim that media affect college students’ behaviors and thoughts.

Internet Crime

The emergence of the internet saw the emergence of internet or cyber-criminals commonly known as internet hackers and scammers. Whereas internet hacking is the act of breaking codes and passwords to gain an unauthorized access to computer system; scamming is a clever and dishonest way of making money.

Indecent Dressing and Sexual Harassment

The problem of indecent dressing and the consequent sexual harassment in the country, especially in tertiary institutions, have been made worse by the phenomenon of social media. As has been said earlier, some, if not
all, of these social media sites often provide room for users to upload and share pictures and videos. Unfortunately, these provisions have been abused as many users share risqué pictures of themselves or celebrities wearing skimpy clothes while some appear wearing their pants or trousers below their waist in the name of sagging.

**Research Methodology**

**Data Collection**
Both primary and secondary data will be collected for the study. Primary data will be collected using questionnaires. Secondary data will be obtained from the previous researches on the impact of various forms of media on morality.

**Findings**
This shows how much percentage of people agree to the fact that media truly effects the moral values in an individual.

The below pie shows the purpose for which the people used media.

This Chart shows the percentage of people using Internet on daily basis and for how many hours.
Based on all the collected data and by thorough analysis of the same it is very much evident that media is playing a very important role in the life of a young person and it has contributed very much in shaping the overall psychology of the person. It also shows that even if majority of the people surf internet and other forms of media for information and later entertainment and leaves its impact on the minds of the individual.

**Conclusion**

The number of Indians active on social media platforms increased in 2019 according to the “State of the Internet in India 2019” report released by the Bloggers Association of India (BAI). According to the report, as of September 2019, a total of 26 million Indians were on WhatsApp with 7.1 million of them being on Facebook. YouTube saw 8 million Indians actively using it during the year with 4 million taking on Instagram. Among the social media tools in India, Twitter has always been deemed powerful in articulating issues and pushing for agendas. Indians have widely used Twitter to hold government accountable, condemn an injustice or comment on various issues. “Increased internet penetration and mobile subscriptions as detailed above have contributed to the growth of locally generated content and the corresponding proliferation of the blogging and Social Media communities,” said the report.

Hence we conclude after all the data collection and analysis of the same, that media truly affects the moral values of an individual and it influences them either negatively or positively depending upon how maturely they handle the media platform and for what purpose.

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Abstract:
The following research paper makes a study of the economic situation of the marginalized Contract Workers, engaged in their works with Housing Complexes and Co-operative Societies in the region of Mumbai. This research hopes to shed light on one such section of marginalized in order to stress the idea of integrating the marginalized into the Mainstream Indian Economy in order to achieve the dream of a whopping 5$ trillion Economy.

A well-established Labour Market is an integral macroeconomic phenomenon that helps build an efficient economy that is on a rise. For regulating the interests of this very Labour Market many Laws and Acts have been brought in place. In a study done by ‘Annual study of industries- National Sample Survey Office’, the employment level of contractual workers increased from 15.5% in 2000-01 to a whopping 27.9% in the year 2015-16. This huge influx of such workers in the Labour Market indicates their importance in the contribution of the annual GDP.

The National Statistics Committee's 2012 report concludes that the contract workers contribution to the Annual GDP is at "about 50% of the national product". It then states that "It is increasingly realized that lack of reliable statistics on the size and economic contribution of this sector has been a major constraint in providing a realistic understanding of the significance of the Indian economy, leading to its neglect in development planning".

Hence it is imperative that an analysis of their economic conditions is done in order to come up with policy implications and reforms to facilitate an upliftment of this ‘class of neglect’, which in reality is the major driving force that will catapult the Indian economy towards its aspiring levels.

Key Words: 5 Trillion Economy, Contract Workers, Marginalized sector, GDP.

Introduction:
Contract Workers are workers that provide their labour on contractual or hourly basis. They go onto form the ‘Informal Sector’ of the Economy, moreover the influence of this bracket of labourers is such that they form the very backbone of the Indian Economy. These workers often perform both skilled and unskilled forms of labour and work for inhumane long hours in a day for a meagre salary which doesn't even make ends meet for them.

Most contractors flounder to provide their workers with the Minimum wages as prescribed by the ‘Minimum Wages(Maharashtra)Act2019’, they also fail to follow the welfare norms and requirements under such laws.

In particular this study focuses on the economic status of sweepers, carpenters, security guards, electricians, plumbers and other such labourers with respect to Housing Complexes, to ensure their optimum utilisation and employee satisfaction in order to strengthen the economy.
Objectives:
To aid in defining the focus of this study, one must set certain objectives for the study. The following are the Objectives of the study:

Obj 1: To suggest applicable reforms for inclusion of such workers into mainstream economy.

Obj 2: To find out if the Contract Workers are paid according to the Minimum Wages prescribed by the ‘Minimum Wages (Maharashtra) Act 2019’.

Obj 3: To determine the standard of living and quality of life of the Contract Workers.

Hypotheses:

HYPOTHESIS 1:
H₀ - Contract workers in housing societies don't get paid as per minimum wage rules.
H₁ - Contract Workers get paid as per the minimum wage rules.

HYPOTHESIS 2:
H₀ - Income of the contract worker is an important factor influencing the expenditure level, demonstrating the standard of living.
H₁ - Income of the contract worker is not an important factor influencing the expenditure level, demonstrating the standard of living.

Mode Of Data Collection
Primary Method of data collection is the method employed in the following research study, this has been conducted through the usage of: SURVEY using a Questionnaire / Schedule

The following are its critical points:

- **Sample Size**: 30
- **Location**: Mumbai metropolitan region and suburbs
- **Primary Occupation of the respondents**: Service providers working on contract basis in cooperative housing societies through service or job providing agencies.

Survey On: Contract Workers

I. **A. What age group do you fall under?**
   - □ Below 20 years
   - □ 20-30 years
   - □ 30-40 years
   - □ 40-50 years
   - □ More than 50 years

B. **What is your gender?**
   - □ Male
   - □ Female
   - □ Third gender

C. **What is your job profile?**
   - □ Sweeper
   - □ Carpenter
   - □ Electrician
   - □ Security Guard
   - □ Cleaner
   - □ Plumber
   - □ Supervisor
   - □ Any other
D. On a daily basis, how many hours does your job require you to work?

- □ 0-2 hours
- □ 2-5 hours
- □ 5-10 hours
- □ 10-12 hours
- □ More than 12 hours

II. A. What is the monthly income you acquire from your job?

- □ ₹0-₹10,000
- □ ₹10,000-₹20,000
- □ ₹20,000-₹30,000
- □ ₹30,000-₹40,000
- □ ₹40,000-₹50,000
- □ More than ₹50,000

Amount: __________________________________________

B. Do you have any alternate sources of income?

- □ Yes
- □ No

C. If yes, please mention it:

______________________________________________

D. If yes, what is the approximate income generated from it?

- □ ₹0-₹10,000
- □ ₹10,000-₹20,000
- □ ₹20,000-₹30,000
- □ ₹30,000-₹40,000
- □ ₹40,000-₹50,000
- □ More than ₹50,000

Amount:

III. A. How much is your monthly expenditure?

- □ ₹0-₹10,000
- □ ₹10,000-₹20,000
- □ ₹20,000-₹30,000
- □ ₹30,000-₹40,000
- □ ₹40,000-₹50,000
- □ More than ₹50,000

Amount:

B. On a monthly basis, how much do you save up from your income?

- □ ₹0
- □ ₹0-₹2,000
- □ ₹2,000-₹8,000
- □ ₹8,000-₹14,000
- □ ₹14,000-₹20,000
- □ ₹20,000-₹26,000
- □ ₹26,000-₹32,000
- □ More than ₹32,000

Amount: __________________________________________

C. Does your agency provide you with any medical or health care insurance policies?

- □ Yes
- □ No

Limitations

Limitations are bound to be there in a research study, if not many, at least some of them can always be listed. The project is a detailed study on the economical condition of the contract workers employed by Housing Complexes in the region of Mumbai who have been marginalized. Restrictions on area, Sample size, Limited access and Time constraints are some of the restrictions.

Analysis And Observation:

1. A. Age group

Majority of the respondents were middle aged ranging from 40-50 years of age. A startling observation here is that around 10% (3) of those surveyed also belonged to the age group of above 50 years.
of age, not just that but a 3% (1) of the respondents were also below the age of 20, proving that people from both extremes of age groups are employed as contract workers.

B. Gender:
Most responses were recorded from the male contract workers and a very few responses from the females, this shows a gender disparity in terms of number of women employed in such positions of contract workers. No transgender respondents have been recorded.

C. Job Profile:
Most respondents are engaged in the work of sweepers then followed by security guards, hinting that the requirement of sweepers and security guards are the most amongst others. Along with this, we can also observe that the requirement of the carpenter is the least in such a complex.

D. Working Hours:
Here it is observed that more than half of the population work for around 5-10 hours a day and around 30% of them even work for 10-12 hours, this makes it almost impossible for them to engage in any other economic activities and in turn even limits their quality of life as they only shuttle between work and home due to excessive working hours.

2. A. Income
One can clearly conclude that the average payment is between ₹0-20,000 for a continuous 5-12 hours of work. This minimal income backed by numerous other expenses make a major reason for the low standard of living and quality of life of the contract workers in housing societies.

B. C. D. Alternate Income:
A majority which is above half the respondents said that they do not have any alternate sources of income. So, most of them depend on their salary only, that makes it difficult to manage their expenses well. Another interpretation of this fact can be that almost 47% of respondents said that they do have an alternate source of income such as working as salesmen, maids, etc. Of the 14 respondents who had alternate source of income, 8 said that it yielded a meagre amount from ₹0 to ₹10,000, most often closer to the lower limit.

3. A. Expenditure:
A majority of them said that their monthly expenses were between ₹10,000-₹20,000. It was still difficult to meet their expenses given their monthly income. The ones with large numbers of dependents and less income had monthly expenditures of ₹20000-₹30000.

B. Savings:
Out of the 30 people surveyed, 10 people do not save any amount from their income. 10 respondents however have very few savings, i.e. below ₹2000. Thus it can be observed that the majority of the respondents have little or no savings.

C. Healthcare:
The results are very disappointing, clearly shown by the pie chart. All the 30 respondents are not provided with any medical or healthcare insurance policies. This shows that better policies have to be implemented to provide the working class with human working conditions, which will help to improve the
quality of their lives.

**Regression Analysis:**

Based on the responses given in the survey by the respondents, Regression Analysis has been carried out using Microsoft Excel below to examine the relationship between Income and Expenditure.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Income (X)</th>
<th>Expenditure (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>₹ 8,000.00</td>
<td>₹ 7,000.00</td>
</tr>
<tr>
<td>2</td>
<td>₹ 21,000.00</td>
<td>₹ 18,000.00</td>
</tr>
<tr>
<td>3</td>
<td>₹ 7,000.00</td>
<td>₹ 5,500.00</td>
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<td>4</td>
<td>₹ 25,000.00</td>
<td>₹ 21,000.00</td>
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<tr>
<td>7</td>
<td>₹ 15,000.00</td>
<td>₹ 13,500.00</td>
</tr>
<tr>
<td>8</td>
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Here, *Income is represented on the X-axis* as it is the independent variable. On the other hand, *expenditure* being the dependent variable has been represented on the *Y-axis*. We have obtained the regression equation which is \( Y = 0.7205X + 2495.2 \). The *autonomous consumption* as per the equation is \( a = 2495.2 \). *Marginal Propensity to Consume (MPC)* is \( \beta = 0.7205 \). It is defined as the ratio of the change in the level of aggregate consumption to a change in the level of aggregate income. We know that \( R^2 \) is the coefficient of determination and here it has worked out to be 0.8423. As the value of \( R^2 \) is above 0.5, we can conclude that the regression equation is a good fit to the given data. Here, 84.23% of the Expenditure (Y) can be explained by Income (X).

Here, income has turned out to be a good parameter to predict or forecast the expenditure of the contract workers.

As per the above table, total income has turned out to be more than the total expenditure. The difference between the two is ₹57,900 and this can be termed as *savings*. Hence, based on the survey conducted for the contract workers, it has been found that they are able to keep on an average ₹1,930 as savings.

**Hypotheses Verification**

**HYPOTHESIS 1:**

As per an article by *Centre for Advancement of Philanthropy*, Maharashtra State Government has notified the following “minimum wages” effective 1st January 2019:
As per the analysis of the surveys, 50% of the respondents earn income in the range ₹0-₹10000, while 14 respondents, i.e. 47% of the respondents have their incomes within the ₹10000-₹20000 range. There is only 1 respondent who earned more than ₹20000. These figures, when compared with the table given above, help us to indicate the inefficient implementation of laws.

According to the survey, 54% of the respondents belong to the unskilled category, while the rest fall in skilled and semi-skilled labour categories. As the surveys were conducted mostly in Zone I, it can be said that:

There is sufficient evidence to prove that the incomes are not adequate.

H\textsubscript{0}: Hence, the contract workers in housing societies don’t get paid as per the minimum wage rules.

HYPOTHESIS 2:

The regression addresses this issue. As observed, income is a good parameter to predict or foresee the expenditure of the contract workers. \( R^2 \) is the coefficient of determination and here it has worked out to be 0.8423. As the value of \( R^2 \) is above 0.5, we infer that the regression equation is a good fit to the given data. This tells us that income has a considerable influence on expenditure. This is also alarming because if incomes are low, their expenditure may suffer consequences due to higher degree of dependence. So we can conclude that:

H\textsubscript{0} : Hence, the Income of the contract worker is an important factor influencing the expenditure level.

**Conclusion**

There are various factors to be taken into consideration, when it comes to humane treatment of the labour class. Essentially, the employer needs to be careful and sensitive to the needs of the contract labourers. Lack of diligence on the part of the employer can land the company into jeopardy. When it comes to security guards, the security sector is the second largest employer after the manufacturing industry. They have no choice but to agree to low quotes since they don’t want to lose out on contracts. If the company is inspected, then it resorts to
‘plausible deniability’ and puts the blame squarely on the contractor, even though the company is the principal employer and it is its responsibility to ensure that contract labourers are not exploited. According to the new amendments, a security personnel working with a housing society should make Rs ₹10,000 per month for eight-hour shifts. Housing societies manage to cut themselves loose from the law, 90% of the guards at housing societies are underpaid.

According to the survey analysis, one of the first things one notices is the gender disparity when it comes to hiring female contract workers. One can say that these contract workers are underpaid and overworked. Naturally, low income leads to restricted expenses and very little or no savings. This can prove really harmful to the country’s economy on a bigger scale. Health care and insurance, leave, job security are some essentials which can ultimately improve an individual’s quality of life and also motivate the labour class. It is really disappointing and sad for a growing economy like India to not look after the working class.

The regression analysis is like a ray of hope, but it still shows that income is a factor with a big influence on expenditure. The regression analysis also contains a table which indicated that income is more than expenditure. But the labour class is moving in the right direction, as there is a noticeable increase in the awareness of saving.

As part of Policy recommendation, there is a vehement need to raise minimum wages for contract workers. A higher wage shall enable them to lead a dignified life. These changes have to be made to improve the lifestyle of contract workers and to enable them to work in humane conditions. Furthermore, whenever a contract worker is engaged through a contractor, the contract agreement between the employer and the contractor should clearly indicate the wages and other benefits to be paid by the contractor.

Suggestions

From the survey, we find a direct relation between the income and expenditures of contract workers in housing societies. It means higher their income higher their expenses. However, most of them find their income inadequate to meet their needs. So the following policy recommendations can finally be suggested, based on the undertaken project, to ameliorate the living conditions of contract workers:

1. A rise in the minimum wages specified for contract workers. Most of them hardly have any savings and it is apparent that if at all they meet with any unfortunate event such as hospitalization of a family member, they will not have adequate funds to fall back on due to less savings. A higher wage shall enable them to lead a dignified life.

2. There must also be a system of pensions and PPF for the workers once they retire.

3. They must be given health care benefits as well. Example: health insurance

4. They must be entitled to dearness allowance, travel or daily commute allowance and house rent allowance.

If we really want this CLASS OF NEGLECT to prosper and people to have a better standard of living, so that they can positively add to the national economy to achieve the dream of a whopping 5$ trillion economy then we seriously need to work out policies on such lines.

Bibliography


Webliography


A STUDY ON IMPACT OF CONSUMER BEHAVIOR ON E-COMMERCE WITH AMAZON SHOPPING MALL IN THANE REGION

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Abstract:
This paper shows that the Amazon.in shopping online site is a better way for E-Commerce business opportunity. It also shows that the E-Commerce site (Amazon.in) provides multipurpose options for E-Commerce. In the survey found that the people often use “Amazon.in” for online buying of goods than other sites. People think that this site is more easy and safe for online purchase. If want to make E-Commerce as an important factor in economy then we have to make it more safe. If E-Commerce will made much easy with more safety to consumers then E-Commerce will become a lead point for a smooth economy functioning.

Keywords: Amazon Shopping, E-Commerce, Opportunity, Multipurpose, Easy And Safe, Smooth Economy.

Objectives:
1) To identify the better way for E-Commerce business opportunity.
2) To identify the best option for buying goods online.
3) To find options for easy and safe way for smooth economy.

Significance:
E-commerce has become an integral part of business in the modern world. It is generally associated with buying or selling a product by using the Internet as the platform. Information and communications technology (ICT) is used in e-commerce marketing to create and add to relationships among organizations and between an individual and an organization. At present, about half of the world prefers purchasing items online at their convenience.

Research Methodology

Primary data: The research is done by observation method and collection of data with questionnaires.

Secondary Data: Secondary data is collected from internet websites and Wikipedia.

Sample Size: The sample size is determined as 120 respondent’s opinion from the customers who presently using Amazon Shopping Mall Option for E-commerce service.

Users of Amazon Shopping Mall

<table>
<thead>
<tr>
<th>Methods Used</th>
<th>Percentage</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Amazon Shopping Mall</td>
<td>62%</td>
<td>74</td>
</tr>
<tr>
<td>Not Using Amazon Shopping Mall</td>
<td>38%</td>
<td>46</td>
</tr>
</tbody>
</table>
Profile of Users of Amazon Shopping Mall Option

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Shopping Mall</td>
<td>44%</td>
<td>53</td>
</tr>
<tr>
<td>Paytm Mall</td>
<td>19%</td>
<td>23</td>
</tr>
<tr>
<td>Flipkart</td>
<td>27%</td>
<td>32</td>
</tr>
<tr>
<td>Myntra</td>
<td>10%</td>
<td>12</td>
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</table>

Awareness of Using Amazon Shopping Mall Option

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<thead>
<tr>
<th>Awareness</th>
<th>Percentage</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Well Known</td>
<td>62%</td>
<td>74</td>
</tr>
<tr>
<td>Somewhat Known</td>
<td>23%</td>
<td>28</td>
</tr>
<tr>
<td>Unknown</td>
<td>15%</td>
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</table>
**Frequency of Using Amazon Shopping Mall Option**

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>22%</td>
<td>26</td>
</tr>
<tr>
<td>2-3 times in a Week</td>
<td>58%</td>
<td>70</td>
</tr>
<tr>
<td>Often in Month</td>
<td>20%</td>
<td>24</td>
</tr>
</tbody>
</table>

**Multipurpose Options Used with Payment Gateway Method:**

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Shopping Mall Only</td>
<td>25%</td>
<td>30</td>
</tr>
<tr>
<td>With Shopping Amazon Payment method, Prime Video</td>
<td>75%</td>
<td>90</td>
</tr>
</tbody>
</table>

**Advantages:**
The first and important advantage of E-Commerce is that it is easy and convenient, where it helps to make online transactions in easy steps and due to convenience the customers save their lots of time for buying any goods or product than buying in offline way. Customers gets products full details and description at online sites, Where in offline buying the product information gets somewhat less. Search engines helps to expand E-Commerce transactions, where the links they can get easily from any websites. With the help of E-Commerce the sellers can decrease their inventory management cost or it can say they save their operational cost. E-Commerce helps to sell or buy the goods not only in the limited location but can across the world. The E-Commerce facility gives 24/7 services to customers. It saves the expenditure incurred for infrastructure, manpower etc ext., so it make economic condition smooth and reasonable.
Conclusion:
From the above study it found that the Amazon E-Commerce website is a better way for business opportunities in E-Commerce. As well as it also identify that Amazon is a best option for buying goods online because it provides multipurpose options at one place for doing E-Commerce. Amazon self provides web security to their own business so the users felt it much safer than other websites, where it creates safe and easy way for smooth economy. The overall research states that the E-Commerce sites or options helps to make speedy and convenient growth of economy.

References:
https://www.shopify.com/encyclopedia/what-is-ecommerce
https://en.wikipedia.org/wiki/E-commerce
AN EVOLVING GLOBAL PERSPECTIVES OF INDIA’S FOREIGN TRADE
SINCE 1990’S TRENDS AND CHALLENGES

Mrs. Neha N. Salagare,
Assistant professor,
K.V. Pendharkar College, Dombivli

Abstract:
Globalization is creating a major influence on culture, and slowly, a global culture is emerging, which reflects merging of tastes and preferences across the globe. Future global businesses require a non-traditional style and creative approach and accordingly orient strategic decisions of businesses. Firms need to possess the ability to foresee future trends and have the ability to initiate actions in advance keeping in mind the emerging trends of customer’s preferences and by working along with them. IT is a major tool used to get a competitive advantage. Subsequent to liberalization of trade in India in 1990-91, India’s international trade has grown many folds and the product range has also got diversified. It is not only that the exports have improved, but even the volume of imports has increased which indicates that India as a nation is developing and moving towards developed nation. The World Bank reports that India will emerge as the top economies of the world by 2016 ahead of China (World Bank 2015). With a population of 1.295 billion, the GDP of India is $2.649 trillion at market prices. In recent years, there has been an impact on our trade on account of domestic inflation and recession at the global level. The present paper attempts to interpret the export performance of India in the last few years and identify the factors that help in improving performance or act as impediments. This paper analyses the trends in Indian exports based on past 15 years, data covering the period 1999-2000 to 2015-16.

Key words: Foreign trade, global culture, liberalization

Introduction:
Globalization itself is evolving, with changes in global trade flows, capital flows and the fourth industrial revolution. This has huge implications for India’s future. Trade flows have attracted more attention than capital flows and technological changes as drivers of globalization. Trade in services are now increasing at much faster pace than in goods and it has been long since business enterprises have started focusing on customers and not on products. Entire strategies revolve around the customer. The needs of customers are plenty and are greatly influenced by their environment. With globalization, even the customers’ needs and tastes are getting standardized or are moving in that direction. Coke and Pepsi have been able to get global acceptance. Pizza is no longer an alien food variety in India. Microsoft MS office is used the world over. Technology has facilitated information flow and is able to initiate mingling of culture and thereby, cultural interaction and then cultural integration. International trade allows us to expand our markets for both goods and services that otherwise may not have been available in the country. Services have been a major source of contribution to our export growth, especially in IT. This also makes an interesting comparison with China, whose major focus is on manufacturing and not on services.
Objectives of the study
1. To examine recent trends in India’s foreign trade after globalization
2. To analyze the trend of Indian exports from 1999-2000 to 2015-16.
3. To identify the factors that help in improving performance or act as impediments.
4. To focus on global challenges and opportunities for India’s foreign trade.

Methodology
The present study is mainly done using secondary data relating to period 1950-51 to 2017-18, which is collected from the publications of RBI bulletins, various journals, books and websites.

Present scenario
The Ministry of commerce, government of India, which is responsible for India’s export growth has set for itself an ambitious strategic vision and has drawn a strategic plan which is reflected in its Foreign Trade policy 2015-20. (Department of Commerce, Ministry of Commerce & Industry, Government of India, 2015). The long-term vision of this ministry is to make India a major player in world trade by 2020 and assume a role of leadership in international trade organizations. The goal of Ministry of commerce and Industry is to increase India’s exports of merchandise and services from the level of 465.9 billion USD (2013-14) to approximately 900 billion USD by 2019-20 and to raise India’s share in world exports from the level of 2% to 3.5%.

India is currently a 2.8 trillion USD economy; to reach the 5 trillion USD mark by 2024, the economy would require nominal growth in dollar terms of over 12% a year. To put it in this context, in the last quarter of 2019, India are at slower than 6% in real terms.

The growth emerging markets (e.g. India, China, Brazil and other parts of Asia and south America especially) has impacted international trade in every way. The emerging markets have simultaneously increased the potential size and worth of current major international trade while also facilitating the emergence of whole new generation of innovative companies. Intermediate goods and services from several countries are combined through integrated production networks to fabricate the final goods and services. India participates in manufacturing GVCs, inter alia, in sectors such as chemicals, electrical equipment and jewelry, in general by way of sourcing intermediates from abroad. India also has a high participation in mining, textiles, machinery and services sectors such as distribution, transport and telecom from past few years. Especially engineering goods and chemicals, drugs and pharmaceuticals have shown remarkable improvement in growth rates of exports i.e. 22.4 percent in 2017-18 from 17.0 percent in 2014-15.
Trends in India’s foreign trade

Foreign trade plays a vital role in the Indian economy. As the country need to import diverse products so foreign trade is extremely important to country. India exports vast number of products and also imports an equal number of other products. Although India has steadily opened up its economy, its tariffs continue to be high when compared with other countries and its investment norms are still restrictive. However in recent years the government’s stand on trade and investment policy has displayed a market shift from protecting producers to benefiting consumers. India is now pushing more aggressively for a liberal global trade regime, especially in services. it is explained with the help of following table.

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<td>1.7</td>
<td>1.7</td>
<td>1.6</td>
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</table>

Source – Department of commerce, Ministry of commerce and industry, Government of India (2019)
India’s trade performance since 1990’s

Growing value of exports: the total value of India’s international trade has gone up from US$ 1269 million in 1950 to nearly US$ 8486 million in 1980-81 and to US $ 303,526 million in 2017-18. But much of this increase was concentrated in last 20 years. one reason why India’s export was almost stagnant during the first 15 years of planning was the predominance of traditional goods such as tea, jute and cotton manufactures, the foreign demand for which was generally inelastic. Besides the rise in prices in India and high cost of our export goods, did not allow these goods to be competitive in the international markets. After devaluation of rupee in 1966, Indian export goods got a price advantage. moreover, the government entered into a series of bilateral agreements with fiscal and cash incentives to boost exports. Finally it set up a number of export promotion councils and agencies to promote export. these factors explained the very rapid growth of export in 1970s. this is shown in following table.

In 1980-81, exports as percentage of GDP were only 5.5.%, in 1990-91 this ratio increased to 5.8% and in 2016-17 it is 19.2% and total trade (export and Import) is 39.8%. this is as per the data given in economic survey 2016-17.

Larger growth of India’s imports: as per following table, import showed a continually increasing trend. In 1950-51, imports were US$ million 1273, in 1980-81 it was increased to US $ 15869 million, and in recent year 2017-18 it increased to US$ 465,581 million. however, imports which were 10.2% of GDP in 1980-81, declined to 8.8% in 1990-91 but rose further to 16.9% in 2004-05 and to 27.1% in 2008-09 but again it declined to 20.6% in 2016-17 which is a good sign for an economy.

Widening Trade Deficit: following table shows that in 1950-51 Trade deficit was US$ 4 million in 1980-81 it was increased to US $ million 7383. In 1990-91 it was decreased to US$ 5932 million; it was further decreased to US$ 1546 million .in 2017-18 it was US$ 162,054 million.

Table 2. Recent trends in India’s Foreign trade ( in Us $ million)

<table>
<thead>
<tr>
<th>Year to</th>
<th>Exports</th>
<th>Imports</th>
<th>Trade balance</th>
<th>Rate of change</th>
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</thead>
<tbody>
<tr>
<td>1950-51</td>
<td>1269</td>
<td>1273</td>
<td>-4</td>
<td>24.9</td>
</tr>
<tr>
<td>1970-71</td>
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<td>2162</td>
<td>-1301</td>
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<td>8486</td>
<td>15869</td>
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<td>6.8</td>
</tr>
<tr>
<td>1990-91</td>
<td>18143</td>
<td>24075</td>
<td>-5932</td>
<td>9.2</td>
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<tr>
<td>1991-92</td>
<td>17865</td>
<td>19411</td>
<td>-1546</td>
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<td>1995-96</td>
<td>31797</td>
<td>36678</td>
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<tr>
<td>1996-97</td>
<td>33470</td>
<td>39133</td>
<td>-5663</td>
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</tr>
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<td>2001-02</td>
<td>43827</td>
<td>51413</td>
<td>-7586</td>
<td>-1.6</td>
</tr>
</tbody>
</table>
thus it can analyzed that export growth in 2016-17 was broad based with positive growth in major items except for the fall in leather & leather products, textiles & marginal fall in electronic goods & drugs & pharmaceuticals. Remarkable performance was shown by marine products and minerals. In 2017-18 (April-November) among the major sectors, there was good export growth in engineering goods and petroleum crude and products; moderate growth in chemicals & related products, & textiles & allied products; but negative growth in gems and jewelry. In case of Imports, still petroleum, crude & products are showing increasing trends.

Challenges ahead

The liberalized global environment is posing a very competitive global market, and India has to be very competitive under such circumstances to be able to sustain growth.

1. Many unorganized sectors have to be provided with a lot of information, the government has to coordinate, create awareness and continuously provide market assistance for such sectors. technology can play a vital role in this aspect.

2. Training needs pose a great challenge and it calls for strengthening of the industry-institutional interface.

3. Getting foreign investment and retaining investors in India is a big challenge. foreign investors must be able to visualize a big market in India for their products. the policies of the government should show consistency to attract and retain foreign investments.

4. Outsourcing will be the watch word for many global firms. India, as a major service provider to the entire globe, should grab these opportunities and the challenge here will be to sustain on a long term basis. china has captured the title of “Factory floor of the world” mainly on account of cost advantage in manufacturing, but it lacks the ability to build a brand image. India, with its knowledgeable workforce, can leverage not only cost, but also on providing quality services.

5. Indian firms need to attain functional efficiencies in their operations with improved supply chain business models to suit their needs and to be competitive in a global environment. this involves overcoming cost barriers on account of bottlenecks in infrastructure and also improving functional efficiencies not only in operational value adding activities, but also in logistics/channels of distribution.
Table 3. World economic Growth estimates by various Agencies

(annual percentage change)

<table>
<thead>
<tr>
<th>Category</th>
<th>United Nations</th>
<th>International Monetary Fund</th>
<th>World Bank</th>
</tr>
</thead>
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<tr>
<td>World</td>
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<td>2.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Developed economies/ high income</td>
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<td>1.8</td>
<td>1.9</td>
</tr>
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<td>Euro Area</td>
<td>1.9</td>
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<td>Japan</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>developing economies/E MDEs</td>
<td>3.8</td>
<td>3.8</td>
<td>4.4</td>
</tr>
<tr>
<td>India</td>
<td>7.3</td>
<td>7.3</td>
<td>7.5</td>
</tr>
<tr>
<td>China</td>
<td>6.9</td>
<td>6.4</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Source: UN, World economic situation and prospects 2016, IMF world Economic Outlook,

Opportunities and suggestions

1. Sectoral Approach – firms in India also have to identify the products or product ranges that reflect our heritage and culture which are valued more by buyers. once such a stance is taken, they can explore the possibilities of mass production and achieve reduction in cost of production. an apt example is the cluster approach initiated by the govt. of India for handicrafts, wherein a group of artisans are engaged in production of large varieties of items in a geographical area. examples of such clusters are Moradabad in Uttar Pradesh and Narasapur in Andhra Pradesh where more than 20,000 artisans are engaged in producing a variety of handicrafts. such locations get proactive assistance from the government in terms of infrastructure spending, latest technology, adequate training facilities and so forth (Ministry of Textiles, Government of India, 2014)

2. Stop Looking at the government – Future business firms need to develop adequate confidence in themselves, stand on their own feet, instead of looking for sops from the governments. the government should limit itself to creating conducive environment through sound policies.

3. Global value chain-the future market will be dictated by MNCs who will look for opportunities to outsource labor, raw material, logistics and so forth as part of their global value chain. they will also focus on process innovation to improve their operational efficiencies, product innovation to differentiate their products, and functional innovation in areas such as supply chain aimed at improving their efficiencies and thereby getting a competitive advantage.
4. **Shift towards emerging economies** - the developed countries are no longer having a hold on the market. Emerging economies like China, India, Brazil and Russia are fast becoming suppliers for the needs of the world. Investments are moving to emerging economies. Developed nations to developing nations are now reversed to developing nations to developed nations.

5. **Euro Zone Crisis & U.S. sovereign Debt crisis** - the crisis in euro zone, and more specifically in Greece, is slowly settling down with Greece agreeing to the euro team’s guidelines. At least they have not precipitated the issue by walking out of euro as was originally feared. Thus, the impact of UK from European union (EU) on India is expected to be minimal, which India is well prepared to deal with considering its sound macroeconomic fundamentals, comfortable foreign exchange reserves, commitment to fiscal discipline and declining inflation. However business firms having high exposure of dependency on U.S. markets, especially IT firms, are worried over this development and are reviewing their strategies.

6. **Climate change** - Emerging Focal point - climate change is another area of concern in the environment and its impact on business is also critical. Business organizations need to go green and promote green. Here again, business firms believe that developing “green” products involves additional costs and do not see it as sustainable, they see this more as a corporate social responsibility rather than as a business objective. But many other firms look this as an opportunity and are creating green products, are spreading the message, and they consider it as a competitive edge for them. For some firms, it is an obligation, corporate social responsibility, and cost; while for some others it is an opportunity which they can convert into competitive advantage. Firms which initiate steps ahead of others in green consumerism will find this as an opportunity, grab it, and create competitive for themselves.

7. **Services sector** - India’s services sector contributed 72% to the GDP and ranked 11th in the world. Thus it shows upward trend of contribution of services to economic development in line with the symptoms of development. The declining trend of agriculture’s contribution to growth is likely to generate serious consequences in the very near future of a country like India, with a large population for which achieving self-sufficiency in food security is critical.

8. Conversion of technology and market. In addition to working with consumers, firms also need to work with other technological leaders and form strategic alliances as the current products have become multi-technology dependent. In the past, a single industry was able to meet the needs of the customers; whereas now, customer needs are met by the joint efforts of more than one industry. An automobile car needs the technology of mechanical engineering and electronics. Telecommunication and information technology have to work together. In an industry like photography, chemical engineering and digital technology have to contribute together. The industry focus has now shifted from cross functional within the organization to multi-technology across industry sectors. So sources of innovation need not be from within the industry alone, but cutting across different sectors of industries - like electronics working with communication.

**Conclusion**

Thus, getting India’s GDP to $5 trillion in five years will be far more challenging than achievable. India is currently a $2.8 trillion economy; to reach the $5 trillion mark by 2024, the economy would require nominal
growth in dollar terms of over 12% per year. To put it in context, in the last quarter i.e. in December 2019, for which data is available, India grew at slower than 6% in real terms. Sharad Kumar Saraf, president of apex trade body Federations of Indian export Organizations, said, besides protectionism, liquidity concerns and the sudden spread of the novel coronavirus, global sentiment has worsened further, prompting exporters to delay their shipments. However, India could and should aspire to double digit growth. Without sustained growth at that level it has little hope of employing the roughly one million young people who join its workforce. every month. And unless it takes advantage of its current favorable demographics it is never likely to emerge with a prosperous and thriving middle class.

Limitations:

The study is mostly based in the Indian context. Though the study highlights the emergence of global convergence of India’s export, still there can be unique variations that are specific in certain cases in other countries. There is lot of scope for further study in establishing this concept by studying patterns that have emerged in the past, crystallin these and understanding them better for the future of global business growth.  

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Tourism, the flourishing service sector industry in world and India as well. The World Travel and Tourism Council has calculated the tourism industry generated 8.1% of countries total jobs which roughly equals to 42.673 million jobs. This industry is contributing to nearly 9.2% of India’s GDP. Maharashtra is considered as 2nd largest state after Tamil Nadu visited by foreign tourist, The Travel and Tourism Competitiveness Report of 2019 states that India Ranks 34th among 140 countries overall. This is a positive sign for the Tourism Industry. This has brought variation in the tourist destination. Recreational tourism got momentum with establishment of Water and Amusement Parks since the year 1960. 

Around 1990 world over development of water- parks has notices. In this the huge investment is done by big business tycoons, such as Mr. Subhash Chandra and Mr. Ashok Goel in Water Kingdom and Essel world, Mr. Viraj Jit Sing in KidZania, Arihant Industrial Corporation Ltd. in Great Escape water-park and so on. For the expansion of rural tourism, to reduce income and economic inequalities. The theme parks were the best option for qualitative time for urban tourist of middle and high income and generated large scale revenue such parks were given permissions Amusement and water parks can be best described as artificially created parks that are designed and developed for the sole purpose of offering visitors entertainment and new thrilling experiences. 

Over the years, in the world and in India even, notable amusement parks such as Water kingdom water park in Mumbai,[Asia’s largest.] Jalavihar water park in Hyderabad [Established on 20th May 2007 near Hussein sager Lake] ect, has put a great impact on tourism. There are endless positive and negative economic aspects that are associated with the establishment of these parks and lead to the upcoming of new trends in tourism. There is practically no peak and off-peak seasons for such parks. These parks provide world class experiences for both local and international tourists. 

In many developed countries the Water and Amusement Parks has brought changes in the life of local communities. This is not in India and that to in the vicinity of Greater Mumbai Region. Nearness to metropolitan city and changing income status of population has increased the demand for one day recreational tourism in a form of such parks. Water Parks fights perception that they are WATER HOGS, because just one water park requires 9 lakh gallons of water which they recirculate and the cost of construction is around $250 to $600 per square foot of area. So the average cost of one water kingdom and Essel world goes around $69696000 for 64 acres of land covered 

So the questions arises.
1] Does India really affords to spend such huge amount? ,
2] Whether sweet water used in waterparks and electricity used for amusement park rides is affordable in developing agrarian economy of India with crisis of Farmers Suicides.

3] Is the local community getting maximum benefit? And so on.

In the current paper the researchers tried analyze such issues and highlight the reality with reference to waterparks developed in the vicinity of greater Mumbai.

Key Wards: - Rural tourism, water hogs. World Travel and Tourism Council

Introduction:

India witnesses’ more than 5 million annual foreign tourist arrivals and 562 million domestic tourist visits. In view of developing varied tourist centric, tourism destinations attempt have been made to develop agro-tourism, theme parks which includes amusements and water-parks, development of specialty Museums, food tourism, wellness tourism, experiential tourism which highlights connection between historical and cultural places as compared to traditional type of tourist destinations. Amusement parks constitute a substantial proportion of the total global tourism. This is because of the fact that these parks boast of very high numbers throughout the year. Market intelligence form Euro monitors noted that during in between the year 1984 to 2013 nearly 153 amusement parks has come up in India. It started with Appu Ghar in Delhi Essel World in Mumbai in the year 1986 according to Ms. Smita Jha. Director Price water House Corporation of India “amusement parks are facing many hurdles. Indians do not have a gaming culture and families tend to go to the movies rather than such parks. Mr. Viraj Jit Singh chief marketing officer KidZania, a Mexican base entertainment and education chain which is setup its separate agency says that, “ the amusement park has competition with cinema and even with the laptops at home But the secret of success lies in providing entertainment for the whole family and not just the children. Sustaining interest of major families lies at providing maximum facilities to the entire family.

Research Methodology:

PRIMARY DATA:-

1) Primary Survey at few water and amusements parks from Palghar and Thane Districts..
2) Interview with tourists and community.

SECONDARY DATA:-

1] Use of website.

Objectives:

1] To understand the need for Water and Amusement Parks.
2] To know the socio-economic opportunities and challenges.
3] Health, Culture and Environment sustainability challenges it face.

Analysis And Interpretation:

To understand the need for Water and Amusement Parks: -

Water and Amusement parks is always considered as leisure and pleasure activity. As the method of leisure changes with ages the demand for water parks also increased. It is considered as family entertainment source in the changing lifestyle. Most of the visitors are employed male members between the age group of 18 to 40. But
those who are coming with families want entrainment for children as well as senior citizens even. Water Park is the perfect solution for this. For children there are specially designed shallow swimming pools, Play Parks with swings, See-saw, Slides, E-vehicles, indoor games etc. Whereas for senior citizens there are banquet halls, retiring/resting rooms, cool enclosure with shade, comfortable cots, peaceful greenery. For every tourist; locker for safe keeping their belongings, swimming costume for sale, Water slides of different heights with floats, artificial wave pool, drifting lazy river, rain dance, cocktail Bars/ Bar restaurants, Massage centers and so on.

Tourist visiting at water parks likes Shangrila at Padgha on Nasik- Bhiwandi road, Great Escape at Virar, and Konkan King at shilphata road. Dombivli-Kalyan area has responded as follows: -

<table>
<thead>
<tr>
<th>Response from Tourist</th>
<th>Percentage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spending enjoyable time with family and friends</td>
<td>.51.9</td>
</tr>
<tr>
<td>Promotional schemes</td>
<td>26.5</td>
</tr>
<tr>
<td>Love of water and cocktail bars.</td>
<td>21.6</td>
</tr>
</tbody>
</table>

To know the socio-economic opportunities and challenges:-

Water and Amusement Parks has huge employability. From designing of these parks till final operations and daily maintenance and customer care etc. it provides large scale jobs. They require Industrial engineers, creative designers for water slides structures, Mechanical engineers for filtration and recycling water, Purchase executives, Vender management services, Laborers at every stage, Water Park and Ride attendants, Cooks, Receptionist, Bouncer or Guards, Watchmen and so on.

The challenge in it is- How far the local communities gets the Jobs?

According to the survey conducted only 10 % of the local people from nearby communities are been absorbed.

The marketing, advertising agencies services are hired for creating publicity of these parks. The educated receptionist, purchase executives, accountants& C.A are all from different areas but not from the local community. Watchmen are also appointed through some agencies but no jobs are proved to local people. Most of the local community are either been absorbed as bar tenders, waiters or food service.

Then one more question arises that tourism is considered to be beneficial to local communities, Is the Water and Amusements Parks tourism reflecting so?

According to UNTWO [United Nations World Tourism Organisation] which is specialized agency for the promotion of responsible, sustainable and universal accessible tourism, there should be some benefits to the communities then only such tourism can be called as responsive Tourism. Hence certain criteria are laid down such as :-

1) Stimulates business:- Yes such park development gives rise to other related business activities. Many Water parks do not have their own travel or transport services. The owners say that communities around these water
parks provides these services. At some places like Water Kingdom and Essel World water park, the water ferry system is operative to give benefit to local fisher folks. From nearest railway stations and Bus stations local means of transport system is more effective.

Near the water parks areas many Dhaba restaurants have even came up to support the tourist visiting these parks to have their dinner in least cost before going homes. Local people have started their own pan, cigarettes and tea stalls.

2] Create economic opportunities for community or supports community based tourism:- the income earning opportunities are very less. [as discussed earlier.]

Water Park tourism is really a profitable business. It is charging admission fees, but they have additional earnings through sales of food and beverages, souvenirs and merchandise and additional fees for facilities like cocktail bars, games and massage parlors etc. Inside the premises of such parks different shops are also established. These shops are given on rental basis. From them also the income earning takes place. This indicates that Water Park tourism is profitable business activity.

3] Saves money: - The general fees or charges at any water and amusement parks in India ranges from Rs. 600/- to Rs. 1500/- per adult person and for children slightly less. Most of the metropolitan tourist visiting such parks is from middle and high middle income groups. For such families the cost of general living is very high. Hence are always blaming the system and even argues with vegetable and fruit venders. Then the question arises whether the fees/charges to be paid at the parks and other additional expenses for cocktail bars, swimming costumes, shopping, traveling etc. to be paid! Do the visitors afford the cost of one visit to such parks? There is no chance of saving money. Every year the charges are even increasing.

When interviewed nearly 80% of the visitors reacted that for enjoyment it is necessary and it for the family entertainment and spending some qualitative time with family so they are ready to pay. Whereas 20% tourist have agreed that the cost of one day recreation is high and hence they visit such Parks during some promotional offers or some festivals like Holi is going to be celebrated.

4] Retaining staff:- In my personal two times visit to above mentioned water parks, I have seen the entire staff has changed. Only the few receptionists at the counter were retained. The local communities around has reacted that we do not get permanent jobs at the Water Parks. Thus this criterion for sustainable, community based tourism development has even failed.

Health, Culture and Environment sustainability challenges it face

According to UNTWO the tourism activity has to increase or at-lest protect the value of cultural and environmental.

Water and amusement park tourism at Water Kingdom and Essel world has systematically destroyed Mangroves of Gorai land near Manory Creek. Mangroves has great value in environment protection and management. Mangroves acts as buffer zone for high waves and protects the coast. It is considered as Carbon Sinks, which has a highest capacity to absorb and store carbon. THIS IN TERN REDUCES POLLUTION. Mangroves are the breeding grounds for fish. But destruction of mangroves in 13 acres of land has been noticed on the basis of satellite data available with Forest Department.
The company is not ready to accept the blame, rather putting blame on villagers of Gorai. According to them the villages has done destruction of mangroves for expansion of their business and settlements. Rather the company has reclaimed land with 1.5 lakh of different variety of trees. They even have rainwater harvesting system since 1989-90. For ‘vested interest’ they may have cut the mangroves in a bit of area for expansion of some activity. But nearly 43 acres of grassland area has reduced for the purpose this park. Reducing natural grassland region itself is a crime.

For Shangrila Water Park the land reserved for logistics, warehouses are converted to water parks. At the outside areas only Dhaba type restaurants have come up. No other establishments are able to flourish around the region.

In areas of Konkan King Water Park region, the traditional brick making industries have vanished for sack of controlling pollution and that land is converted to waterpark. The 100 pulse workers are not been absorbed by waterpark management.

Cultural shock is yet another issue related to water parks. The women who are not use to wearing swimming costumes are asked to wear it. The couples {married, Unmarried} are creating very bad postures at such Parks. Cocktail Bars/ Bar Restaurants are very common at such Parks, without which the Water Parks remain incomplete. According to the survey the ratio remain more or less same where Men and Women are drinking liquor.

Health issues related to water and amusement Parks are of varied nature. The green or blue swimming pools at such Water Parks have harmful bacteria. The chemical level is high .The water quality can cause eyes, ear, nose and throat infections. Diarrhea like diseases is becoming common among all the age groups. According to one survey conducted in Canada, related to water safety says that in common swimming pools of 110,000 gallons of water, within 3 weeks’ time there is addition of about 7.92 gallons of urine. The eyes are not getting red because of chlorine but the urination cause infection to eyes. [Ref- www.Today.com>health by Scott Stump]

The pool water contains strong acids, alkaline which can affects those who have sensitive skin. Skin tanning and Skin infection has been noticed on maximum tourist visiting such Parks. This persist for more than 15 days. But the tourist either denied for such infection or have shown careless [chalta hai] type attitude.

In the year 2015 in the water Parks of India more than 4200 people visited hospitals. They had water Park related injuries like scraps, cuts, broken bones, and spinal injuries. Even few death cases happened. But there is not much media coverage given to such news.

Conclusion:
The demand for one day tourism or recreational activities is showing increasing urbanizing countries all over the world. Hence within small period of time cinema theatres, national and state museums, zoo parks, fails and festival celebration in a grand scale as well as Slum tourism, dark tourism. Water and Amusement Parks has got importance. The small shrinking families creating demand for such types of tourism. These are suitable for all income groups even.

But at water parks Once or Twice in a year they get fresh stock of water and throughout the year they recycle and reuse the water. Chlorine of Ozone are the solvents used to purify the water. They are harmful to human
health and environment even. One newly formed water parks has a capacity of 3 to 5 lakh gallons of water has a capacity to satisfy the need of water for 50 people for months together. Such kind of tourism activity cannot be considered as Green or environmentally sound. It is destroying indigenous natural vegetation by newly plated decorative plants, which is not supporting the local environment. So there is need to rethink before launching new Water and Amusement Parks in India. Water is precious; the employment generation for local community is need of an hour. Spending huge amount for such type of lavish lifestyle tourism do not support the agrarian economy.

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Abstract:
Cyber security is combination of practices and policies to monitor and prevent unauthorized data. Main objective of cyber security is to protect network applications, program. Theft software or information is misdirected or misguided will be rectified by cyber security. Cyber security includes hardware physical access, network, applications are protected from harmful elements like virus or corruption etc.

Introduction
Cyber security is the combination of policies and practices to prevent and monitor computers, networks, programs and data from unauthorized access or attacks that are aimed for exploitation. Cyber security can be implemented by small as well as large organizations or in fact any one in computer world. In today’s world cyber security is important to protect digital attacks, cloud damage.

Threat vector in cyber security is
1. Orphan account.
2. Infected website.
3. Not supporting browser.
5. Personality test online etc.

Methodology
A qualitative approach was selected for this study. Since not many people know about cyber security. Beside that secondary data is used in order to compare with primary data. The data is has been collected by other for their own purpose.

Objective
1. Different type of security attack and their types.
2. Major taken by government to control cybercrime and increase cyber security.
3. Impact of cyber security on society.

SECURITY ATTACKS AND TYPES
A. Denial of Service Attacks – when some resources are available like web server to use then this service attacks is used.
B. Brute Force Attacks - These attacks try to in brute force attract trial and error is attempted to guess password.
C. Browser Attacks- These attacks target who browse like end users. Fake software use or applications by this browser attacks. Websites are also force to download malwares. Updated web browser is the only reason to
protect it from cybercrime.

D. Shellshock Attacks- These attacks are refers to vulnerabilities found in Bash, a common command-line shell for Linux and UNIX systems.

E. SSL Attack- Intercept data is sent over an encrypted connection. These attacks successfully access to the unencrypted information. Common attack nowadays

F. Backdoor Attacks- These attacks are used to bypass normal authentication to allow remote access. These attacks are added in software.

G. Botnet attacks- These attacks are hijackers. Computer are controlled remotely by one malicious attacker. Attackers use the botnet or botnets for malicious activity to perform malicious activity for others.

Government steps taken for cyber security

1. (NCIIPC) for protection of critical information infrastructure in the country. Establishment of National Critical Information Infrastructure Protection Centre.
2. Organizations who are providing digital services have been mandated to report cyber security incidents to CERT-In expeditiously.
3. Issue of alerts and advisories regarding cyber threats and counter-measures by CERT-In.
4. Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre) has been launched to provide detection of malicious programmes and free tools to remove such programmes.
5. Conducting cyber security mock drills and exercises regularly to enable assessment of cyber security posture and preparedness of organizations in Government and critical sectors.

Impact of cyber security on society.

Cyber security is not new concept. Has technology increased it carry both advantage and disadvantages. Due to which cyber security began to drive internet policy discussions. Some human right are framed regarding security, which play important role in documenting and monitoring business, transactions etc. To increase cyber security in society important is shaping securities, sharing information and collaboration.

Conclusion

As we know cyber security is very much needed in today’s world. Due to some government policies schemes regarding cyber security it gave a protection to cyber world. Normal public is happy and secure. As advantages there are also disadvantages of cyber but due to cyber security disadvantages can be neglected.

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Volume 8, No. 3, March – April 2017 International Journal of Advanced Research in Computer Science RESEARCH PAPER
CHALLENGES AND OPPORTUNITIES OF THE AGRICULTURAL SECTOR IN RAIGAD DISTRICT

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Abstract:
Indian is an agriculture based country, where more than 50% of population is depend on agriculture. This structures the main source of income. The commitment of agribusiness in the national income in India is all the more, subsequently, it is said that agriculture in India is a backbone for Indian Economy. The present paper discusses the role and contribution of agriculture sector in Raigad District with respect to generation of employment and carrying out livelihood of the public. It also focuses on the challenges faced the agriculture sector in Maharashtra in general and Raigad District in particular.

Key Words: Indian Economy, Agriculture, Raigad, Challenges and Opportunities.

Introduction:
Agriculture is the backbone of Indian economy. Agriculture is a way of life, a tradition from centuries and shape the thoughts, culture and the economic life of the people of India. Over 200 million farmers and farm workers is the backbone of Indian agriculture therefore is and will continue to be central to all Strategies for planned socio-economic development of the country. With production of agriculture activity of $375.61 billion, India is 2nd larger producer of agriculture product. India accounts for 7.39 percent of total global agricultural output. In this scenario the condition of the farmer and agricultural sector is not showing sound relations increasing indebtedness and farmer’s suicide creating black side for the agricultural sector in Maharashtra. 21st century has witness changes in agricultural production and cultivation techniques by reducing the export of the traditional crops India has started exporting fruits vegetables and flowers is new crops are captured the world market.

Objectives of the study –
1) To study the problems faced by the farmers in agriculture sector.
2) To study effects of industrialization on agricultural productivity
3) To find out the opportunities in agriculture and its allied activities
4) To find out the opportunities to prevent migration of youth towards urban area

Methodology of the study:
The present study has been descriptive; the data for this study were obtained from secondary sources. The secondary data has been collected from various references which already exist in the published form; part of the paper is based on literature review the method comprising of collecting all the available papers relating to the them and selecting relevant papers /books for the review purpose. Selection of the paper is done on the basis of their relevance and contribution to the body of knowledge. The author has made an attempt to do primary reading of the selected papers which will constitute the core of this review study.
Discussion based on secondary data:

India is badly in need of strong economy to solve the problems of poverty, unemployment, low productivity etc. But agriculture cannot be ignored. The agricultural sector is considered as the backbone of India economy. It earns about 10 percent foreign exchange by means of exports. The appropriation of cultivable lands for the industrialisation purpose has created a big problem to the farmers in the Raigad districts. In the recent years, a good number of industrial establishments have mushroomed on the agricultural lands in Raigad Districts. This development is necessary to boost economy of the State. But it is done at the cost of farmer’s livelihood. The industrial impact is so great that they are rendered homeless and jobless. Because their arable lands are appropriated for the industrial purpose. Moreover, this has affected the growth of the produce. As a result, the field products are now scarce and are sold at exorbitant prices. Under the prevailing circumstances, the poor farmers are compelled to seek their livelihood somewhere in the urban areas.

Location of Raigad District

The Raigad district is located on western side of Maharashtra State in Konkan Division. Arabian Sea is spread along the west side and Sahyadri Hills towards the East. Thane, Pune, Satara and Ratnagiri are the border districts. North West is Thane Creek. The District is spread 160 km north-west and 25 to 50 km east-west. Geographical area of the Raigad district is 7,162 sq. km and is 2.32 % of the total area of State. Raigad district has 240 km clean and beautiful sea shore. There are fifteen Talukas namely; Alibag, Pen, Panvel, Karjat, Uran, Khalapur, Roha, Sudhagad (Pali), Mangaon, Murud, Mhasala, Shrivardhan and Poladpur in Raigad District. Alibag is the head quarter which is historical capital city of Raigad district.

As per 2011 census the population of district is 26,34,200 which includes 12,89,855 females and 13,44,345 males. Literacy percentage is in males is 89.10% and females is 76.90% averaging 83.10% of the district. The female: male ratio of the district is 955 per thousand. There are 1970 villages and 16 cities. Local self-government includes 824 GP, 15 PS, and 11 Corporations.
As Raigad has 240 km sea shore definitely fishing is one of the major enterprises in about 103 villages along the sea shore. ‘Jitada’ is supposed to be the king of fish in Raigad and taken as inland fish enterprise. Bauxite mineral is found in Shrivardhan, Roha and Murud Talukas. Ferus is also found in some part of the district. Natural oil is found in Uran taluka. Domestic salt is prepared in Uran and Panvel. Amongst industrial products are chemicals, colours, paper, Iron, different type of soft drinks etc. Industrial sectors are Khopoli (10.9 ha), Panvel (12.31 ha), Kamothe (23.8 ha), Roha (240.44 ha), Taloja (893.31 ha), Patalganga (313.70 ha), Birvadi (470.39 ha). There are also big industries in Nagothane, Mangaon, Wadkhal, and Usar The climate of district is hot and humid. Average rainfall is 3142.83 mm and is highest i.e. 4,947 mm at Matheran Aug 2014 in Karjat taluka. About 48% of rainfall is received in July. During rainy season humidity is above 80% and it ranges from 65 to 75 % in rest of the year. There is no much difference in day and night temperatures.

**Challenges in Agriculture:**

1) **Less availability of irrigation**

In spite of the river the agricultural land under irrigation is very less (6.81% of irrigated areas) it means that rain water is the only source for irrigation. It is observed that hardly 36% of the total rainwater is available for used and so the remaining 64% water is lost by surface runoff that also creates the problem of loss of fertile soil layer.

2) **Less land holding:**

Raigad district has a 240 kilometre coastline, along the west side and Sahyadri Hill towards east, minerals, salt pans, and non-agricultural use like buildings and roads, industrialisation, etc. are the activities carried out. Because of overpopulation land to men ratio is declining rapidly causing less landholdings, it affects the progress in agriculture in terms of getting higher yields as it creates limitation in order adoption of modern agricultural techniques, mechanization, etc.

3) **Declining soil quality**

The recent trend of farmers with regards to adaptation of technologies such as horticulture, plantation crops, hybrid paddy organic farming etc. shows willingness and openness to adopt emerging agricultural trends. The soil quality is declining due to improper use of fertilizer, frequent occurrence of flood, and uncertainty of rainfall, use of pesticides insecticides has also resulted in the loss of soil quality.

4) **Shortage of labours**

Agriculture requires more manpower to perform various activities from land tilling to post harvest of agriculture produce. In spite of population pressure in Raigad district the farmers are facing the problems of an availability of labour in specific period at the beginning and at the end of the main season. Shortage of labour is due to migration of rural population in nearby urban areas and the increasing awareness of new generation toward education resulting in reluctant to work in agriculture preferring to work in urban areas rather than to work in rural areas.

5) **Mechanisation of agricultural sector:**

Migration of labour to the neighbouring Mumbai metropolitan city is one of the major threats in the agricultural
sector. The higher payment received on the other hand other than agriculture sector viz; brickworks port activities etc. So to have timely agriculture operation to be done mechanisation is the only way for increasing productivity. In this context it is needed to subsidize the supply of all the types of tractor and other implements or arrangement should be made for the farmers to get various implements on rental basis at relatively cheaper cost.

6) Economic problems:

Economic status of the farmers is still not sound to invest sufficient capital in farming. Most of the farmers are small and marginal type i.e. holding less land, having lower income group which results in less adaptation of modern technologies. The main effect of low economic status is that the farmer had to borrow loans from banks or private money lenders. Many times farmers are unable to repay their loans due to less price of agricultural produce they sold in the market. This kind of situation is very serious if they have taken loan from private money lenders as it has more interest rates.

7) Marketing problems:

This is one of the burning problems in the agricultural sector that when a farmer goes to the market to sell his agricultural produce, most of the time he is not getting reasonable prices. This kind of situation arises in the market as the supply of commodities increases in the market at a specific period due to the seasonality nature of agriculture resulting in the reduction of prices. Farmers have no way to wait for an increase in price as they have to return their loans and meet other outstanding. Unfortunately it is to accept that every producer of any kind of product other than agriculture decides the prices but it is not in the hands of farmers.

8) Impact of globalisation

India has entered in the processes of globalisation. It is influencing international marketing which is liberalized considerably, it means that the commodities which are cheaper for customers could be sold easily hence the competition at global level is so increased that the commodities which are produced with lesser cost will be sold at lesser prices. Unfortunately the cost of cultivation under Indian conditions is more as compared to developed countries because they are using advanced technologies like mechanization computerisation etc. Impact of globalisation will be thus a more influencing factor in the field of the agricultural sector.

Opportunities in agriculture and allied agriculture activities:
1. There is tremendous scope for the growth of Horticulture, Floriculture, and Animal Husbandry, Dairy, Poultry, Apiculture, etc.
2. There is also good scope for development of agro-tourism in and around Raigad as well as Raigad district as a whole.
3. There is scope for establishing private market, contract farming, cold chain, cooperative Marketing - farmer to consumer market.
4. Large area of cultivable wasteland can be converted to cultivated land.
5. There is scope for agro processing industries at a great extent.
6. There is a scope for growth of dairy and milk processing industry.
7. Good scope for the development of inland fisheries 1055 ha. Water spread
Area is suitable for inland fisheries.

8. Growing opportunity to develop organic Agricultural Produce and Food Products.
9. Opportunity for establishment of organized markets by farmers groups and Linkages with Retail markets like Malls etc.
11. Opportunity for developing good brands for domestic as well as export market.
12. Small agricultural processing units/federations can be initiated in generating Employment Opportunities.

Conclusion:
Agriculture sector plays an important role to accommodate maximum number of population. Any changes in agriculture may have serious affects and whole of the economy. But now a days the importance of this sector is declined due to lack of job opportunities, and increasing awareness of new generation toward education resulting in reluctant to work in agriculture preferring to work in urban areas rather than to work in rural areas. Agriculture sector is a need to significant investments to ensure sustainable growth and development. If industries start to utilize the agriculture land for construction then the popular rice cultivation may disappear from the land of Raigad districts in Maharashtra.

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6) Industrial Impact on Agriculture in Raigad district by Jagtap H. K. (An International journal of interdisciplinary studies VOL1, ISSUE 4)
7) www.Encyclopidiea.com
A STUDY ON AWARENESS OF OVER THE TOP (OTT) MEDIA AMONG YOUNGSTERS

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Assistant Professor,
Laxmichand Golwala College of Commerce & Economics, Ghatkopar East

&

Prof. Soumya George,
Assistant Professor,
Mulund College of Commerce, Mulund

Abstract:

OTT “Over-the-Top” media is in new trend amongst the youth today. Due to easy availability of high speed Internet service today and busy lifestyle this media is emerging as complete service for spending time out of leisure. OTT media have a good number of viewers across city specially youth due to its variety of content, web series-orginal, movies, TV shows etc. OTT media has already unfolded traditional media and current demand and viewers interest shows the numbers of OTT users are expected to rise. Through this research paper the researchers have tried to find the awareness of OTT media amongst youth today also the impact of OTT media on the people who watch OTT media.

Keyword: OTT, smartphones, internet

Introduction:

OTT is the short form for the concept Over-the-top, it refers to the streaming content to customers directly over the web. Here contents of television and film are been provided via a high-speed Internet connection, other than a cable or satellite provider. OTT is the future of entertainment. It has been becoming very popular among the people due to the availability of High speed internet, increasing use of smart phone and other gadgets like laptops, tablets etc. Over-the-top (OTT) services has overcomed traditional media distribution channels such as telecommunications networks or cable television providers. In any location leisure time can be spended accessing OTT, as long there is good access to an internet connection either locally or through a mobile network

OTT services are currently monetized via paid subscriptions, but there are exceptions. For example, there are some OTT platforms which might offer in-app purchases or advertising etc. OTT platforms bypass third-party networks traditionally managed online content already available. The only things which customers need to access OTT services are internet connection and a compatible hardware device like,

- Mobile devices: Majority Smartphones and tablets can download OTT apps from a supported digital storefront.
- Personal computers: Majority of the computers support OTT content viewing through various desktop-based apps or web browsers available
- Smart TVs: The latest version of TV models often include pre-installed OTT apps, or provide users with an option to download them.
- Digital media players: Different third-party devices like the Apple TV support most of range of OTT. Many modern video game available in recent days also include the ability to download and run OTT apps.

**Why People Prefer OTT?**

- Paid TV Customers are dissatisfied by services provided by Cable or dish network.
- Customers want to get rid of traditional TV.
- Due to odd working hours all the members of family are not coming together and able to spend time all together to watch TV Programs.
- OTT services can provide customers with a wide variety of payment and viewing options which allows the viewers to free themselves of contracts that their cable providers locked them into.
- All are having access to smartphones, tablets, laptops so at comfortable timings according to there own personal interest OTT media can be accessed.
- OTT provides the customers what they want.

1. **Benefits of Over the Top Media**

OTT is a win-win for everybody involved. Consumers love it as they no longer have to pay for TV that is much limited in terms of content and convenience.

Advertisers always prefer to use this media as it generates massive revenue.

- Targeting – OTT media enables shorter but more relevant ads because it knows where the audience is located geographically. OTT platform can break the audience into segments for better metrics, and it can tell you which device(s) the viewers are using most often to access your content.
- Dynamic ad insertion - Lets you interchange ad creatives in linear, live or video-on-demand content.
- Advanced analytics - With all of the data obtained about your audience, you can use it to find which ads are working for you
Ref: https://www.iab.com/insights/ott-video-streaming-playbook-for-advanced-marketers/

Objectives of Study:-

— To know about the Awareness about Over The Top (OTT) Media among youngsters
— To know the impact of OTT Media among the people

Research Methodology

This paper is based on primary as well as secondary data, primary data collected from 160 respondents of youngsters-college students, working youth across Mumbai, Secondary Data information gathered from various magazines, newspaper, websites.

To gather more information the researchers have conducted survey among 160 respondents to gather information about OTT and usage of OTT Media.

Data Analysis & Interpretation:-

1. Gender of respondent ?

<table>
<thead>
<tr>
<th>No.</th>
<th>GENDER</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>116</td>
</tr>
<tr>
<td>3</td>
<td>Prefer Not To Say</td>
<td>01</td>
</tr>
</tbody>
</table>
2. Age of respondents?

<table>
<thead>
<tr>
<th>No.</th>
<th>Age</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15-25 years</td>
<td>149</td>
</tr>
<tr>
<td>2</td>
<td>25-35 years</td>
<td>09</td>
</tr>
<tr>
<td>3</td>
<td>Above 35</td>
<td>02</td>
</tr>
</tbody>
</table>

3. Profession

<table>
<thead>
<tr>
<th>No.</th>
<th>Types</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student</td>
<td>148</td>
</tr>
<tr>
<td>2</td>
<td>Salaried Employee</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Housewife</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>Student as well as working in Institution</td>
<td>01</td>
</tr>
</tbody>
</table>
4 Do you have access to Over The Top (OTT) Media?

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>135</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>160</td>
</tr>
</tbody>
</table>

5 Which OTT Media you prefer the most?

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amazon Prime</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>Hotstar</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>Netflix</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Voot</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>Sony Liv</td>
<td>07</td>
</tr>
<tr>
<td>6</td>
<td>Zee 5</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>160</td>
</tr>
</tbody>
</table>
6 Which device you use to access OTT media?

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TV</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Laptops</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Tablet</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>Smart Phone</td>
<td>123</td>
</tr>
</tbody>
</table>

7 How often do you use OTT streaming?

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Once a week</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>Twice a week</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>More than three times a week</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Regular Routine ( Almost a routine)</td>
<td>36</td>
</tr>
</tbody>
</table>
8 What do you watch most on online streaming

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Original</td>
<td>86</td>
</tr>
<tr>
<td>2</td>
<td>Sports</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>Movies</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>TV Shows</td>
<td>47</td>
</tr>
</tbody>
</table>

9 How many episodes of show do you usually watch in a single sitting

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 3 episodes</td>
<td>95</td>
</tr>
<tr>
<td>2</td>
<td>3-5 episodes</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>More than 5 Episodes</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Entire Season</td>
<td>15</td>
</tr>
</tbody>
</table>
10 Why do you watch OTT Media

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Helps me to forget about my Worries</td>
<td>41</td>
</tr>
<tr>
<td>2</td>
<td>Takes me to Another world</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>Helps to forget about my Problems</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Helps to Escape from Reality</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>Others</td>
<td>71</td>
</tr>
</tbody>
</table>

11 Please indicate your level of agreement with the statement below about your viewership of OTT media
12 After I watch OTT media I feel

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Happy</td>
<td>69</td>
</tr>
<tr>
<td>2</td>
<td>Tired</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Relaxed</td>
<td>93</td>
</tr>
<tr>
<td>4</td>
<td>Anxious</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Guilty</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Disappointed because it is over</td>
<td>23</td>
</tr>
</tbody>
</table>

13 How do you rate the Over the Top Media service

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excellent</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>Very Good</td>
<td>73</td>
</tr>
<tr>
<td>3</td>
<td>Satisfactory</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Unsatisfactory</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>160</td>
</tr>
</tbody>
</table>
14. Will you recommend OTT Media to others

<table>
<thead>
<tr>
<th>No.</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>102</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>Maybe</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Total</td>
<td>160</td>
</tr>
</tbody>
</table>

Findings:
- Majority respondents are students, under age category less than 25 years
- Majority are aware and have access to OTT Media
- Netflix, Hotstar are media popularly used by the respondents
- Smartphone is the device used by the respondents to access OTT Media
- Respondents prefer accessing OTT Media more than three times in a week.
- Original Series (Web Series/Short Films) are watched more by the respondents
- Less than 3 episodes are been viewed in a single sitting by majority respondents
- Respondents are of the opinion that various reasons make them spend time in OTT media are Helps me to forget about my Worries, Pass time etc
- Respondents viewing OTT media are of the opinion that it brings them satisfaction, cause anxiety, addiction
- Respondents are of the opinion after watching OTT they feel happy, relaxed, disappointed because it is over.
- Respondents feel OTT media is very good and prefer referring it to others

General Findings based on study
- College students are spending more time in OTT media, so it affects there studies, interest in doing other productive work.
- Over use is leading to addiction among youngsters.
For the access of OTT Media, high speed internet is needed. As the interest is becoming more among young generation to watch OTT media, more money is spend on Internet.

Many Programs which are made available on OTT media are not censored. Communication between people are becoming very less as at home, free time, while travelling people prefer spending time in OTT Media

In todays world in case of favourite people start with all these type media but one side they have turned to severe addictions among youngsters today.

Many of the people are not even aware why they watch this media but are carried away in crowd.

As in television serials the routine drama have really bored our regular public, so people find OTT media where so much orginal contents are attracting customers.

In general people are finding the programs on this media is making them happy and relaxed as it helps them to stay away from stressful life for a while.

The current trend and awareness among youth shows there is a great impact of OTT media among youth and also this media would have a wide market spread in next years to come.

Conclusion:-
OTT Media is been used by youngsters specially in smart phones, laptops with the access of internet. Various different programs like Original Web series, Short Films are been accessed by people. People in Metros who have access to Internet and use devices like smartphones, laptops, tablets etc spend there free time at home or while travelling accessing OTT Media. More Cable Charges, limited options available in TV Channels as DTH services provides different packages, less time available at home to sit and watch TV because of busy schedule, people prefer OTT Media but there are some problems associated with it like it is leading to addiction among youngsters, more time and money is spend on Internet to access OTT media, many programs available in OTT Media are not censored. Due to availability and more use of internet and smart phones, laptops, tablets and because of varieties of programs available OTT media is replacing Cable TV and DTH.

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SEXUAL CRIMES AGAINST WOMEN IN INDIA.

Sakshi Tridevi

Abstract:
Violence for women in India is been in limelight since various years because of severe cases like rape, murder has thrilled the country. The study carried out survey within 250 individuals all across the country and world. Most typically these acts are committed by men as a result of the long-standing gender inequalities present in the country. The study was undertaken with objectives to understand both male and female views on the present scenario in respect of penalties, suggestion to reduce crimes against women, time to settle down cases which are pending since years for justice through a direct question related to factors responsible for crime, law formation, penalties were the parameters used to test the hypothesis which was to see the implementation of separate law with the help of ratio analysis. Sexual crimes against women are one of the issues that the country is facing, and proper measures must be carried upon to control it. As per National crime records bureau around 3, 45,988 cases was register for crime against women all over. Hence crimes towards women must be solved from ground level.

Keywords: sexual crimes, ground reality, law formation, penalties, time of settlement

Introduction:
• Violence against women in India refer to physical or sexual violence committed against Indian women, typically by a man. Common forms of violence against women in India include acts such as domestic abuse, sexual assault, and murder, molestation, rape, brutal assault after rape. In order to be considered violence against women, the act must be committed solely because the victim is female. Most typically, these acts are committed by men as a result of the long-standing gender inequalities present in the country.

Genesis of the study
• In India, crime against women is increasing rapidly specially in case of sexual harassment, rape, domestic violence, molestation, murder etc. Crime against women is one of the most talked upon topic. As per NCRB, around 3, 45,988 cases were register for crime against women all over India. The study provides ground reality through individual reviews especially in cases like rape, sexual harassment. Popular cases that can be seen such as Nirbhaya case which is still running, and decision is yet to come.

Objectives:
• To study of crime against women in respect of sexual crime. To understand the ground report from men as well as women on crime against women. To study various measure to reduce crime against women through individuals. To suggest some measures based on study. To gather reviews of men as well as women on penalties on offenders. To study the reviews, obtain through research on formulation of law, penalty
Hypothesis of the study:

H₁: there is need for strict implementation of law against women.

Research design

- The study is an empirical research based on the survey method. The primary data has been collected from 103 women, 97 male. The data is collected from various states from India and international countries. The required secondary data has been collected from NCRB office, bulletins and government websites. The collected data is analyzed with the help of snowball method and presented with the help of charts and diagrams in systematic manner. Percentage analysis and ratio analysis methodology and data sources of study: it is simple statistical tools have been applied for the interpretation of data and to arrive at conclusion. Percentage analysis and ratio analysis methodology and data sources of study: it is simple statistical tools have been applied for the interpretation of data and to arrive at conclusion.

Analysis of data & interpretation of data

Gender:

Around 210 individuals provided information out of which 113 are female and 97 were male.

OCCUPATION

These research include students, teachers, professionals, hotelindustry, housewife’s and various others. Around 67% are student, 16% are professional etc.

Regional expansion:

This survey was conducted on national as well as international level, these include Gujarat - 18 person Brampton - 2 person Delhi - 9 person Haryana - 5 person Punjab - 32 person Maharashtra - 48 person Toronto - 1 person Vishakhapatnam - 1 person Himachal Pradesh - 73 person Philippines - 1 person up - 5 person JAMMU & KASHMIR - 1 person.

Factors responsible for crime against women

1. Around 210 individuals in research analysis, mentality of the criminal, society are most responsible for crime against women which was also highly seen in the comments received.

2. The least factor responsible for crime against women are the clothes women wear.

Steps to reduce crime against women

The most important and immediate steps required reduce crime women training, lawformulation, fast track court awareness of crime within girls. Around 114 individuals are in support for fast track court, women training to be the most important steps to reduce crime against women.

Should fast track court must be implemented?

Around 192 individuals are in support of implementation of fast track court. And around 18 individuals are in oppose to the formulation of fast track court.

Penalty for severe crime?

Penalty should be strong if to reduce crime against women.

Around 180 individuals are in support to hang to death punishment for severe cases like killing, sexual molestation etc.
Time frame for solving the cases. Today some of the cases are pending for over 7-10 years. As per the survey around 112 individuals are in support for cases to be solved within 1 month.

Conclusion
Various suggestions were received in the research there around 120 suggestions they include Women safety training must be necessary in all schools, Mentality of society must be changed, Active use helpline number in time of danger, No mercy appeals, Separate transport system for women, Reduction bad use of media, Equality, Reduce illiteracy, Strict action against cases, Sensitize men, No delay in filing of fir, Complete assurance of investigation from police in respective cases, Women police patrolling in informal attire, Inculcating of values and respect towards all gender in schools for boys, Technology support.

These researches conclude that even having law and penalties this law is not able to reduce crime against women.

References:
The data completely includes primary data. The numeric data is collected from national crime records bureau of India.

Some of the data is collected from national newspaper.
THE DEVELOPMENT AND INCREASING IMPORTANCE OF SMART TECHNOLOGIES:
A MATHEMATICAL STUDY

Prof. Satyprakash Pandey,
Assistant Professor,

Abstract:
The Consumer Durables market has always been fuelled by innovation, some successful and some less so. The latest wave of innovation is Smart technology, which is influencing many electrical products, some outside of the conventional consumer electronics categories. Smart technologies are designed to streamline our lives, they go above and beyond the primary function, and within the last few years, multiple products have been released in differing product groups that have had an impact on the market, and increasingly our lives. The technological progress like electronics and communication; advanced materials including composites, stealth and meta materials, aerospace technologies; energy devices; healthcare systems, biotechnology and so on. Sophistication in weaponry, development of accurate and multi role missile systems, sophisticated electronic gadget for warfare, highly efficient ammunition and explosives, accurate and high performance small arms, amphibious vehicles, highly efficient radar and sonars etc. vindicate the growth of science and technology in the defence sector.

Introduction:
The smart technology market is very much in its infancy and comparatively small with a limited household penetration, however, it is a massive opportunity for retailers and manufacturers alike to take advantage of this developing technology. The demand for products in multiple sectors is there, and it is a market that will grow rapidly in the next few years. Since the beginning of human civilization, science and technology has progressed in a continuous process. Science is an education process that allows the educated and creative minds to question, experiment or observe in an attempt to find answers, and then try to identify a set of unifying principles, concepts, and laws that embraces all phenomena of nature. The aim is to better understand our universe and gain new knowledge that will enlighten humanity by unveiling mysteries of how nature works. In the process we may make new discoveries and inventions that change the way we think and/or create new technologies that transform our society.

The Cloud:
We can realize communication with cloud services and deploy any necessary micro-services for business logic and data processing. Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data centres available to many users over the Internet. Large clouds, predominant today, often have functions distributed over multiple locations from central servers. If the connection to the user is relatively close, it may be designated an edge server.
Information and communication Technology (ICT):

Although there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that combined allow people and organizations. ICT encompasses both the internet-enabled sphere as well as the mobile one powered by wireless networks. It also includes antiquated technologies, such as landline telephones, radio and television broadcast all of which are still widely used today alongside cutting-edge ICT pieces such as artificial intelligence and robotics.

4G Technology:

4G is about convergence of wired and wireless networks, wireless technologies including GSM, Wireless LAN, and Bluetooth as well as computers, consumer electronics, communication technology and several others. Formal mathematical specification is widely used for simulation of real time systems. Similar to algorithm, mathematical specification allows manually tracking simulation logic. Despite it is less visual, this type of specification provides ability to track system time and calculate system parameters for each time moment. It also is easily adoptable to programmable environment.

- A comparison of 1G to 5G technologies is given in the table.

<table>
<thead>
<tr>
<th>Technology/Features</th>
<th>1G</th>
<th>2G/2.5G</th>
<th>3G</th>
<th>4G</th>
<th>5G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data bandwidth</td>
<td>2 kbps</td>
<td>14.4-64 kbps</td>
<td>2 Mbps</td>
<td>200Mbps to 1 Gbps for low mobility</td>
<td>1 Gbps and higher</td>
</tr>
<tr>
<td>Standards</td>
<td>AMPS</td>
<td>2G: TDMA, CDMA GSM 2.5G: GPRS, EDGE, 1xRTT</td>
<td>WCDMA CDMA-2000</td>
<td>Single unified standard</td>
<td>Single unified standard</td>
</tr>
<tr>
<td>Technology</td>
<td>Analog cellular technology</td>
<td>Digital cellular technology</td>
<td>Broad bandwidth CDMA. IP technology</td>
<td>Unified IP and seamless combination of broadband, LAN/WAN/PAN/WLAN N and www</td>
<td>Unified IP and seamless combination of broadband, LAN/WAN/PAN/WLAN N and www</td>
</tr>
<tr>
<td>Services</td>
<td>Mobile telephony (voice)</td>
<td>2G: Digital voice. Short messaging 2.5G: Higher capacity packetized data</td>
<td>Integrated high quality audio, video and data</td>
<td>Dynamic information access, wearable devices with AI capabilities</td>
<td>Dynamic information access, wearable devices with AI capabilities</td>
</tr>
<tr>
<td>Multiplexing</td>
<td>FDMA</td>
<td>TDMA, CDMA</td>
<td>CDMA</td>
<td>CDMA</td>
<td>CDMA</td>
</tr>
</tbody>
</table>
Switching | Circuit | 2G: Circuit for access network & air interface; Packet for core network data | Packet except circuit for air interface | All packet | All packet
---|---|---|---|---|---
Core Network | PSTN | PSTN | Packet network | Internet | Internet
Handoff | Horizontal | Horizontal | Horizontal | Horizontal and vertical | Horizontal and vertical

**Convergence of technology and telecommunications:**

Parallel developments in the field of technology lead to convergence of technology and telecommunications. We saw, as mentioned earlier, the way we got connected with each other. Social networking became a virtual reality. Interacting with people who are hundreds of thousands of kilometres away, especially, in real time became a reality. The barrier of distance to communicate dissolved. There were new avenues to express oneself in the form of blog and microblog. Digital revolution made data processing very easy to handle. In other words, ICT provided an ideal platform for learning in the new paradigm.

- The following figure traces a trajectory of evolution of various technology tools that are popularly used in the educational practice.

<table>
<thead>
<tr>
<th>Display</th>
<th>Television</th>
<th>Radio</th>
<th>Projectors</th>
<th>Storage Devices</th>
<th>Communication</th>
<th>Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard</td>
<td>Monochrome CRT</td>
<td>Radio</td>
<td>Handmade Slide Projector</td>
<td>Paper/Books</td>
<td>Face to Face</td>
<td>Mainframe Computer</td>
</tr>
<tr>
<td>Flannel Board</td>
<td>Colour CRT</td>
<td>HAM</td>
<td>Photography Slide Projector</td>
<td>Magnetic tape</td>
<td>Postal mail</td>
<td>Desktop Computer</td>
</tr>
<tr>
<td>Peg Board</td>
<td>Plasma TV</td>
<td>FM</td>
<td>Opaque Projector/Epidiascope</td>
<td>Magnetic Drum</td>
<td>Telegram</td>
<td>Laptop</td>
</tr>
<tr>
<td>Magnetic Board</td>
<td>LCD</td>
<td>Community</td>
<td>Film</td>
<td>Floppy Disc</td>
<td>Telephone</td>
<td>Palmtop</td>
</tr>
<tr>
<td>White Board</td>
<td>LED</td>
<td>Mobile</td>
<td>Micro Projection</td>
<td>Compact Disc</td>
<td>Mobile Phones</td>
<td>Notebook</td>
</tr>
<tr>
<td>Interactive White Board</td>
<td>3D/HD</td>
<td>Internet</td>
<td>Overhead Projector</td>
<td>DVD</td>
<td>e-mail</td>
<td>Tablet</td>
</tr>
<tr>
<td>Collaborate</td>
<td>UHD</td>
<td>Podcast</td>
<td>Digital Projection</td>
<td>Hard</td>
<td>Forum/Online</td>
<td>Tablet</td>
</tr>
</tbody>
</table>
Software Life Cycle Models and Smart Technologies

Over the years a number of discussions have been devoted to software development life cycle models [2] and analysis on strengths and weaknesses of linear and incremental models have been performed. A new approach (e.g. principles agile software development process) has been added to lengthy discussions. Nevertheless, the main attention in software life cycle models traditionally is being paid to software development, including requirement gathering (specification), design, and implementation and testing. Less research is devoted to the system maintenance and operation despite the fact that these aspects take up the main part of the duration of a successful system. In real life development of software is just the very first phase of software life cycle. The most time consuming phase of software life cycle is software maintenance including user support, software upgrade, and functionality extension services (e.g. MS Windows is being under development for more than 15 years!) Every successful software solution has been used and improved for significantly longer time period that it was created for. A successfully developed system might be used for many years simultaneously modified, improved with new functions permanently satisfying occurring client needs. Thus, every time changes occur in software or operational environment, the issue of testing software’s correctness becomes crucial. Therefore, to ensure software reliability in long-term, the system already in its early development phases should comprise not only client defined functionality but also additional mechanisms to support usage, maintenance, and further development of software. The smart technology is based on the idea about “smart” software that like living beings is able to “self-management”. It means the software should be able to handle unpredictable events in unknown environments. A smart technology conform software should be able to deal with internal (related to internal structure and functioning of the system) and external (originated outside of the system) events adequately.

Conclusion:

India has been ranked 138th in the 2016 ICT Development Index out of a total of 175 countries. In 2015, India
ranked 135th position. The United States and Canada top the IDI ranking in the Americas region. The majority of countries in the region fall within the two middle quartiles, with only two LCCs in the bottom quartile (Cuba and Haiti). The most significant improvements in the Americas region were recorded by middle-ranking countries in South and Central America and the Caribbean. Smart technologies assist to provide software performance in a changing environment and environment containing heterogeneous platforms and infrastructure. Nevertheless mechanisms of smart technologies need regular adaptation to the environment changes, especially in case of standardized software. It is very important to provide in-depth reporting mechanism to inform the developers about indicated problems in time.

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A STUDY OF STUDENTS’ ACADEMIC BEHAVIORAL VARIABLE

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S.P. Dnyanasadhana College of Arts, Commerce & Science and  
Siddhant Rajesh Jadhav,  
Student of S.Y. B Com, Satish Pradhan Dnyanasadhana College, Thane.

Abstract:  
The research indicates the scenario of our education system. Identifying the factors that influence academic performance is an essential part of educational research. Previous studies have documented the importance of personality traits, class attendance, and social network structure. Most of these analyses were based on a single behavioral aspect and/or small sample sizes, there is currently no quantification of the interplay of these factors. Here, we study the academic performance among a cohort of 100 undergraduate students. The availability of multi-channel data from a single population allows us to directly compare the explanatory power of individual and social characteristics.  
We find that the most informative indicators of behavior performance are based on social ties and that network indicators result in better model performance than individual characteristics (including both personality and class attendance). We confirm earlier findings that class attendance is the most important predictor among individual characteristics.  
Strong and futuristic education systems need a better policy formation & the better policy formation this research will be beneficial to individual student behavior.

A Study of Academic Behavioral Variable

Introduction:  
Student-centered learning environments have been shown to be effective in higher education. They have been defined specifically within higher education as both a mindset and a culture within a given educational institution and as a learning approach broadly related to, and supported by, constructivist theories of learning. They are characterized by innovative methods of teaching which aim to promote learning in communication with teachers and other learners and which take students seriously as active participants in their own learning and foster transferable skills such as problem-solving, critical thinking, and reflective thinking. "Institutions should ensure that programs are delivered in a way that encourages students to take an active role in creating the learning process and [should ensure] that the assessment of students reflects this approach."

A research university promotes student-centered learning across the entire university by employing the following methods  
- Analysis of good practice by award-winning teachers, in all faculties, to show how they made use of active forms of student learning.  
- Subsequent use of the analysis to promote wider use of good practice.
• A compulsory teacher training course for new junior teachers, which encouraged student-centered learning.
• Projects funded through teaching development grants, of which 16 were concerned with the introduction of active learning experiences.
• A program-level quality enhancement initiative which utilized a student survey to identify strengths and potential areas for improvement.
• Development of a model of a broadly based teaching and learning environment influencing the development of generic capabilities to provide evidence of the need for an interactive learning environment.
• The introduction of program reviews as a quality assurance measure.
• The success of this initiative was evaluated by surveying the students. After two years, the mean ratings indicating the students' perception of the quality of the teaching and learning environment at the university all rose significantly. The study is one of many examining the process of implementing student-centered pedagogies in large institutions of higher education.

Objectives:

• The study of behavioral variable of college student with specific reference to degree college student in Thane city.
• To know about challenges and opportunities for an academic system
• To analyze the need of stress management
• To understand the importance study of behavioral variable
• To know education system
• To know present teaching and learning system
• To find Strong and futuristic education policy system

HYPOTHESIS: Keeping in view the above objectives the researcher has frame the following hypothesis.

H1 There is significant behavior between student behavior and variables.

Source of data
A) Primary data: -
The primary data was collected from the respondent my structured questionnaire method, throw personal interview it involves specific reference to degree college student in Thane city. This study is empirical in nature. The empirical data will be collected from analyzing the information from student. To attain the above objectives and for getting first-hand information knowledge of challenges and opportunities for an academic system and Student Behavior

Technique:-The researcher has used pre-tested and pre coded schedule as well as questionnaire from the student in thane region. For the present study, convenience or volunteer sampling technique was used. The sample was collected for 100 student in total from thane region. The questionnaire was uploaded on survey monkey.

B) Secondary data: -
Secondary data was collected from Wikipedia, websites & articles etc.
Statistical Technique used for analysis:
Measures of central tendency such as average and percentage (%) rank are used for data analysis.

Scope of study
The present study is based on random selection involve specific reference to degree college student in Thane city. their personal experience for establishing new venture & review are classified in terms of primary data to get results & conclusion.

Limitations of Study:
The present study is confined to student of Thane city.

Analysis and Interpretation:
1. Adequate Support System
Did you have adequate support system which motivates you to attending the college?

<table>
<thead>
<tr>
<th>Assistance for career advancement</th>
<th>Assistance for academic growth</th>
<th>Scholarship and financial assistance</th>
<th>Placement assistance</th>
<th>Above all</th>
<th>Any other</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.33</td>
<td>27.78</td>
<td>5.56</td>
<td>5.56</td>
<td>27.78</td>
<td>0</td>
</tr>
</tbody>
</table>

2. Stress Level
Does the academic system result in stress?

<table>
<thead>
<tr>
<th>A). Yes</th>
<th>B). No</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
3. Stress Management System

Does college have stress management system for the student?

![Bar chart showing the percentage of students who believe their college has a stress management system.]

- A). YES: 61.11%
- B). NO: 38.89%

4. Measures to reduce Stress

What measures does your college take to remove stress among the students?

![Pie chart showing the distribution of measures taken to reduce stress.]

- A). Exercise and sport: 11.11%, 11%
- B). Yoga and meditation: 11.11%, 11%
- C). Counselling: 50%, 50%
- D). Above all: 27.78%, 28%
- E). Any other: 0%, 0%
5. Measures to improve academic environment

What are the measures to improve academic atmosphere?

6. Causes of Lack of Interest

What are the causes for deviation from studies or lack of interest in studies?
7. Status of present education system
   How will you read they present education system?

8. Teaching Learning system
   How would you rate the present teaching learning system?
9. Suggest measures to improve the present teaching and learning system!

- Teacher should be able to understand student they should not give them stress
- To present ICT lectures in classroom
- Use of modern technology and ICT enabled lectures theory and practical session will help to develop availability of a student.
- Take practical examples for explaining the subject. Improve teaching technology. Take classroom activity.
- There should be good bonding between students and professors. Professor should do counseling of the student and student should also give his best to score good
- Use of technology and the competition amongst the classmates like self-studies, ppt presentation etc.
- Teaching with fun and lots of example by simply way to understand students, be friendly in behavior with students.

What are the conflicting variable during affect your stay in the college!

- One of our teachers gives us so much stress. All of us student feel depressed in front of her
- Company n mgmt. little bit good
- A bad company of people
- Clashing time of academic lecture and extra activities

Conclusion:

Research shows that the current education system is based on classroom theoretical approach driven only & that leads to stress and depression among the students the education system and teaching learning system need to be evil as per the future.

Case study & practical based study approach is necessary, this research identifying the problems and give suggestions for the better growth

Role of teaching and learning is important so as teaching and mentor and having a good assistance is required & not just having knowledge is necessary but student have to apply that knowledge and should increase their skill sets.

References:


INITIATIVES, OPPORTUNITIES AND CHALLENGES IN HUMAN RESOURCE ACCOUNTING POLICIES & PRACTICES IN HOSPITALS AND CONTRIBUTION IN GDP

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B. K. Birla College (Autonomous), Kalyan

Abstract:
The importance of Human Resources associated with an organization has been well recognized nowadays. Human Resource is the vital part of the organization and the ability to attract and retain them is the key driver of our future success. Healthcare is a blooming service sector in today’s world. Human capital must be augmented in the right perspective. The profit and loss account of a company only discloses current expenses incurred in respect of employment. Balance sheet is silent regarding the value of human capital employed. Recently, many Indian companies have started realizing the importance and net worth of the Human Capital employed in their organizations. This study is focused on to study the human resource accounting practices in India, to study the significance of human resource accounting for smooth functioning of business organization, to study the Human Resources Accounting practices followed by companies in Hospitals and to identify the opportunities and challenges. Primary data and secondary data are collected for analysis. After analysis it is found that HRA concept is about the evaluation of the human resources as assets into the companies. In Indian companies, expenditures of the human resources are treated as current expenditure. There is no significant justification for treating the expenditure on human resource as cost. Through the implementation of HRA in hospital industry will help the optimum utilization of human capital and increase the ROI and satisfaction level through decision making in HR. It helps to analyze human resource accounting policies and practices in the selected organization and will ensure the objectivities of human resource valuation practices followed by healthcare organizations. Being a new concept of accounting practice, there is a big opportunity for implementation and follows the HRA practices and policies. But being a new concept there are many challenges which can be overcome by following continuous research and development in HRA field and in return it can increase the contribution in GDP.

Key words: HRA, Financial Statement, Disclosure, Opportunities and Challenges

Introduction:
In the knowledge driven economy, Human Resources are the most important assets. The importance of Human Resources associated with an organization has been well recognized nowadays. Economic reforms all over the world have given an added impetus to globalization. These developments have changed the accounting information requirements in the present day times. Human Resource is the vital part of the organization and the ability to attract and retain them is the key driver of our future success. Unfortunately, the numbers of organization in the country which are giving appending note regarding human resource are very few.
Healthcare is a blooming service sector in today’s world. Basically in India, healthcare sector is tremendously growing due to its traditional and oldest medicinal treatment culture. In India, after LGP, the healthcare sector reformed due to technology advancement and training & development activities. Due care, latest technology, ancient Indian medicinal culture and different natural therapy system made Indian Healthcare sector very attractive and effective. On behalf of hospitals, initiatives are made by human resources professionals to improve the overall standard of care in the hospital. This department examines and shapes the organization's corporate culture among the public hospitals operating in India.

In this study, a brief about what are the initiative taken for applying Human Resource Accounting policies and practices in Indian Hospitals, what are the opportunities HRA has in Indian Accounting practices and what are the challenges to implement HRA in generally accepted accounting principles and policies is highlighted.

Human capital must be augmented in the right perspective. Without human resources, the other resources cannot be operationally effective. The profit and loss account of a company only discloses current expenses incurred in respect of employment of labour such as wages, salaries and director fees, whereas other assets employed in the organization are shown in the balance sheet either in the form of capital subscribed by shareholders or all fixed assets and current assets but balance sheet is silent regarding the value of human capital employed. Recently, many Indian companies have started realizing the importance and net worth of the Human Capital employed in their organizations. Realizing the importance of Human Resource Accounting (HRA) in Human Resource Management (HRM) many companies world over is making HRA as a necessary element on their balance sheet.

Human Resource Accounting (HRA) helps management frame policies for human resources especially where it is necessary to identify measure and disclose data about the people within an organization, where they are recognized as an accounting resource. The concept of HRA came into existence back in 1980s, but the value and importance was realized in 1990s when service industry, technology and other knowledge based industry, where human resources contributed significantly towards the increase in shareholder’s value, noticed a great increase in the employment.

Hospital administration in India when compared to the era of pre independence, entrepreneurs and technocrats in the private sector see immense opportunity for ROI in this sector. Unfortunately, Government hospital administration is lagging far behind when compared to the corporate hospitals. Even the most sophisticated and the so-called modern government hospitals in India are still managed by the traditional and stereotyped system of hospital administration. To rectify the working environment, importance of human capital need to be attended. If human capital is accounted systematically and disclosed as per Human Resource Accounting policies and practices then proper ROI can be calculated for the investment made towards it. As HRA is at infancy stage in India so, there is a great opportunity for adaptability of HRA. There are many companies, who are following HRA from long back like BHEL, SAIL, Infosys and many more. But there are many challenges to adopt the HRA policies and practices in generally accepted accounting principles and practices in India.

**Statement of Problem**

The study is on human resource accounting policies and practices in healthcare industry based on Mumbai. The topic is based on some assumptions on which it is depended. The research is based on hypothesis testing which
may or may not be proved easily. The key issues are:

- Identifying the importance of Human Resource Accounting policies and practices in financial performance in Healthcare Industries.
- There are few accounting practices for valuation of Human Resource but not commonly used for decision making.
- Many companies are not following Human Resource Accounting and reluctant to invest time and money on HR. No studies or no clear method of calculation of Return on Human Capital Investment so that the scope of profitability can be increased.

Review of Literature

1. The monthly management reports of the group showed that employees are used as source base for value extraction, through funding received from the government for off-the-job training. Further, the owner–directors keep a close eye on salaries, wages costs and employee numbers, ensuring that these are kept to a minimum, often at the expense of the long-term growth of the firm. (Abeysekera, 2006).
2. Human resources of company is accepted as intellectual capital, and it is accepted as core competence of firm, according to study of Prahalad and Hamel (1990). Human Resources are key resource of a company. Therefore, it may be recorded as intellectual capital in balanced sheet of firm. Human resource accounting enables human resource managers and executives to do information and decision-making roles. It is related with cost analysis and budget analysis. Human resource accounting records the costs of human resource management practices. Secondly, human resource accounting shows human resources of company as intangible asset and as intellectual capital in balance sheet. (Uysal, 2016)
3. HRA views human resources as an asset that is on a par with any other asset of an organization, intangible though it is. Like any other asset, it is a resource that boasts of an economic value. The organization owns and controls HR, hoping to generate income from it. An asset is supposed to enhance the value of the organization and generate cash flows. HR qualifies as capital too but of the intellectual kind. Intellectual capital is more durable than money. Intellectual capital is used to generate wealth through investment. Like traditional capital, HR can be rented by the organization to create wealth. Since HR qualifies as capital of the intellectual kind, HRA should be identified as a capital item. Since HR qualifies as a capital asset, it represents the investment made by the organization in its people. (Uma Hattikal, 2013).
4. Traditional accounts which records all the tangible assets and to some extent intangible assets like goodwill, patent etc but altogether ignore to show the value of human resources in the balance sheet. Due to this insufficient reflection in the annual accounts the shareholders do not get the real picture regarding contribution made by the human resources for the success of the company. Time has come when more and more researches are required in this field otherwise the true value of human assets remains unearthed. (Juhi Chatterjee, 2018)
5. HRA being an emerging area in accounting has greater potential for further research. The model devised so far, for the valuation of HRA, has been developed in USA keeping into consideration the environments prevailing there. There is a great need to review their applicability in India. The special studies needed periodically to calculate cost of turnover, cost-benefit analysis of training and the cost of labor etc., must be a
joint effort since many value judgments and assumptions must be made and understood by the prepares of data as well as the user. Much more research is necessary before HRA can possibly be useful to operating managers. 

(Raul, 2013).

6. Human resource accounting (HRA) is an effort to recognize and calculate the investments made in human resource of an organization. HRA helps to determine the value of employees, which helps management in decision making. On the whole, assessing human resources proves to be essential to Indian organizations. Despite the interest in valuation there will be little or moderate progress in the area over the next five to ten years. In order to show greater progress, more needs to be done at both the theoretical and practical level. More search into valuation methods and models, and the practical implication of these, is needed together with the engagement of both human resource and accounting professionals in the debate on valuation and its implementation in practice. Invalid source specified.

7. Human Resource Accounting is the process of reporting the investment made in the human capital of an organization. There are few limitation for implementing HRA like there is no proper clear-cut and specific procedure or guidelines for finding cost and value of human resources, The period of existence of human resource is uncertain, HRA may dehumanize and manipulate employees, in what form and manner HRA to be disclosed in financial statement is still a question, human resources cannot be owned, retained and utilized unlike the physical assets and there is no universally accepted method of human asset valuation. In spite of its limitations, a growing trend towards the measurement and reporting of human resources, particularly in the public sectors, is noticeable during past few years. BHEL, Cement Corporation of India, ONGC, Engineers India Ltd., NTPC, MMTC, Madras Refineries, ACC, SPIC, Cochin Refineries Ltd. etc. are some of the organization which have started disclosing some valuable information regarding human resources in their financial statements (Kalpana, May 2016).

8. Overall, even valuing human resources appear to be important to Indian organizations, most organizations do not value their human resources and plans to implement valuation of human resources are at a very early stage. Despite the interest in valuation there will be little or moderate progress in the area over the next five to ten years. In order to show greater progress, more needs to be done at both the theoretical and practical level. More search into valuation methods and models, and the practical implication of these, is needed together with the engagement of both human resource and accounting professionals in the debate on valuation and its implementation in practice (SOOD, February 2016).

9. Mr. Raunak Narayan published and presented a paper, titled “(Narayan)” in Asian Journal of Management Research. The objectives of the paper were to study the Human Resource Accounting Practices, to identify and examine the issues and challenges and to give suggestions based on the findings of the study. The author concluded that though HRA is an old approach but till now The International Accounting Standards Board (IASB), and the Accounting Standards Board (ASB) has not been able to formulate any specific accounting standards on measurement and reporting of cost and value of HR of an organization. Hence, considering the paramount importance of HRA, proper initiation should be taken by the Government as well as Professional Boards at the National and International levels in respect of formulation of specific accounting standard and
suitable valuation models on the measurement and reporting of the value of HR.

10. Ahuja Reshma published and presented a paper, titled ‘Human resource accounting in India with specific reference to BHEL and SAIL ’ (Reshma). The objectives were to analyze the current human resource valuation practices in India, to investigate current practices in the selected Indian companies in evaluating their human resources, to make a critical analysis and comparison of human resource accounting practice in the selected enterprises, to suggest effective human resource accounting model for Indian corporate companies, and to study whether the employees of the selected organization are aware of the HRA practice prevailing in the organization. The author concluded that both the organizations being pioneer in reporting HRA follows Lev and Schwartz model with certain refinements suitable for the company. Regarding awareness the study shows that the employees in both the organizations are aware of the human resource accounting practice in the organization. Management of both the organization take important decisions based on HRA.

**Objectives of the study**

1. To study the human resource accounting practices in India.
2. To study the significance of human resource accounting for smooth functioning of business organization.
3. To study the Human Resources Accounting practices followed by companies in Hospitals.
4. To identify the opportunities and challenges.

**Research Hypothesis**

H01- There is no relation between HRA policies and practices with organization’s performance.

H02- There is no future opportunities of HRA in Indian accounting practices.

H03- There is no significant challenges in HRA in Indian accounting context.

**Research Methodology**

The study is based on secondary data. Secondary data collected through published data from various publications of the central, state are local governments; foreign governments or of international bodies and their subsidiary organizations; technical and trade journals; books, magazines and newspapers; reports and publications of various associations connected with the organization, reports prepared by research scholars, universities, economists, etc. in different fields.

**Scope and Significance of Research**

Human resource Accounting is still in its infancy in healthcare sector in India. Human Resources are still not considered as other tangible and intangible assets. The policies and practices of HRA are not properly applied and followed in healthcare sector of India. Therefore as of now HRA is to be evaluated and reviewed in the present context.

The real purpose of this study is to bring forward the growing significance and relevance of HRA in healthcare sector. Few sectors in India have begun to apply HRA and it is in developing stage. So, at this time, studies should be taken on how HRA policies and practices can be adopted and extended as an opportunity and how the challenges can be overcome.

**Limitation of the Study**

There are certain limiting factors, which are inherent in a study of this nature, but it won’t detract the value of
the study. Rather it should be taken to point out the precautions to be observed in analyzing the conclusion and recommendations. The main limitations of this study are-

a. The study has not covered the entire population. Limited sample coverage as a limitation of sample study applies to this study also.

b. Interpretation and assumption errors can be a limitation.

c. This study considers the variables which are measurable in nature. But in HRA there are some soft skills also which are not measurable in terms of money.

Conclusion:

Human resource accounting is not new concept in the corporate world. This concept is about the evaluation of the human resources as assets into the companies. However, in India so far HRA has not been introduced as a system so to be applied among the hospitality industries with proper mechanism. The Indian Companies Act, 1956 does not provide any scope for furnishing significant information about human resource in financial statement even in new amendment of Indian Companies Act, 2013 there is no clause has been available regarding HRA. In Indian companies, expenditures of the human resources are treated as current expenditure but some expenditure is deals as capital nature. There is no significant justification for treating the expenditure on human resource as cost is exists because human resource are the primary generator of income of an enterprise, and human resource have service potential for more than an accounting period which is an important feature of an asset. Some type of human resource expenditure is fixed nature rather than the variable. The aim of the research is to study the initiatives, opportunities and challenges of HRA in hospital industry and its contributions towards GDP. Through the implementation of HRA in hospital industry will help the optimum utilization of human capital and increase the ROI and satisfaction level through decision making in HR. It helps to analyze human resource accounting policies and practices in the selected organization and will ensure the objectivities of human resource valuation practices followed by healthcare organizations. Being a new concept of accounting practice, there is a big opportunity for implementation and follows the HRA practices and policies. But being a new concept there are many challenges which can be overcome by following continues research and development in HRA field and in return it can increase the contribution in GDP.

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Scientific Research and Management.


HEALTH INVESTMENT IN INDIA: ISSUES AND CHALLENGES

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Abstract:
Infrastructure development is one of the major factors contributing to economic growth and employment generation directly and by creating externalities for investment in the private sector. Development is the process of not only increasing Per Capita Income (PCI) but also improving the quality of human life. Investment in social infrastructure and human development enhances productivity through better education, improved workforce, skill development, lower absenteeism, greater mobility, faster demographic transition, increased participation of women in workforce, and better targeting of social security and welfare schemes. One of the most important pillars of social infrastructure and human development is healthcare. Irrespective of economic position of the country, the State has to develop a good health infrastructure for improving health indicators. In India, the Constitution assigns a predominant role in providing social infrastructure to the States. One of the Directive Principles of State Policy states that “…it is imperative that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment”. In addition to this, even the Union Government also takes keen interest in making investment in health. There is a direct relation between good health and productivity leading to increased aggregate output and growth. Fifty percent of economic growth differentials between developed and developing nation is attributable to ill-health and low life expectancy (World Health Organization, 2005). The United Nations (UN) recommended an average of 8 to 10 percent of the GDP as benchmark expenditure on health for a country. Although, India has the world’s second-largest population, its total health care expenditure is at 4.1% of GDP which is among the lowest in the world. (China spends 5.6 times more than India.). Public expenditure on health is found to be declining for multiple reasons. Increase in public expenditure on health and allied fields was unable to keep pace with the growth of India’s GDP after 2009-10. This shows that ‘Health is Impaired in India’. National Health Policy (2017) aims at 2.5 % spending by 2025. Despite various measures and programs, India’s journey on MDGs is not very encouraging. SDGs put a daunting task before us. Public Economics provides the theoretical base for government intervention in the provision of health care services. Health care is of significant importance as it is a merit good and also a human right. This paper reviews the progress of last ten years to make comparison of pre and post 2014-15 up to 2019- 20; the period during which novel experiments and policies were conducted and introduced. This research suggests the policies for changing India’s demographics so designed for better health outcomes for all and an improved wellbeing of the societies at large, for optimizing social welfare; in view of Sustainable Development Goals (SDGs).
**Key words: Social Infrastructure, Health expenditure, MDGs, SDGs, NHM**

**Health Investment in India: Issues and Challenges**

**Introduction:**
Infrastructure development is one of the major factors contributing to economic growth and employment generation directly and by creating externalities for investment in the private sector indirectly. Development is the process of not only increasing Per Capita Income (PCI) but also improving the quality of human life. Investment in social infrastructure and human development enhances productivity through better education, improved workforce, skill development, lower absenteeism, greater mobility, faster demographic transition, increased participation of women in workforce, and better targeting of social security and welfare schemes. One of the most important pillars of social infrastructure and human development is healthcare. Irrespective of the economic position of the country, the State has to develop a good health infrastructure for improving health indicators. This study pertains to health Investment, trend and its related issues.

In India, the Constitution assigns a predominant role in providing social infrastructure to the States. One of the Directive Principles of State Policy states that “…it is imperative that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment”. In addition to this, even the Union Government also takes keen interest in making investment in health.

Public Economics provides the theoretical base for government intervention in the provision of health care services. Health care is of significant importance as it is a merit good and also a human right. Ideally the preventive health care should be provided by the government free of cost.

**Health Expenditure and growth: Indian Scenario**
There is a direct relation between good health and productivity leading to increased aggregate output. Further, growth in national output only will tend to increase the health expenditure. There has been a growing interest to extend the relationship between health and economic growth, catalyzed in considerable extent by the 1993 World Bank Report on Health (World Bank, 1993). Barro (1996) commented that health is a capital productive asset and an engine of economic growth. Fifty percent of economic growth differentials between developed and developing nations is attributable to ill-health and low life expectancy (World Health Organization, 2005). Developed countries invest a substantial proportion of their budgetary allocations on provision of health care because they are convinced that their residents’ health can serve as a major driver for economic growth. The United Nations (UN) recommended an average of 8 to 10 percent of the GDP as benchmark expenditure on health for a country.

Considering health funding, we find that India’s public spending on health is little over 1%, of GDP, which is very insufficient against the world average is 5%; reflecting very weak state efforts in delivering an essential service. The Reserve Bank Data (2016-17) showed that expenditure on social services by the Centre and the States as a percentage of Gross Domestic Product was 7% with education and health accounting for 2.9% and 1.4% respectively. This shows that ‘Health is Impaired in India’. National Health Policy (2017) aims at 2.5% spending by 2025. Despite various measures and programs, India’s journey on MDGs is not very encouraging.
SDGs put a daunting task before us.

Although, India has the world's second-largest population, its total health care expenditure is at 4.1% of GDP which is among the lowest in the world. (China spends 5.6 times more than India.) Government contribution to insurance stands at roughly 32 percent, as opposed to 83.5 percent in the UK. Indians meet more than 62 percent of their health expenses from their personal savings, called 'out-of-pocket expenses', compared with 54 per cent in China. The high out-of-pocket expenses in India stem from the fact that 76 percent of Indians do not have health insurance.

The existing healthcare infrastructure in India is just not enough to meet the needs of the population. 75% of the dispensaries, 60% of the hospitals and 80% of the doctors are located in and cater to urban people; serving just 28% of India. India compares unfavourably with China and the US in the number of hospital beds and nurses.

Moreover, the majority of healthcare professionals happen to be concentrated in urban areas where consumers have higher paying power, leaving rural areas underserved. India meets the global average in the number of physicians, but 74 percent of its doctors cater to a third of the urban population only, the country is 81 percent short of specialists at rural community health centres (CHCs), and the private sector accounts for 63 per cent of hospital beds, according to government health and family welfare statistics. The Central and State governments do offer Universal Health Care services (UHCs) and free treatment and essential drugs at government hospitals. However, the hospitals are understaffed and under-financed, forcing patients to visit private medical practitioners and hospitals. Besides, there is widespread Rural-urban disparity in health insurance. With such a plight of meagre allocation of funds for health and the severe economic differences in the rural - urban people, it’s a challenge to cover all the people to provide with health security. On this background this paper explores the trend in health expenditure in recent ten years period, making comparison of pre and post 2014.

**Literature Review:**

In the early 1960s, the concept of human capital was introduced, as a factor of economic growth to gradually

The poor health spending in India is documented in many studies. Public expenditure on health is found to be declining for multiple reasons. Increase in public expenditure on health and allied fields was unable to keep pace with the growth of India’s GDP after 2009-10. Choudhury, et al (2004) opined that the Union government focuses on health issues that are considered national priorities, as well as on issues that have significant interstate externalities. Till the mid-nineties, the Union government primarily focused on family planning, national-level institutes like AIIMS, select disease control programmes, and regulatory bodies around medicine and health. Since then, the focus has expanded to include maternal and child health – culminating in the National Rural Health Mission starting in April 2005. The NRHM – now the National Health Mission or NHM, also involved the Union government focusing on primary and secondary healthcare.

Hooda (2013) studied the impact of different policy changes (health and macroeconomic) on the level and compositional pattern of health expenditure and depicted the changes therein. Rajesh Kumar and Nalraj (2014) undertook the study of the cases of four Indian states namely Tamilnadu, Kerala the top two in India in health performance and Orissa, Madhya Pradesh as least performing states in India, to analyse the causal relationship between economic development and health expenditure; for the period 1991 to 2010 using Granger integration and Co integration techniques. They found that economic growth of above mentioned four states did not have any influence on their health care spending.

Using multivariate framework, Basumallik (2014) found a highly significant impact of health spending on economic growth in India. Sony and Jariwala (2014) found that there existed a long term relationship between India’s health expenditure and GDP to opine that India represents an example of a developing economy where the size of health expenditure expands in the process of economic transformation.

**Analysis: (2009-10 to 2017-18)**

The assumption of the study is India has not been able to keep up its Public health expenditure with its economic growth. To test this, Economic growth is captured through figures of GDP and actual figures of health expenditure are considered for health investment. So our objective is to test if Health expenditure increases proportionately with increase in GDP and PCI. This study pertains to the last ten years and the data sources used form Centre and State Budgets and National Health Profile 2018.

It can be observed from the Table 1 below that there has been continuous rise in the health expenditure that is allocated in the budget and actually spent on health, in terms of absolute numbers. Considering the two...
variables GDP and Public expenditure on Health, yearly incremental change is calculated and the same is shown in the following Graph1.

**Table No 1: Trends in Public Expenditure on Health**

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Expenditure on Health in Rs. (Crore)</th>
<th>% change in Public Expenditure</th>
<th>GDP</th>
<th>% change in GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>72536</td>
<td>-</td>
<td>6477827</td>
<td>-</td>
</tr>
<tr>
<td>2010-11</td>
<td>83101</td>
<td>14.56</td>
<td>7784115</td>
<td>20.16</td>
</tr>
<tr>
<td>2011-12</td>
<td>96221</td>
<td>15.78</td>
<td>8736039</td>
<td>16.78</td>
</tr>
<tr>
<td>2012-13</td>
<td>108236</td>
<td>12.48</td>
<td>9951344</td>
<td>13.91</td>
</tr>
<tr>
<td>2013-14</td>
<td>112270</td>
<td>3.72</td>
<td>11272764</td>
<td>13.28</td>
</tr>
<tr>
<td>2014-15</td>
<td>121600.23</td>
<td>8.31</td>
<td>12433749</td>
<td>10.30</td>
</tr>
<tr>
<td>2015-16</td>
<td>140054.55</td>
<td>15.17</td>
<td>13764037</td>
<td>10.70</td>
</tr>
<tr>
<td>2016-17</td>
<td>178875.63</td>
<td>22.72</td>
<td>15253714</td>
<td>10.82</td>
</tr>
<tr>
<td>2017-18</td>
<td>213719.58</td>
<td>19.48</td>
<td>16751688</td>
<td>9.76</td>
</tr>
</tbody>
</table>

**Graph 1: Comparative analysis of %Change in GDP and % change in Public Expenditure on Health (2009-10 to 2017-18)**

It can be observed that the movement of increase in Public expenditure before 2014 was bizarre and the change not only halted in 2013-14 but was very poor to show continuous decline in the health expenditure. However the % change in Public Expenditure on health is especially remarkable after 2014 and showed a rising tendency. When compared to GDP change before 2014, we find percentage change in GDP exceeded the percentage change in Public expenditure on Health; however after 2014, we find that percentage change in Health
Expenditure outnumbers the % change in GDP growth rate. This implies that Health Expenditure in India has shown a rising tendency outstripping GDP growth after 2014 only.

**Table 2: Comparative analysis of % changes in Per Capita Public expenditure on Health, GDP and Public Expenditure on Health.**

<table>
<thead>
<tr>
<th>Year</th>
<th>% change in GDP</th>
<th>Public Expenditure on Health as % of GDP (%)</th>
<th>Percentage Change in Per Capita Public Health Expenditure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>20.16</td>
<td>1.07</td>
<td>12.88</td>
</tr>
<tr>
<td>2011-12</td>
<td>16.78</td>
<td>1.10</td>
<td>14.4</td>
</tr>
<tr>
<td>2012-13</td>
<td>13.91</td>
<td>1.09</td>
<td>10.97</td>
</tr>
<tr>
<td>2013-14</td>
<td>13.28</td>
<td>1.00</td>
<td>2.58</td>
</tr>
<tr>
<td>2014-15</td>
<td>10.30</td>
<td>0.98</td>
<td>6.57</td>
</tr>
<tr>
<td>2015-16</td>
<td>10.70</td>
<td>1.02</td>
<td>14.29</td>
</tr>
<tr>
<td>2016-17</td>
<td>10.82</td>
<td>1.17</td>
<td>25.63</td>
</tr>
<tr>
<td>2017-18</td>
<td>9.76</td>
<td>1.28</td>
<td>18.61</td>
</tr>
</tbody>
</table>

**Graph 2: Comparative analysis of % changes in Per Capita Public expenditure on Health, GDP and Public Expenditure on Health.**

From the Graph 2, it can be observed that the trend of increasing percentages of all the three variables viz; per capita health expenditure, GDP, public expenditure is in tandem. However, the percentage change in per capita
expenditure is the highest as compared to other two factors. This implies that despite increase in population, the per capita public expenditure has shown increase especially after 2014. Thus our assumption is falsified especially after 2014, that health investment has not kept pace with GDP growth.

Of course, this may not actually imply that everybody’s health has been fully and equally taken care off and well off. This is mainly due to the fact that there is highly unequal distribution of health facilities especially among urban and rural people as urban people enjoy 89 percent leaving only 11 percent for the rural folk, as stated before.

The study covers most recent period of 2014-15 and 2018-19; the period during which novel experiments and policies were conducted and introduced. The ‘Clean India’ campaign, ‘Eliminate Open Defecation’ etc. brought in through social marketing aimed at creating awareness on cleanliness, health and hygiene, supported by the requisite policy framework like ‘Pradhan Mantri Swasthya Suraksha Yojana’, ‘Rashtriya Swasthya Bima Yojana’ to create ‘Ayushman Bharat’. The impact of these policies is quite visible and the increasing health investment is witnessed as above. This also indirectly deals with a causal relationship between health provisions and the fulfilment of the SDGs for India to assess the prospects of our country towards transformation in 2030 and suitable policy options.

Conclusion:

It is necessary to understand that there is no room for complacency despite rising Public Health Investment. To achieve the SDGs, we need the policies for changing India’s demographics so designed for better health outcomes for all and an improved wellbeing of the societies at large. In view of India being viewed as third major economic super power, a wealthy nations’ wealthy people policy needs to be crafted diligently. The WHO standards and UN measures on Health are far from being achieved by us. This would ask for a long term well designed process for optimizing social welfare.

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WHO Reports
“ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN MUTUAL FUND INDUSTRY”

Dr. Laksha Ailani.

Abstract:
In recent years, due to the rapid development of artificial intelligence (AI) and machine learning (ML), its application has been widely used in many aspects of financial area, as well as significantly impacts financial market, institutions and regulation. The artificial intelligence technology brings massive change to the entire financial industry, which creates a series of innovative financial services like quant mutual fund schemes. If times required, artificial intelligence can provide many extended services such as Intelligent consultant, Intelligent lending, monitoring, warning, and Intelligent customer service.

The objective of this paper is to evaluate applicability of use artificial intelligence (AI) techniques to predict the future NAV and returns from mutual fund investments. Present paper is focused on the development and application of artificial intelligence and machine learning in mutual fund investment decisions, as well as its impacts on macroeconomics and microeconomics. Further, attempt is made to study problems and risks associated with use of artificial intelligence and machine learning.

Key words: quant mutual funds, AI and ML in mutual fund industry

Introduction:
A Mutual Fund (MF) is formed when various investors contribute to large amount of capital which is invested in purchasing shares, stocks, or bonds of various companies. Mutual fund investments are collectively managed by a professional fund manager, who allocate the fund's assets and attempt to produce capital gains or income for the fund's investors. A mutual fund's portfolio is maintained and structured from time to time to match the investment objectives of investors. Nowadays, Investing in Mutual Funds is the easiest way to grow wealth. The fund manager’s expertise and judgment in picking up the stock is an important factor to consider while choosing the fund. All MF houses are under the purview of the Securities and Exchange Board of India (SEBI) and the Association of Mutual Funds in India (AMFI). Both SEBI and AMFI are government bodies and hence, investors can consider Mutual Fund investments to be as safe.

The market value of the mutual fund company depends on the performance of the securities it decides to purchase. A share or unit of a mutual fund represents investments in many different stocks or other securities. Therefore, the price of a mutual fund unit is referred to as the net asset value (NAV) per share, sometimes expressed as NAVPS. Mutual fund units can be purchased or redeemed as needed by investors at the fund's current NAV doesn't fluctuate during market hours, but it is settled at the end of each trading day.

Investors can earn a returns from a mutual fund in following three ways:

1. Dividend: Income is earned from dividends on stocks and interest on bonds held in the fund's portfolio. A fund pays income to investors as it receives over the year in the form of a distribution. Funds often give investors a choice either to receive an amount for distributions or to reinvest the earnings and get more shares (units).

2. Capital gain: If the fund sells securities that have increased in price, the fund has a capital gain. All the funds also give these gains to investors in a distribution.

3. Capital appreciation: If fund holdings increase in price but are not sold by the fund manager, the fund's shares increase in price. Investors can then sell their mutual fund shares for a profit in the market.
AI in mutual fund investments:

Rapid advancements in technology are transforming industries and people’s lives around the world. Technology in the conventional sense has been used to automate manual processes and improve productivity. However, development in information technology in the last 20 years or so, particularly artificial intelligence (AI) and data science has brought about a paradigm shift in innovative use of technology. Apart from improving efficiency and reducing defects related to human errors, technology is increasingly being used to make better and smarter decisions to earn higher returns from mutual fund investments. Like many other industries, the financial services industry including asset management, are adopting technology in order to meet their client’s (investor’s) needs. In asset management, technology is being increasingly used to provide better outcomes for investors. Quant (shortened form of quantitative) funds are a great use case of technology in the investment management. Though fund managers look at many analytical factors and use quantitative techniques, there is always human judgement involved in conventional actively managed funds. Errors are bound to occur despite best intentions of fund managers, they may tend to commit errors in judgements in investments. Quant Funds build their portfolios by following fundamental rules of investing using mathematical algorithms with little human interference. This reduces errors of judgement and provides a better chance to meet investment goals. In India quant investing is still a relatively new concept; only a few Portfolio Management Services and mutual funds offer quant products. However, quant funds are very popular in the West; nearly a quarter of all stock trades in the US comprise of quantitative or algorithmic investments. Many quant hedge funds and mutual funds are now also using Artificial Intelligence (AI) and Machine Learning (ML) to improve the way they analyse securities and make investment decisions. AI can be used in investment process for consistent, high velocity information processing and structured decision making which human brain may not capable of. Typically, quant-based schemes have a data-driven approach to pick stocks. They create a stock-picking model using various parameters. The model then selects stocks that match the parameters. The idea is to best and quality stock-picking avoiding human intervention. In these funds, the fund manager usually focuses on the robustness of the model and keeps a check on whether the model is working optimally or needs tweaking.

Quant funds use AI in the following way:

1. Secure large market impacting datasets
2. Build statistical models to drive Quant investment strategy
3. Run comprehensive model testing for different real life scenarios
4. Create framework that evaluates and manages Quant Model’s prediction accuracy over time
5. Employ statistics to identify hidden patterns and correlations that would be difficult to spot otherwise

Benefits of Quant Fund:

1. Quant based disciplined investment approach devoid of human errors of judgement
2. Machine Learning enabled investing for superior outcomes without taking too much risk to get higher returns
3. Suitable for long term investing as Model learns from new economic and market conditions for making investment decisions
4. Evaluates which factor Strategy (Alpha, Value & Quality etc.) worked in a Macro scenario and select an optimal portfolio with a combination of top ranked stocks within the factor strategy
5. Evaluates whether the Macro conditions and various strategy scenarios favour factor strategy investment or may lead to fall in portfolio performance
6. Based on the evaluation, the Model makes the Buy or Hedge (Current portfolio) decision
7. Since a quant fund follows a somewhat passive strategy, expenses are lower here than active funds. Nippon Quant fund (regular plan), for example, has an expense ratio of 0.95 per cent, which is lower than the 2-2.9 per cent the fund house charges on its other equity funds.

All of this is done with the objective of making better predictions, fewer errors, and greater efficiency.

**Suitability of Quant Funds (nature of investors):**

1. Investors who are techno savvy
2. Investors who have disciplined approach to investing
3. Investors who are patient and can remain invested for the long term (at least 5 years)
4. Investors with moderately high to high risk appetites

**SEBI Guidelines for Reporting for AI and ML applications and systems offered and used by MFs**

In a bid to step up surveillance on MFs, on May 9, 2019 SEBI asked fund houses to provide various details about artificial intelligence (AI) and machine learning-based (ML) systems used by them on a quarterly basis. As most AI and ML systems are "black boxes" and their behaviour cannot be easily quantified, SEBI said it was imperative to ensure that there should not be any misrepresentation due to any advertised financial benefit owing to these technologies in investor facing financial products offered by intermediaries.

**Quant funds in India till now:**

There are three quant funds issued in India till now, they are:

1) **Tata Quant Fund:**

Tata Mutual Fund has launched Tata Quant Fund on 3rd January 2020 and closed on 17 January 2020 but it’s an open-ended fund in which investors can still invest. It uses an active multi-factor quantitative investment model, embedded with AI modules that dynamically change factor strategies basis prevailing market conditions. Tata Quant Fund’s algorithmic investment strategy using AI is accordingly, expected to achieve better returns than the index on a consistent basis and avoid negative absolute returns. Tata Quant Fund uses artificial intelligence and machine learning for picking stocks.

**Tata Quant Fund - Stock Selection Strategy**

Source: Tata mutual funds
The schematic above depicts Tata Quant Fund investment process at a high level. The fund has a very structured and highly analytical (data driven) approach for portfolio construction and management. The stock selection approach focuses on generating superior long term returns and reducing portfolio risks. The AI algorithms aim at providing stability and performance consistency over time. Tata Quant Fund aims to select optimal portfolio combination of Alpha (risk adjusted returns), Value and Quality stocks. The fund will use a quant model to build its portfolio. Tata Quant Fund provides an opportunity to invest in machine drive investment strategy which can provide superior risk adjusted returns in the long term.

2) Nippon India Quant fund:
Nippon India Quant fund was launched in February 2005. As on 31 December 2019, Nippon India Quant has corpus of ₹ 24 crore. Fund has given returns of 5.85% since launch. Fund has total investment of 96.83% in Indian stocks of which 66.66% is in large cap stocks, 23.03% is in mid cap stocks, 1.43% in small cap stocks. Fund is suitable for Investors who have advanced knowledge of macro trends and prefer to take selective bets for higher returns compared to other Equity funds. Simultaneously, these investors should also be ready for possibility of moderate to high losses in their investments even though overall market is performing better. The object of investment in this scheme is to generate capital appreciation through investment in equity and equity related instruments. The object of Scheme is to generate capital appreciation by investing in an active portfolio of stocks selected on the basis of a Quant model. It has given a return of 8.69% over seven years compared to 12.43% from the benchmark, according to data from Value Research.

3) DSP Quant fund:
DSP Quant Fund was launched on 10th June 2019. As on February 2020 it has corpus of ₹ 191 crores. The Scheme seeks to deliver superior returns as compared to the underlying benchmark over the medium to long term through investing in equity and equity related securities. The portfolio of stocks will be selected, weighed and rebalanced using stock screeners, factor based scoring and an optimization formula which aims to enhance portfolio exposures to factors following good investing principles like growth, value and quality within risk constraints. In the period of six months, DSP Quant Fund has given an annualized return of 15.98% compared to 7.96% from the benchmark, the S&P BSE 200 TRI as on 21 January 2020.

Conclusion:
Quant funds surely not so popular than actively-managed funds- multi-cap and large-and-mid-cap-as well despite having slightly lower expense ratios. The scheme with the biggest assets under management (AUM) in the category i.e. Kotak Standard Multicap Fund, and which tracks the same benchmark, has given 16.04% over seven years. Mirae Asset Emerging Bluechip, the biggest scheme in the large- and mid-cap category, has seven-year returns at 22.63% and six-month returns of 12.97%. Whereas, DSP Quant Fund has given an annualized return of 15.98% compared to 7.96% from the benchmark, the S&P BSE 200 TRI as on 21 January. The fund was launched in June 2019 and is yet to complete a year. Nippon India Quant, has given a return of 8.69% over seven years compared to 12.43% from the benchmark, according to data from Value Research. It has not been able to beat the benchmark even over five-, three- and one-year periods. The expense ratios of the existing quant funds are between what exchange-traded funds (ETFs) and actively managed funds charge. DSP Quant (regular) has an expense ratio of 1.23% and Nippon India Quant (regular) charges 0.95%.

A form of artificial intelligence, ML enables powerful algorithms to analyse large data sets in order to make predictions against defined goals. Instead of simply following instructions coded by humans, these algorithms self-adjust through a process of trial and error to produce increasingly more accurate prescriptions as more data comes in. ML can identify potentially outperforming equities by finding new patterns in existing data sets. Some
of these new techniques produce significant improvements over traditional ones. Researchers have found that ML techniques are approximately 10% more accurate than those prior models at predicting bond defaults. Machine Learning can certainly improve the quality of data analysis, it cannot replace human judgment. To use these new techniques effectively, asset management firms will need humans and computers to play complementary roles. Due to this collaborative model, mutual fund companies will have to make substantial investments going forward in both technology and people, although some of these costs will be offset by cutting back on the number of traditional analysts. Still, most other asset managers have not taken serious steps for implementing ML.

As per the survey by the CFA Institute in 2019, few investment professionals are currently using the computer programs typically associated with ML. Still today, most portfolio managers continued to rely on Excel spreadsheets and desktop data tools. Large size and Mid-size asset managers can be able to benefit, because they are likely to attract and retain high-quality data scientists who may see more opportunities for advancement. The losers are likely to be small firms (with less than $1 billion in assets under management). They are likely to have trouble attracting enough talent and absorbing the cost of developing the technology given the strong downward pressures on fees of active managers.

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ME TOO MOVEMENT - BREAKING SILENCE

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Abstract
Two years ago, two little words burst out on phones, computers and industries across the world, and gave a voice to millions of people rendered voiceless by an unsympathetic hierarchy – Me too movement.

The Me Too movement is mainly concerned with two types of behaviour: Sexual Harassment and Sexual Assault. Although the precise legal definitions of these terms may differ from state to state, they are generally understood as referring to specific inappropriate sexual behaviours, especially in the workplace or at school.

Tarana Burke, an African-American civil rights activist who is the senior director of ‘Girls for Gender Equity’ in Brooklyn had coined “MeToo.” To increase awareness of the pervasiveness of sexual abuse and assault in society Tarana Burke started the Me Too Movement. Me too movement gave many the courage to stand up against harassment. From all over the world, women have come forward to share their story of being sexually harassed. It is done on social media using the hashtag "Me Too", which targets to show the magnitude of sexual assault. Social platforms like Twitter and Facebook made it very easy to re-tweet and like content (thus making it very easy for other people to show solidarity with just a single click).

So far over half a million women have tweeted Me Too.

This paper focuses on the Me Too Movement which gave a platform for women to speak against forms of sexual harassment they have faced. This paper highlights the importance of Me Too Movement & it’s positive & negative impact as well. It also throws light on how media plays an important role in movement like Me Too.

Keywords - #MeToo, sexual assault, B-town celebs, solidarity, social media.

Introduction
In 2006, An American social activist, Tarana Burke began to use the phrase “Me Too” on the Myspace social network to highlight the occurrence of sexual harassment, particularly non-white young women who weren’t so rich to seek out ways to form them begin of the aura that that they had suffered.

Tarana Burke argues that the Me Too movement works on empowerment through empathy, by showing the world simply how common sexual harassment is and by telling survivors that they are not alone and are supported. To raise awareness of the pervasiveness of sexual abuse and assault in society Tarana Burke founded the Me Too movement.

The phrase "Me Too" advanced into a broader movement following the 2017 use of #MeToo as a hashtag after the Harvey Weinstein sexual abuse allegations. In October 2017 the movement began to unfold virally as a hashtag on social media in an endeavour to demonstrate the widespread prevalence of sexual abuse and harassment, particularly in the workplace. It followed sexual-abuse allegations against Harvey Weinstein - American film producer. In the film industry in late 2017, when many high-profile actresses opened up about their experiences with sexual harassment. Since then, the movement has provided a source of solidarity for all ladies from all backgrounds who have experienced sexual harassment, most often, though not always, perpetrated by a male colleague.

What is #MeToo?

Tarana Burke founded Me Too movement but initiated as a much wanted social phenomenon in October 2017 as a hashtag started by American Actress Alyssa Milano who shared her story of sexual assault against Harvey.
Weinstein. In October 2017 the hashtag “Me Too” got widespread, acting as a platform for women to speak against forms of sexual harassment they have faced, especially at workplace. The movement blow-out like a wildfire soon after the allegations of sexual assault on Hollywood film producer, Harvey Weinstein was unleashed. For any woman who had gone through a similar experience, at any point of time in life it acted as a powerful blend of solidarity, empowerment and empathy. Within days, uncountable women had flooded the social media, sharing accounts of their personal brushes with harassment- be it Twitter, Facebook or Instagram. Many, who chose not to reveal their stories, simply wrote “#MeToo”. The hashtag is in support of every woman who is sexually harassed by someone. In France, Twitter users are using #balancetonporc or "expose the pig" to encourage women to call and shame their attackers, while #Womenwhoroar is getting used to reassure victims of sexual assault to talk up.

**How the movement came to India**

When the movement was spreading around the world back in 2017, it also made its way over to India. Women from daily spheres of life were coming forward and sharing their stories, many stood in solidarity. The movement also became a mode for many men to talk about their own experiences of being harassed. The movement once again came to light prominently in the beginning of October, 2018 so, when the Bollywood actress, Tanushree Dutta called out Nana Patekar for sexually harassing her years ago while shooting for the 2008 film 'Horn Ok Please'. What followed was a boundless string of more and more women coming up with their stories, each saddening, raising goosebumps. While the MeToo movement gave courage to many women, who spoke about their experiences, the campaign also hit Bollywood hard as several B-Town celebs were called out. Who are 'The Silence Breakers'?

The "silence breakers" confer with any man or woman who came forward to mention that they had been the victim of abuse.

**Methodology**

The entire research study is centred on Secondary data. The Secondary data has been collected from Websites, Journals and Newspaper.

- **Objectives**
  1] To discuss the significance of ME Too Movement.
  2] To highlight the Positive Impact of Me Too Movement.
  3] To highlight Negative Impact of Me Too Movement.
  4] To discuss Challenges of Me Too Movement.

#MeToo is a very significant campaign. It’s all about increasing awareness and giving women the strength, to raise their voice. The “MeToo” movement has been powerful and effective in the sense that, it has brought to light the true faces of many powerful men in the nation. Lots of them are idealised, looked up to by numerous people. In the case of MJ Akbar, for example, most of the women who have shared their experiences regarding him have stated how they used to be among his faithful fans. The movement has given several the courage to come forward, some after years of silence. In Dutta’s case, she had accused Patekar 10 years ago as well, but it had gone unheard. This time too, she came across with more criticism than empathy. And perhaps, that is something society needs to really ponder over. If the accused are given the advantage of doubt, why not the victims? Trusting the women who come up, does not mean we are moving towards a “man-hating” world, like many would like you to think. We are merely moving towards a more empathetic one. Individuals who say “Why now? Why did not she come forward years ago, when it happened?”, here’s your answer: Merely the survivors have the right to choose when they feel safe enough to share their story, if they are doing so in the least. It doesn’t matter how many centuries have passed, if her rights had been violated then, her account remains even as valid now. Since then, #MeToo has turn out to be a symbol of women raising their voice against
their oppressors. Not only in English speaking countries, but it’s getting used by women everywhere the planet to share their stories of sexual harassment on social media. In India, #MeToo movement arose almost a year late. However, it's gaining momentum fast, and ladies now know they're going to and can speak up.

- **Positive Impact of the Movement**
  - This movement empowered the womanhood to make a community and help one other in speaking about the bitter truths of sexual assault within the world and has assisted the victims better fit in the society.
  - It elevated awareness among women about their rights as an individual in the work place or outside and aided men understand the results of an equivalent.
  - This has assisted bringing out the buried truth about Harvey Weinstein and lots of other men like him and brought them to justice within the eyes of the world.
  - It helps individual’s suffering irrespective of the sex, race or religion.
  - Many people are daring to inform now what happened with them. They are finally trying to get over though it's hard but they are trying to!
  - However, various personal stories of anger and also the guilt, buried under the years of silence, emerged out to public media due to this recent campaign.
  - It reveals one thing - the legal and systemic provisions to cope with sexual harassment have failed.
  - In fact, the women who suffered silently for years are now angry enough to place their faith in a “name and shame” mechanism.
  - And, the movement allows the victims to find the courage to call the accused through the collective.
  - This forces administrators or the people in charge to take the problem seriously and start a process of redress.

- **Negative Impact of the movement**
  - It can destroy a man’s life with one single allegation. No proof needed.
  - No clear direction. Each woman is taking this movement in their own direction.
  - Women are using this campaign as a “bargaining” chip to urge what they want.
  - This is an simple pay check for few woman who claims #MeToo
  - It could be misused by both people that cheats and lies. Fake victims and faux supporters’ with their own agenda could just about hijack it, and make the movement to be discredited by many, when the reality is exposed.
  - Women have an choice to voice their complaints, right or (perceived) wrong .
  - TV channels get their free TRP ratings as they will blah blah over it for weeks! They do not need to do any constructive and real investigative journalism.
  - Unknown, irrelevant people can come to limelight and get their piece of glory by levelling charges without proof.
  - No one can dare fire a woman or pull her up for careless work because it can be seen as harassment.
  - Equality at work would suffer as there can be different set of gender based behaviour.
  - It encourages defamation without proof or the need for evidence (especially if it is after years!)
  - Anyone who was yelled at for poor quality work at a workplace can easily accuse harassment.
  - A loving, innocent, or caring touch even by a mature relative or friend may be used against him/her. It is fully dependant on how wrapped up the mind of receiver is.
  - Those who freely participated in sexual acts at some point and the relationship fell apart can hold the other person at ransom by ruining his/her image in public.
• A person accepted certain behaviour for personal gain at some time, but later could not achieve whatever he/she wanted, can easily insult the other person.

• The movement doesn’t check the facts which may cause false rape accusations.

• The worst part would be –

  Alienation at work place, less people will hire women, they will record every talk, and if there is a agreeable sexual act, there would be always a danger of “silencing” the person capable of damaging later once the relationship ends. It would lead to more horrible crime.

• The movement has since resulted in major social consequences for many of those suspects like firing or resignation from their jobs, condemnation and disassociation from members of their individual industries, and anger against their actions from their fans and/or the general public at large.

❖ Challenges

The most important challenge is to encourage women to come out and share their experiences of sexual harassment. Each woman who is victim of sexual harassment must raise their voice. A woman must complain about such incidents, straightaway at the time of its occurrence. And if she feels that her complaint is not being registered or is not being fairly addressed, she should resort to other available options like calling out the harasser on social media platforms. Also, platforms similar to ‘Youth Ki Awaaz’ also offer a good space for such victims to share their experiences and reach out to the masses. This will aid the victim is collecting enough support which will eventually force the authorities to act fairly and quickly.

Another challenge is about some individuals who are VIPs and hold powerful and important portfolios, for them to be punished, a massive campaign will be required. Media will be required to play a serious role in this. It won’t be easy, but as India is a democratic country, no government can ignore the citizen’s demands for a long time. And step by step, the law can take its course.

Conclusion

Women continue to be harassed at their workplaces, even after five years of enactment of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. So #MeToo movement gave much the courage to stand up against harassment. Yet, there have been some cheapskates who did use it for his or her own advantage, accusing the innocent. While it’s not utterly impossible to seek out the reality, it might be better, if people acted maturely and acted out after they a minimum of knew a little bit about the allegations. There are cases during which the culprit is caught red-handed and therefore the evidence is all crystal clear. It should be in such cases, that folks urge the officials to call for severe actions immediately. But in such cases like those in #MeToo, before taking any side, people should have waited and given both the edges, enough time to prove or deny the allegations. And behind, all those people are media, manipulating details and spreading whatever it can to urge more viewers or readers. Lastly, we can sincerely hope that all the wrongdoers will be duly punished. Women must stay strong & entire country will stand by them!

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ANALYSIS OF PERCEPTION OF YOUTH TOWARDS ONLINE SHOPPING IN MUMBAI CITY

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Abstract

Online shopping is a growing area of technology. Establishing a store on the Internet, allows for retailers to expand their market and reach out to consumers who may not otherwise visit the physical store. The convenience of online shopping is the main attraction for the consumers. Unique online payment systems offer easy and safe purchasing from other individuals. Given the pace at this sector is growing and getting funded, this decade could well belong to the e-commerce industry in India. Young consumers are playing an important role in online shopping. The increasing use of Internet by the younger generation in India provides an emerging prospect for online retailers. This has created a need to understand how the young consumers in India perceive online purchases. In this regard, this research paper attempts to find out the perception of young consumers towards purchasing online in the Mumbai city.

Key words: Internet, Online shopping, Shopping behavior, Young consumers

I. INTRODUCTION

Online shopping is a growing area of technology. Establishing a store on the Internet, allows for retailers to expand their market and reach out to consumers who may not otherwise visit the physical store. The convenience of online shopping is the main attraction for the consumers. Unique online payment systems offer easy and safe purchasing from other individuals. Many physical retail stores have expanded their market by using the Internet. By having both a virtual store and a physical store, companies get the best of both worlds. Stores that are marketing their products in both areas can take advantage of the high demand for online shopping availability. The ability to shop for products online gives consumers the option to purchase goods off of the Internet with the convenience of not even leaving his or her home.

Making purchases online means consumers will use virtual shopping carts. Online shopping makes picking out items a quick process. It makes picking out items so quick that consumers have the tendency place more items in their cart than they are capable of paying for. Consumers shopping online exhibit an odd behavior of abandoning their shopping carts instead of proceeding to checkout. This behavior would be very unlikely to see in a physical store. While physical shopping carts are used in actual stores with the intent of purchasing the product in the cart immediately, “retailers cannot assume that their website patrons use their carts to purchase a product immediately”. According to ACNielsen report (2010) on top online shopping trends in India conducted among Internet users in 55 markets. More than eight out of ten Indian online consumers plan to shop online in the next twelve months. More than a quarter indicate they spend upwards of 11 percent of their monthly shopping expenditure on online purchases.

II. OBJECTIVES OF THE STUDY

The study is carried with the following objectives

➢ To study and analyze key factors that influence online shopping behavior of youth in Mumbai city.
➢ To study perception of youth towards online shopping in Mumbai city.

III. LIMITATION OF STUDY

The study is limited to youth attitude towards online shopping in Mumbai.
IV. RESEARCH METHODOLOGY

The study is mainly in descriptive in nature. Data for this study was gathered by primary data collection through consumer survey administered among students from two colleges in Mumbai city. Total 80 students were taken as sample for this study. The data for the study was gathered through the structured questionnaire. Statistical tools such as percentage method and charts are made use of.

V. REVIEW OF LITERATURE

According to ACNielsen (2007), more than 627 million people in the world have shopped online. ACNielsen also reported that, across the globe, the most popular items purchased on the Internet are books (34%), followed by videos/DVDs/games (22%), airline tickets/reservations (21%) and clothing/accessories/shoes (20%). Online shopping holds a great potential for youth marketers. According to Vrechopoulos et al. (2001) young are the main buyers who used to buy products through online. Dholakia and Uusitalo (2002) study examined the relationship between age and Internet shopping; found that younger consumers reported more linen to the online shopping. Another study by Sorce et al. (2005) found that younger consumers searched for more products online and they were more likely to agree that online shopping was more convenient.

By using a sample of 214 online shoppers, Ranganthan and Ganapathy (2002) found four key dimensions of online shopping namely websites; information content, design, security and privacy. They concluded that, though all these dimensions have an impact on the purchase intention, security and privacy will have greater impact on the purchase intent of online buyers.

According to Kim and Lee (2002) the web site design describes the appeal of the user interface design presented to customer and customers are willing to visit more often and stay longer with attractive web sites.

In the research conducted by Vellido et al. [2000], nine factors associated with users’ perception of online shopping were extracted. Among those factors the risk perception of users was demonstrated to be the main discriminator between people buying online and people not buying online. Other discriminating factors were; control over, and convenience of, the shopping process, affordability of merchandise, customer service and ease of use of the shopping site.

Lohse and Spiller [1998] used a regression model to predict store traffic and sales revenues, as a function of interface design features and store navigation features. The findings indicated that including additional products in the store and adding a FAQ section attracted more traffic. Providing a feedback section for customers will lead to higher sales. Finally, they found that improved product lists significantly affected sales. In Koufaris et al. [2002]’s research, it was proposed that two types of information; non-value-added and value-added; should be used by search mechanisms in web-based stores. Jarvenpaa and Todd [1997] also found that the existence of value-added information at a commercial website can be an important incentive for people to shop online, and provides a key source of diversity. Finally, they suggested that specific information available to support consumer search, and multiple search, mechanisms with a positive challenge will increase shopping enjoyment.

As per the survey conducted by the IAMAI and IMRB in the year 2007, the major triggers of e-commerce in India were:

- Saves time and efforts
- Convenience of shopping at home
- Wide variety / range of products are available
- Good discounts / lower prices
- Get detailed information of the product
- You can compare various models / brands
VI. ANALYSIS AND INTERPRETATION

### Table 1: Demographic Characteristics of Sample Respondents

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENDER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (age group not mentioned as in female)</td>
<td>46</td>
<td>57</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>43</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 18</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>18-20</td>
<td>51</td>
<td>64</td>
</tr>
<tr>
<td>Above 20</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td><strong>EDUCATIONAL QUALIFICATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation</td>
<td>52</td>
<td>65</td>
</tr>
<tr>
<td>Post-Graduation</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Professional</td>
<td>07</td>
<td>09</td>
</tr>
<tr>
<td><strong>FAMILY MONTHLY INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than Rs 20000</td>
<td>06</td>
<td>07</td>
</tr>
<tr>
<td>Rs 21000-Rs 40000</td>
<td>35</td>
<td>44</td>
</tr>
<tr>
<td>Rs 41000-Rs 60000</td>
<td>31</td>
<td>39</td>
</tr>
<tr>
<td>Above Rs 60000</td>
<td>08</td>
<td>10</td>
</tr>
<tr>
<td><strong>FAMILY NATURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Nuclear</td>
<td>62</td>
<td>78</td>
</tr>
</tbody>
</table>

The demographic characteristics of the respondents (Table 1) show that 64% of the respondents’ belonged to the age category of 18-20 years, with 35% of the respondents falling in the above 20 years. It is further revealed that most of the respondents (57%) were males. As far as the income level is concerned, almost half of the respondents belonged to the income category Rs 41000-Rs 60000 and above that and more than three-fourth (78%) of the respondents’ belonged to the nuclear family system.

### Table & Chart 2: How Got to know about the online website for shopping?

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
<td>32</td>
</tr>
<tr>
<td>Television</td>
<td>26</td>
</tr>
<tr>
<td>Hoardings</td>
<td>08</td>
</tr>
<tr>
<td>Friend</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80</td>
</tr>
</tbody>
</table>
The above table and chart 2 shows how the respondents know about the online website for shopping. 40% of the respondents got to know from the advertisement in newspaper followed by 32% from television, 18% from friend and 10% from hoardings.

### Table & Chart 3: Last time purchase made from the website

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>One week ago</td>
<td>13</td>
</tr>
<tr>
<td>One month ago</td>
<td>54</td>
</tr>
<tr>
<td>Six month ago</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

Regarding respondents purchasing made (table and chart 3) last time online, 68% say they purchased online about one month ago followed by 16% about one week ago and remaining 16% six month ago.

### Table & Chart 4: Last time, what items have been purchased from the website

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books/ Magazine</td>
<td>38</td>
</tr>
<tr>
<td>Electronic Gadgets</td>
<td>21</td>
</tr>
<tr>
<td>Videos/DVD/ Games</td>
<td>06</td>
</tr>
<tr>
<td>Clothe/Accessories/Shoes</td>
<td>03</td>
</tr>
<tr>
<td>Any Other (Specify)</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

From the table and chart 4, we can understand respondents’ preference of purchasing different products online. 48% preferred to buy books/magazine online, 26% purchased electronic gadgets, 7% preferred to buy videos/dvds/games, 4% bought clothe/Accessories/shoes and remaining 15% bought beauty products, sports goods, railway tickets etc.
Table & Chart 5: Method of Payment for online shopping

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit/Debit Card</td>
<td>55</td>
</tr>
<tr>
<td>Bank Transfer</td>
<td>02</td>
</tr>
<tr>
<td>Cash on delivery</td>
<td>19</td>
</tr>
<tr>
<td>Money Transfer</td>
<td>03</td>
</tr>
<tr>
<td>Any Other</td>
<td>01</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

Table and chart 5 shows the respondents methods of payment for online shopping. 69% of respondents preferred to pay by credit/debit card, 24% preferred to pay cash on delivery, 4% of respondents paid by money transfer, 2% by bank transfer and remaining 1% of respondents by other method.

Table & Chart 6: In future, will website be your first choice for shopping?

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72</td>
</tr>
<tr>
<td>No</td>
<td>05</td>
</tr>
<tr>
<td>Can’t say</td>
<td>03</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

The above table and chart 6 show respondents’ choice for shopping in future. 90% of respondents say that they will prefer to buy online in future also, 6% will not buy online in future and 4% of respondents’ are not sure whether they will continue buying online or not.

Table & Chart 7: Opinion about the procedures of purchasing online

<table>
<thead>
<tr>
<th>Responses</th>
<th>In %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>14</td>
</tr>
<tr>
<td>Good</td>
<td>50</td>
</tr>
<tr>
<td>Average</td>
<td>13</td>
</tr>
<tr>
<td>Bad</td>
<td>03</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

Table and chart 7 shows that 62% and 18% of respondents’ say the procedures of purchasing online was good and excellent respectively followed by 16% felt average and remaining 4% bad.
From the above table and chart 8, we can understand 86% of respondents’ say that the look of the online shopping website appealed to them, 10% are neutral and it didn’t appeal to 4%.

Most of the respondents’ (86%) (from the above table and chart 9) are satisfied by using the product after online shopping, 10% somewhat satisfied and 3% of respondents’ dissatisfied.

The above table and chart 10 show respondents’ finding the online shopping secure or not. 59% of respondents’ felt secure, 22% felt somewhat secure and remaining 4% felt not secure.

VII. CONCLUSIONS AND RECOMMENDATIONS

On-line shopping is extremely popular and convenient mode of shopping, utilized mostly by the “Net-Generation”, although it has become extremely popular over the last decade it has its own share of problems like:

- Consumers exhibit different buying behaviors when shopping online than when they are shopping in a physical store. Retailers need to study consumer behavior closely in order to make it more consumers friendly, profitable and successful.
Another potential problem that can arise from online shopping is addiction. The convenience of online shopping that can be seen as very beneficial, can also lead to an unhealthy shopping addiction, causing more than financial damage to the consumers.

The key to success lies in not only attracting the youth but audience from all age categories to make online shopping more appealing.

It can be observed that consumer is not keen to buy very expensive consumer durable online this area need to be attended by marketers.

Online shopping need to be popularized through innovative schemes and value offers so that more people buy products frequently online.

**The measures that could be taken by marketers to attract more youth shoppers to online shopping would be to**

- Make it easy for customers to find your website by using a combination of online and offline marketing tactics.
- Promote sales of products exclusively by online websites and Emails.
- Use email campaigns to attract new customers and draw previous customers back to your website.
- Employing innovative marketing schemes such as free samples, Discount offers and bargain price offers online.
- Go where your customers are; these days that includes social networks. Companies are experimenting with Face book ads and check-in coupons, offering promotions on their Face book walls, and tweeting time-limited deals to their followers.

**VIII. REFERENCES**

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IMPACT OF DIGITAL BANKING ON CONSUMERS IN THANE CITY

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Abstract
The present banking reform has open up great opportunities for financial institutions to cover wide area and consumers at faster rate. Digital banking facilitates online banking services which are delivered through internet. It is becoming popular because of benefits it offers to consumers such as more convenient, customer friendly, saves time and cost, round the clock banking services, accuracy and speed of transactions, discounts and offers and so on. The main aim of the research is to understand the status of digital banking, to study factors influencing growth of online banking and its impact on the consumers. The hypothesis has been tested with the help of parameters like cost effectiveness, speed of transactions, convenience offered, modern payment gateways and wide coverage of customers and area. Undoubtedly changes are in progress and which will lead to digital transformation in banking in future.

Keywords: Digital banking, consumer-friendly, cost effective impact on consumers.

Introduction:
The banking sector constitutes backbone of every economy whether it is developed or emerging. Economic reforms can be implemented thorough banking services. Introduction of technology in banking have extensive impact on an economy’s growth. Therefore banks have been adopting unconventional ways to provide and differentiate amongst their diverse services. Not only corporate but retail customers also not willing to stand in queue in banks or wait on the phone for the basic banking services. In the year 2016, the remarkable launch of Unified Payment Interface (UPI) opened up online banking sector to even poorest man. The key drivers of growth of banking sectors are plastic money (Debit cards, Credit cards, Smart Cards, Travel Card, Visa card) internet banking including electronic payment services, online investments, online trading accounts, electronic payment services, online investments, online trading accounts, electronic fund transfer and clearing services and so on.

Conceptual Framework:

a) Electronic Banking: Electronic banking is form of banking in which funds are transferred with the help of electronic signals instead of exchange of cash, cheque, bills of exchange, promissory notes, hundies etc.

b) Digital Banking: Digital banking is digitization of all the traditional banking activities and programs services that were conventionally available to customers physically inside a bank branch.

Rationale of the study:
Today, banks are not mere institutions that mobilize savings but also encouraging saving habits amongst customers. Banking sector in India is expanding by leaps and bounds. More & more banks realizing the benefits offered by globalization. The key drivers for the growth of digital banking are, increased inflow of automatic FDI up to 74 percent in private sector banks, internet penetration, increased use of smart phones, use of social networking, penetration mobile wallets, ease of payments through plastic money and so on. Hence, in this connection a researcher attempted to study the effectiveness of digital banking and its impact on consumers.

Objectives of the study:
The study was conducted keeping in view the following objectives for research:

1. To understand the concept and status of digital banking.
2. To study the impact of digital banking on customers in Thane city.

3. To study the objective and benefits of digital banking.

HYPOTHESIS: Keeping in view the above objectives the researcher has frame the following hypothesis.

\[ H_1 \text{ “Digital banking is convenient to customers”} \]

Methodology and Data sources of study:

a) Data Collection: The study is an empirical research based on primary as well as secondary data. The primary data has been collected from 240 respondents form Thane City. A questionnaire based survey was conducted and data was collected from various categories such as student, salaried person and housewives. The secondary data for study has been collected from sources such as referring books, journals, websites, articles etc.

b) Statistical Technique used for analysis: To study and analyze the data, Ratio analysis and correlation analysis was used to arrive at findings and conclusion.

c) Presentation: Data relating to Thane city was analyzed and it is presented with the help of Tables, charts and diagrams.

d) Limitations: The study mainly focused on benefits of online banking in Thane city. Though the researcher finds the selected geographical area under study representative in nature, but covering the more cities can also be done. Since this was the study undertaken by the individual, it was not easy to carry out such a vast study because of time, cost and other resource constraints. The researcher restricted herself to select only Thane city.

Discussion and Data Analysis

Digital banking is digitization of all the traditional banking activities and programs services that were conventionally available to customers physically inside a bank branch. These activities include money deposits, withdrawals and transfers, saving account management, loan management, applying for financial products, bill pay and so on. The earliest forms of digital banking traces back to the advent of ATM machines and cards launched in the year 1960s. Since 1990, the use of internet emerged and online banking started becoming norm in India. The advancement of broadband and e-commerce system in the beginning of 21st century led to the spread of modern digital banking world today. The key drivers of growth of banking sectors are plastic money (Debit cards, Credit cards, Smart Cards, Travel Card, Visa card) internet banking including electronic payment services, online investments, online trading accounts, electronic payment services, online investments, online trading accounts, electronic fund transfer and clearing services and so on. ATMs help banks cut overhead, especially if they are available at various strategic locations beyond branch offices. Digital banking is electronic payment system. And this is main feature of digital banking. As there are many uses of net banking nowadays. Moreover people can carry forward financial transactions online only. In India digital banking has more developed after the recent demonetization by the present government, enabling people to go cashless and enhance a digital economy. Adoption of digital banking has resulted in increase in FDI which is 74% via automatic route in private sector banks. Whereas in case of nationalized banks, the portfolio and FDI investment maximum limit is 20%.

Significance of Online Shopping

1. Consumer friendly: It provides the opportunity to shop round the clock (24*7). It is more convenient because of the factors such as easy operation, no wait to open the bank, anywhere anytime banking etc.

2. Saves time: The customer can conduct the transactions by sitting at home, avoids standing in queues, and saves energy, time and money also.

3. Cost effective: In case of online banking consumers conduct transactions with the help of broadband so it save, transportation cost and service charges.
4. **Handling of various activities:** In case of online banking, customers can conduct various activities such as money deposits, withdrawals and transfers, saving account management, loan management, applying for financial products, bill pay and so on.

5. **Easy to transfer funds:** Customers can easily transfer funds through internet to relatives and friends, at any nook and corner of the country. They can directly send the fund through online banking to any relative’s place.

6. **Wide coverage:** Large number of consumers can be covered with the use of ICT. Database of consumers can be done effectively.

7. **Financial Inclusion:** It becomes easy to carry on transaction once the account is opened in banks. Even the poor people can access the account through their cell phones after login into accounts.

8. **Discounts & offers:** Online banking and various cards provides more offers and discount to consumers. It attracts consumers in large number.

**Analysis of primary data**

The customers were influenced by the factors affecting the adaptation of on-line banking. Hence, the questions were regarding benefits of online banking and rate it as per their preference. The information of these aspects was collected from the sample respondents and has been presented in table below:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Factors</th>
<th>No. of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consumer friendly</td>
<td>190</td>
<td>79.17</td>
</tr>
<tr>
<td>2</td>
<td>Saves time</td>
<td>198</td>
<td>82.50</td>
</tr>
<tr>
<td>3</td>
<td>Various operations</td>
<td>185</td>
<td>77.08</td>
</tr>
<tr>
<td>4</td>
<td>Cost Effective</td>
<td>175</td>
<td>72.92</td>
</tr>
<tr>
<td>5</td>
<td>Easy &amp; quick transfer of funds</td>
<td>219</td>
<td>91.25</td>
</tr>
<tr>
<td>6</td>
<td>Rewards, &amp; Discounts</td>
<td>180</td>
<td>75.00</td>
</tr>
</tbody>
</table>

**Source:** Compiled from primary data.

It can observed from Table No.1 that electronic fund transfer is the most popular facility given to customers as 91.25% enjoyed it, followed by it saves time 82.50 and convenient to consumers which is 79.17%. Nearly 77.08% were attracted by variety of operations whereas 75% by rewards and discounts offer. Nearly 73% responded that it is cost effective as it results in reduced services charges and also saves money as compare to outdoor banking.

**Testing of hypothesis:**

Percentage analysis and correlation analysis, the simple statistical tools are used by the researcher for testing of hypotheses. Analytical summary of the findings is presented here with for the testing of hypothesis. It can be inferred from the above discussion and analysis (Refer Table 1,) that digital banking is more convenient to consumers due to benefits enjoyed customer in general and in Thane city.

**Findings**

Online banking has become popular due to the benefits offered by to the consumers. Banking operations by customer is influenced by the benefits enjoyed them. The major findings of the study are as follows:

- Online banking is boon for the consumers as it provides maximum benefits to customers such as electronic payment services, online investments, online trading accounts, electronic payment services, online investments, online trading accounts, electronic fund transfer and clearing services and so on.
The key drivers of growth of banking sectors are plastic money (Debit cards, Credit cards, Smart Cards, Travel Card, Visa card) internet banking and convenience provided to consumers including it saves time, round the clock service, energy, money, cost effective, facilitates various operations, easy and quick transfer of funds, rewards and discounts etc.

It evident that electronic fund transfer is the most popular facility given to customers as 91.25% enjoyed it, followed by it saves time 82.50 percent.

It is observed that it is convenient to consumers as 79.17 % says. Nearly 77.08 % were attracted by variety of operations whereas 75 % by rewards and discounts offer.

It can be seen that nearly 73% responded that it is cost effective as it results in reduced services charges and also saves money as compare to outdoor banking.

**Conclusion:**
On the basis of above discussion and previous studies it can be concluded that India has witnessed a significant change in conventional banking services and now digital banking becoming popular day by day due the factors such as cost effective, round the clock banking, saves time, various operations, and easy and quick transfer of funds and so on. It is concluded from the results of the study that the usage of ATM, Tele banking and Internet banking are perceived as important and the use of these services is associated with socio-economic and demographic characteristics of the respondents. Though, most of the customers prefer manual banking over e-banking, the customers tend to use e-banking / internet banking and adoption of e-banking and internet banking services among the bank customers is significantly influenced by the number of times visiting the banks as well as the number of banking transactions per month. Most of the services through e-banking / internet banking performed by both public and private banks are beyond the expectation of the customers. Similarly the various services provided by both public and private sector banks are more than adequate for customers. Undoubtedly changes are in progress and which will lead to digital transformation in banking in future.

**References:**
 Abstract

Sheryl Sandberg, COO at Facebook has said that “all women should ask themselves, what would you do if you weren’t afraid?” As I read this, I see an endless plethora of opportunities and possibilities of magical success stories coming true only if, women get rid of many of such weights that are pulling them away from their dreams. Societal pressures, finances, getting the right people on board, inequality, finding the right resources, ongoing battle between responsibilities at home (which, unfortunately are assumed to be only a woman’s duty even today in our society) and responsibilities at work, inadequate knowledge and access are few of those “weights” that I was referring to. Along with these endless struggles, in today’s day an age, what I see is endless scope and opportunities for women entrepreneurs and aspirants to bring their innovative ideas into reality by finding a niche and filling the gap, to provide value and make society a better place by doing just ‘what they are passionate about’ and ‘what they stand for.’

Today’s surroundings in terms of business climate are dynamic and with the technological advancements at our help, we can observe many ways available at the fingertips of aspirant entrepreneurs, for them to make the mark in their respective fields. The challenges are endless but along with those challenges, there come endless opportunities as well. Having come across many successful entrepreneurship stories for my study, I somewhere realized the urge of penning it down as my research paper. Writing this research paper is my sincere attempt to have a sneak peek into the entrepreneurial life of such successful Indian Women Entrepreneurs, have a note not only of their struggles but also of their ways of overcoming setbacks and their journeys of reaching to the positions where they are standing today.

For the study, I have considered the success stories of 50 Indian Women Entrepreneurs, as qualitative methods of study have been used for this research paper, with the help of secondary data that is available in the form of articles, surveys, blogs and interviews. My efforts during the study were directed towards answering the questions like: What does women entrepreneurship in India mean today? What are the varied initiatives taken by women entrepreneurs? What are the challenges faced by them? What are their ways to overcome those challenges? How technology and changing times have helped women entrepreneurship grow in India? How these real life stories can motivate other aspirant entrepreneurs? and finally, coming to a conclusion on the same. The conclusion of my study depicts the overall trend as to the current scenario of woman entrepreneurship in India, the major challenges faced by these path breaking entrepreneurs, their solutions opted to overcome the same and the opportunities that today’s times have got us to offer.

Key Words: Women entrepreneurship in India, Success stories, Struggles, Initiatives, Challenges, Opportunities, Technology.

Women entrepreneurship in India: Current Scenario

When we talk about women in the workforce today, its saddening to see what the data and the numbers depict. The ratio is not even of 50% of the women at the top positions.

While women constitute around 48% of the population, women participation in entrepreneurship it is only 14%.
After analyzing the success stories of 50 Indian women entrepreneurs, what I have observed is today’s surroundings in terms of business climate are dynamic, demanding and encouraging. ‘Dynamic’ because the environment is changing every second, new trends are coming in and old ones are being phased out, the definition of ‘relevance’ is changing with just the blink of an eye; ‘Demanding’ because this dynamism is creating a plethora of the gaps to be filled and niches to be bridged; and therefore it is ‘encouraging’ for aspiring women entrepreneurs to make their mark. Today’s women entrepreneurs do not come only from established business families or from higher income section of the population, they come from all walks of life. One may feel absolutely motivated and inspired as these success stories depict a trend from unknown to known, from confusion to clarity. And all of them when studied, were found to have a definite purpose; a definite purpose of proving value by analyzing the gap in the market, finding the niche and filling it just rightly with their products and services. Yes, prevailing challenges: situational, operational, personal, attitude related and aptitude related ones are going to be there on a day to day basis, not only as the journey of entrepreneurship starts but all through the journey. But the only way out is to go about it and solve the issues while you are on your toes as an entrepreneur.

**Initiatives and Strong Impact**

Here is the list of 50 Indian Women Entrepreneurs whose entrepreneurial journeys were reviewed and studied in order to draw answers for the research questions like what are the varied initiatives taken by women entrepreneurs? What are the challenges faced by them? What are their ways to overcome those challenges? How technology and changing times have helped women entrepreneurship grow in India? How these real life stories can motivate other aspirant entrepreneurs? The list offers the powerful grid of path breaking enterprises and impactful journeys to draw inspiration from. They are varied in terms of types of ventures (viz. manufacturers, service providers, E-vendors as well as E-consultants) and are varied in terms of their approaches at resolving the hurdles along the way.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title &amp; Company</th>
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<tbody>
<tr>
<td>Pooja Dhingra</td>
<td>Owner, Pastry Chef, Le15 Patisserie</td>
</tr>
<tr>
<td>Shubhra Chaddha</td>
<td>Co-founder, Chumbak</td>
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<tr>
<td>Suchi Mukharjee</td>
<td>Founder, CEO, Limeroad</td>
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<tr>
<td>Ameera Shah</td>
<td>MD, Metropolis Healthcare</td>
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<tr>
<td>Sabina Chopra</td>
<td>Co-founder, Yatra.com</td>
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<tr>
<td>Falguni Nayar</td>
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<td>Richa Kar</td>
<td>Co-founder, Zivame</td>
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<tr>
<td>Dr. Hina Shah</td>
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<td>Aditi Gupta</td>
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<tr>
<td>Rekha M Menon</td>
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<td>Seema Bhattacharjee</td>
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<td>Upasana Taku</td>
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<td>Sairee Chahal</td>
<td>Founder, Sheroes</td>
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<td>Riticka Srivastav</td>
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<tr>
<td>Sunanda Verma Bhatta</td>
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<td>Varsha Bhambhani</td>
<td>Founder, School of Accelerated...</td>
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</table>
Garima Satija, Founder, PoshVine
Smiti Bhatt Deorah, Co-founder, COO, Advantage Club (Work Advantage Pvt. Ltd.)
Kathak Mehta, Co-founder, Gentle Washer
Aditi Balbir, Founder, CEO, V Resorts
Meena Shah, Co-founder, CTO, iView Labs Pvt. Ltd.
Swati Bhargava, Co-founder, CashKaro
Rebekkah Kumar, Founder, Director, fourseven
Harpreet Kaur, Co-founder, Love 4 Apple
Ashwini Asokan, Founder, CEO, Vue.ai, Mad Steet Den
Anjali Goyal, Founder, Director, CasaOne
Manisha Raisinghani, Founder, CTO, LogiNext

Prevailing Challenges and Ways to overcoming them

In her TEDx Talk, in December 2010, Sheryl Sandberg has emphasized on some very important aspects as: She says ‘even though she belongs to the generation which has got more career choices as compared to earlier generations, not all the women are fortunate enough to have got the basic rights. When it comes to taking up a job or running their own business, the trend has shown that in today’s day and age women are making the mark but somewhere when the situations demand, they kind of start leaning backwards. There is this ongoing conflict between the professional success and personal fulfillment.’ And that holds true even today wherever we go.

She says ‘Women systematically underestimate their own abilities. They do not negotiate for themselves at the workplace. The data shows disappointing numbers of the percentage of men negotiating their first salary and women negotiating their first salary.’ She suggests that ‘Women should own their success. Men are less likely to attribute their success to anyone else than themselves. While women are more likely to attribute their success to other external factors (like somebody who has helped them along the way or has given any advice) than to their own hard work and passion towards their dreams.’ She puts, ‘Success and likeability are positively correlated for men and negatively correlated for women.’

Mr. Amitabh Kant, CEO of NITI Aayog, in one of the entrepreneurial summits has said that ‘Being a women entrepreneur in India is tough and being a young women entrepreneur is even tougher.’ The report titled ‘Unlocking Entrepreneurship Opportunities for Women’ based on study conducted by Global Alliance for Mass Entrepreneurship (GAME) and Facebook, apart from outlining the opportunities, the study also analyses the demands, mega trends and challenges that potential women entrepreneurs in India face.

Mainly the inhibitors like lack of awareness of the possibilities related to their passion, inadequate skills or knowledge to be a successful entrepreneur, skepticism about taking unconventional routes, lack of accessibility to available resources and immediate support system.

After analyzing about 50 successful entrepreneurial stories, I was able to pen-down the diverse range of challenges and struggles that these women entrepreneurs have faced and their ways of overcoming those set-backs which can be noted down as their success mantras:

1. Overcoming Fear, Self-doubt and Guilt

Ameera Shah, MD at Metropolis Healthcare says in her Tedx-Talk that ‘Women entrepreneurs in India are
faced with two challenges viz. a conditioned lack of self-belief and the eco system that promotes this lack of self-belief. Growing girls are unintentionally conditioned to be protected, not to take risks in life; as love equals protection in the family. 

This constant protection, no availing of risks, no uncertainty puts women in a position where they are not taking any decisions nor risks in life. And this vaguely as well as specifically contributes to one of the reasons why women constitute only 14% of total entrepreneurs in India (while women constitute 48.9% Indians) among other factors responsible to the same. But if only there is 100% confidence on the idea and a burning desire to articulate it even though nobody finds it convincing enough, one can still attain huge successes as this being the inevitable prerequisite traits of an entrepreneur.

2. From inequality to equality

Equality of opportunities and unbiased approach is something that we as society need to work on. And over the years a trend of positive changes can be observed as Rekha M Menon, Sr. MD, Accenture in India, says when she started working as an employee, the gender ratio was 1: 500 and in another company it was 1500 male employees and no other women employee. When asked by an interviewer as, ‘did she not approached work with the gendered thinking at all?’ and her answer was ‘No.’ Her approach was ‘I am just one more person here, one more management trainee and I have to make a mark’ but at the same time she says as she looks back, she tried to fit in and downplayed it as the gender was such a minority. Further she says that if it was the case today, her approach would have been different as it was a different environment back then. Sabina Chopra, Co-founder of Yatra.com says that ‘in some parts of the country women are still facing the issues like self-doubt and fear; on which she stresses on ‘how important it is for women to get over under-confidence, and even if you fail she says, the important thing is you tried’.

3. Getting the right people on board

Pooja Dhingra, owner, pastry chef and founder at Le15 (who has also been featured in Forbes 30 Under 30 List) emphasizes on how finding the right people on her team was challenging; and finding the people that are as much passionate about the brand and the product as an entrepreneur is. Statistics quote that about 25% women started their businesses even before turning 25. Pooja says that ‘when she had started early at the age of 23, she struggled with people whom she had to deal with, that were not having the trust and confidence that she (because of the fact that she was a young girl who is just 23 and was seeking to set up a business) was capable of doing things on her own and at the same time people did no use to address her as the owner herself.’ This can be overcome by ongoing efforts on making a strong brand and eventually the brand representing its value. While talking about the significance of a solid team, Vandana Luthra, Founder, Mentor and Vice Chairperson at VLCC quotes that “I am not VLCC, I am a part of 6000 professionals who run it.”

4. Balancing Professional and Personal life

Be it in any profession or occupation, there is always an ongoing conflict that women of all socio economic backgrounds struggle with, is between responsibilities at home and those at work. But entrepreneurs like Falguni Nayyar, Founder, CEO, Naykaa, at the age of 50 and after having a successful corporate career in investment banking, decides to start up an E-commerce retail platform for beauty products and runs it successfully against all odds; shows that we can overcome any barrier-be it physical or operational, if we work our ways towards the same.

5. Overcoming family and societal Pressures

Coming from a family with intellect and marrying into sort of a conservative family, Vandana Luthra, Founder, Mentor and Vice Chairperson at VLCC, while sharing her journey in one of the talks, she says, ‘after being a housewife for around 8 years, after taking care of her in laws, raising her children, it was a need for her to
convince the family that she wanted to be an entrepreneur, use all her learnings that she has had, provide value by the way of wellness and this path had not come easy for her. There were hurdles she says: the family being conservative, money issues and other related. But with the motivation and support of her husband she managed to articulate her idea of creating a wellness brand that helps people connect their Body, Mind and Soul. Not only she was successful to overcome those hurdles, but as she started, over the time she successfully managed to transform it into a brand-name that is recognized globally.

6. Getting funding for business venture

In today’s dynamic pace when one can quote to have different funding options available, but can we get through it successfully is the question. On analyzing these entrepreneurial trends, it can be seen that not all business people are fortunate enough to have an investor or financier for their planned ventures. On this, Pranshu Patni, Co-founder of Culture Alley and Hello English app says that ‘Women need to very show the investors that they are committed to their plan and need to let the merchandise represent itself.’ Such confident and just attitude would help us the long way.

7. Technology at help

Majority of the entrepreneurial journeys studied under this paper, are E-commerce platforms and retail solutions to a wide range of products and services- from apparel to lingerie, from souvenirs to beauty products, from a travel portal to an English learning app, and even from providing menstruation solutions to expert guidance on oncology; technology has played a bigger part in articulating these business ideas of varied entrepreneurs, in not only reaching to masses and catering to their requirements but it also helps entrepreneurs get access to the requires pieces of information at a click. The only way out is increasing accessibility as we move ahead and building a strong support network over the years to come.

Opportunities

In this technology driven era, there seems an endless scope of delivering new and innovative products and services; connecting with the consumers, solving their queries and providing the right value; as the boundary lines in terms of limitations seem to have got blurred and are vanishing.

• Government Initiatives

The government has come up with platforms like ‘WEP’ and ‘StartupIndia’ that help entrepreneurs right from registering themselves to accelerating the scope of ventures. WEP i.e. Women Entrepreneurship Platform is a Government of India initiative by NITI Aayog to promote and support aspiring as well as established women entrepreneurs in India, assist them in scaling up and expanding their ventures. Also, StartupIndia portal that provides ‘Networking with the startup ecosystem, participation in challenges and programs; and access to useful tools and resources for free’ would definitely help women entrepreneurs expanding their scales. It furthermore helps the entrepreneurs with updating their skills with the help of various courses curated right from data analytics to design thinking. On the financial front, the schemes such as Mudra Yojana (by Government of India); Stree Shakti Package for Women Empowerment (by State Bank of India) and Bharatiya Mahila Bank Business Loan are few of the schemes launched in order to help women entrepreneurs and aspirants.

• Learnings at home

Vandana Luthra, Founder, Mentor and Vice Chairperson at VLCC says that ‘entrepreneurship has been a transformational journey for her. She says that our little homes teach us all the right things like commitment; they built our self-esteem and confidence.’ And in today’s day an age, with the help of technology at our fingertips, the aspirants majorly in metro cities and urban areas get to avail the same and provide skill based products and services while operating from home itself. Rekha M Menon, Sr MD at Accenture India says that
while she was at home for few years and was taking care of her children, she still remained relevant by taking up projects and grabbing on opportunities that came her way; as she emphasizes on the need to stay relevant even while you are not on your toes as an entrepreneur.

- **High potential sectors**
The report titled ‘Unlocking Entrepreneurship Opportunities for Women’ based on study conducted by Global Alliance for Mass Entrepreneurship (GAME) and Facebook calls out three sectors viz. food, education and beauty and wellness sector as holding high potential for home based entrepreneurship for women. The report puts that ‘India can likely have around 9 Lakh new women entrepreneurs by 2025 in food and education sectors combined where women are present in large numbers as employees as well as entrepreneurs.’

![Women Owned Businesses in Urban India](image)

- **Showing a path**
Priyanka Raina, Founder, Director at Gracia Raina Foundation says ‘entrepreneurship is very big role as a lot of people follow your path and she further emphasizes on how being a social entrepreneur you can contribute in bringing a better change to the societal issues. By doing just what you do for your venture, you are showing direction to many more people and that is one big responsibility as an entrepreneur. As percentage of such people is still very low in India, we must connect with some social impact by using technology, innovation and creativity productively.’

- **Filling a gap by providing value**
On analyzing the current competitive environment, it can be put that having your own identity (and uniqueness) as a brand is of immense importance and to be able to do that impactfully, bridging some sort of a gap by providing just right value to your customers with your products, services and offerings is a pre-requisite and the need of the hour. Shubhra Chaddha, Co-founder of Chumbak says that they found out a big gap in market while
looking for good fridge magnets or souvenir on India, as there was no such thing available and the ones available were not satisfactory enough that could be kept as a collectible on our own country. So what started as a souvenir brand, now is a huge name as a lifestyle brand with over 72 outlets all across the country, with a strong E-commerce presence. Ventures like Onco.com and Empowerji among many others have proved ‘how successfully they have bridged the gap by providing right value to their customers.’

**Conclusion:**

Women entrepreneurship is one of the concrete tools for overall women empowerment and economical, social and cultural growth of women. Its presence needs to be thoroughly monitored and required steps should be taken by us as a society along with thorough penetration of government initiatives till the very grass root level. It is of utmost importance to scrutinize whether the schemes made for entrepreneurs are reaching to them in rural and remote areas in the way they are supposed to be reached and being availed. If we take technology into consideration, with the help of technology, there is so much more to do; today is still considered as a day one. The opportunities for ‘coming up with new products, new concepts and sustainable ways to solve the same issues’ are endless. The need of the time is to build a strong concrete foundation in the ways of ‘availability and accessibility of finance, skill development, research, vocational as well as professional training, counselling and encouragement’ for women entrepreneurship to grow. It is invidious to think on ‘how can we contribute to growth if we can’t achieve or create equal opportunities?’ The data and numbers depict that as a society and a country, we have a long way to go; as far as more women participation in the workforce is concerned. And successful entrepreneurs whose paths and journeys were reviewed for this research paper, are strong and guiding inspiration forces for many aspirant women to become successful entrepreneurs.

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