
**“AN EMPIRICAL STUDY OF CONSUMER PREFERENCES TOWARDS
RELIANCE JIO”****Dr. Zamarrud Ansari¹**Faculty – Marketing, Sinhgad Institute of Management, Pune .
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ABSTRACT

Telecom sector has been at the forefront when we talk about technological upgrades, be it the device manufacturers or the service providers. It has been challenging time since the past year for the Indian Telecom Industry as Reliance Jio has created havoc with its launch and also affected the existing telecom landscape all over the country. Telecom earnings models have been drastically shattered, existing voice and data plans have been evacuated; revenue margins are getting shrieked and because of piled up license fee companies are bleeding. Probably, none of the industry in the country has witnessed such a rapid rise in penetration and concurrent fall in revenues. This paper attempts at identifying pre and post effects of Reliance Jio 4G services on Indian telecommunication industry's landscape.

Giga fiber has become a synonym at Reliance when spoken about speed and convenience both. The Giga fibers provides ultra high speeds for wall to wall broadband services. A Fiber-to-the-Home (FTTH) broadband service, Jio GigaFiber was under testing for about two years now. The service aims to deliver wall-to-wall broadband service for mobile devices; it will also work on Televisions as well. This paper attempts to understand the preferences of consumers towards such upgraded technology that forms a crucial part of the Cyber physical system.

Keywords: Internet, Connectivity, Speed, Giga fiber, Consumer preferences.

INTRODUCTION

This research is based on telecom sector and its broadband services as the telecom sector is growing with a gigantic pace .This research “**Consumer preferences towards Reliance Jio products (Giga fiber)**” was conducted to identify the factors and provide comprehensive 4G VO LTE coverage, high speed Wi-Fi services ,what the people are expectations from Giga Fiber of Reliance JIO at all parts of lucknow city.

The launch of Reliance Jio has drastically affected the Indian Telecom Industry, not only the subscriber base has risen but the data consumption per user has increased by 5 times and stands at 1.5 GB per day. Subsequently price of internet data has witnessed a massive drop of around 95% to current 11 per GB from Rs 192 per GB a year back. Apart from data and its pricing, Jio has grabbed a tremendous hike in its mobile broadband subscriber market around 45% more than other three existing players – Bharti Airtel, Vodafone and Idea Cellular — put together.

After a year of reliance Jio total data use by the subscribers in the country has risen from 220 million GB a month to 2 billion GB a month now, because of this india has become

the world's largest data user, it has overtaken the United States (720 million GB) and China (650 million GB). And this cascade has come from only 285 million customers.

After the successful entry in voice and data services over a year, now reliance has entered into broadband segment by launching its Reliance Jio Giga fiber. The technology used here is known as FTTH mean's fiber to the home in this optical glass fiber will be drawn to the user's home. After disrupting voice and data services segment, it is expected to hit hard the existing broadband service players. Reliance is offering a delightful combo of ultra-fast broadband connectivity at initial data speeds of 100 Mbps with initial 3 months free broadband data services and 1000 GB additional bonus pack.

Every individual has different perspective or viewpoint to look into things and according to that they discover things or we can say show their preference towards the product. This paper attempts to bring out people's preferences towards Jio products and broadband operators and services and also a point of view on Reliance Giga Fiber.

OBJECTIVES

- To study the consumer preference towards Reliance Jio products.
- To study the need and usage of internet in Lucknow telecom market.
- To study the customers behaviour towards broadband
- To study the awareness among customers about the Reliance Jio products

LITERATURE REVIEW

Customer preference can be defined as a situation when an individual likes one thing over another, depending upon his subjective taste & utility. Likes and dislikes of a consumer is not determined by the goods they purchase. One can have preference for iPhone over Nokia or Samsung but only have financial means to buy Nokia or Samsung, in such case simple concept of desire vs demand applies. As a marketer one needs to identify the desires, maximise it into demand by deploying various tools to attract more and more consumers, by way of offers or schemes that eventually get them into the purchase decision process.

In today's world where wide network coverage high speed internet access and advanced technology is everyone's demand and companies are doing their best to satisfy their customers. Jio is working according to the Indian telecom market; providing best quality services at much optimum price ((Paul asset, 2016)³.

Earlier the customer wouldn't like to prefer Reliance network (Rodrigues, 2015)⁴. Before it became a massive task to attract the good customer's base for 4G network. On

³ Paul P., 2016. Reliance Jio will kill 30+ businesses in the next 5-10 years. Retrieved from <https://www.paulasset.com/articles/reliance-jio-will-kill-30-businesses/>

⁴ Rodrigues, Sean. (2015). A study to understand the market potential of Reliance jio 4G services in Dahisar East Area of Mumbai. Retrieved from <https://www.slideshare.net/SeanRodrigues1/reliance-jio-57185875>

1st September 2016 MukeshAmbani launch its digital services as Reliance Jioinfocomm and with the permission granted by the TRAI enable the people to SS unlimited VO-LTE data and national voice calls, videos messaging services and various mobile applications and contents and that to free of cost up to 31st December 2016 (Singh Surabhi, 2017)⁵.

Providing freebies and abundance of data to the customer's Jio kept his first step in the Indian telecom market. Hindi knowledge world Jio foray into the fast evolving market has made tremendous change in the competition; price and data availability. Jio is widely used by the techno- saving customers (Jayaraman et. al, 2017)⁶.

Reliance Jio became the first company in India who is using 4G services and operating on 1800 image and 2300 MH bands all over India with the average internet speed of 15 to 20 mbps, free voice calls nationally and lowest international call tariffs in the world (R. Sorna Priya & M.Sathiya)⁷.

As world is running with the hyper pace and to catch up, Reliance Jio launched its Giga Fiber technology to compete with the other broadband players in Indian. High demand by the uses of ultra-high speed internet access, as broadband cost less than the other 3G & 4G services not only this speed, brand width, reliability and security are also the demand of this Indian society (IrfanUllah , 2012)⁸.

RESEARCH METHODOLOGY

The research design adopted for this paper is Descriptive research. The primary objective of the study is to find the consumer preferences awareness and behaviour towards the reliance Jio product and also to find out the peoples preference level to upgrade from traditional broadband to the optical fiber technology

All G+3 (ground floor + three floors) buildings were identified, for example - Shopping malls, Hospitals, Hotels, Colleges, Corporate offices and Government offices etc. comprehending all the necessary details of the building and variables like – Area, Address, Building name , number of flats and floors ,owner or secretary of building and what type of building it is was also being penned down (commercial, residential, both, Hotel, Hospital). Latitude and longitude was also noted by using mobile application so that number of home passes could be allocated.

The data collection started with identifying all the buildings in work scope area and establish contacts with the building owner/association and explain them the benefits of high speed internet and Giga fiber ultra-high speed connectivity.

Survey method of data collection was adopted for the collection of data, primary data was collected with the help of using two structured questionnaire. The sampling frame of this research was Gomti Nagar, old/new Hyderabad and other parts of Lucknow city.

⁵ Singh, S, 2016. Consumer attitude towards Reliance Jio India, Fifteenth AIMS International Conference on Management, pp 159-160.

⁶ Jayaraman et al., 2017. Customers satisfaction towards Reliance Jio sim

⁷ Sathiya, M. & R. Sornapriya, Customer satisfaction towards Reliance jio, Asian Journal of Managerial Science, Vol 6, No. 1, 2017, pp. 21 -27.

⁸ Irfanullah, A study and analysis of Public WiFi, Linkoping University, Department of Computer & Information Science, 2012.

Convenience sampling technique was used to select the respondents from the sampling frame with a sample size of 96 & 64 respondents. The data thus collected was analysed and inferences drawn.

DATA ANALYSIS

The demographic profile of the sample area selected comprised more of the residential complexes followed by commercial, government and then others (malls, hospitals, hotels, etc). The major respondents came from old/new Hyderabad and Gomti nagar areas of Lucknow city. The floor rise majority of these complexes fall in the rank of G+7 followed by G+3 and G+5.

The data analysed revealed that Airtel is the major player in both the Broadband and the Cable TV network market. In the Cable services a regional player Den is a close competitor to Airtel with a market coverage difference of merely 1.03%, which poses as a big chunk of market for Reliance Jio to beat or compete with.

The study revolved around the preference of consumers towards Giga fiber, where the study reveals that a decent percentage (38%) of respondents are keen in availing the services of Reliance Jio.

The study also brings out the consumption patterns across the various age groups, which reveals that the major respondents belong to the 35-50 age bracket indicating that the usage was high among the working class.

The study also reveals that Reliance Jio is known to most respondents, what they are looking forward to in terms services is good connectivity, while the other majority looks at all aspects such as availability, goodwill and offers and schemes. When it comes to the Giga fiber which consumers have shown inclination for, the preference is higher for speed, followed by connectivity, offers and schemes and the other parameters.

The speed of internet that the respondents look forward is in the preferred range of 40- 60 mbps at least while the current service providers are offering an average of 10 – 20 mbps, this is why most respondents are eagerly waiting to opt for use of giga fiber which Reliance Jio is offering.

Another important area of service operations indicated that if Giga fiber is being opted for the respondents would predominantly use Giga fiber for the services of Cable TV, followed by Voice and Video calling facility as these will then come free of charge. When respondents were proposed to create an integrated plan for themselves, they opted for a high speed, uninterrupted data service in the range of Rupees 500 – 1000 per household, which turns out to be 50% more economical than the existing service providers. This price benefit may lead the customers into more consumption which eventually will benefit the company.

INFERENCES

- While conducting survey, it was found that the maximum number of buildings covered were residential (65%) followed by other types.
- Maximum number of buildings covered in the study were mainly from Gomti Nagar & New/old Hyderabad with 53% of G+7 high rise buildings.

- In the survey we found that Airtel (60%) broadband is mostly preferred broadband operator. And found that there is very high competition between cable TV operators Airtel, Den and Dish TV being mostly preferred in residential building premises.
- During the study the enthusiasm observed of the respondents was quite high, where we identified that 38% respondents were interested & willing to provide the permission for further work and 21% were ready to give permission as they too were almost convinced.
- Connectivity (43%) & schemes attracted most of the respondent to buy Jio.
- 48% of respondents were aware about Jio products and mostly preferred Jio Fi & Jio Apps services.
- A large percentage of respondents are having broadband of Airtel being the largest preferred operator among all others.
- 28% of respondents' broadband service received 20-40 Mbps speed where 40% of them pay around 1500-2000 rupees as a rental charge.
- In analysing the data we found that respondent (37%) use 100-200 Gb of data per month. Speed and connectivity being the most wanted feature that respondents want from operator.
- Majority respondents did not seem to be satisfied with their current broadband operator and were willing to switch operator.
- 95% of respondents were aware about Jio and 59% of them are already using Jio network.
- 55% of respondents were aware about Jio Giga fiber & willing to switch to Jio services.
- JIO Giga fiber will be providing many free services but among that most of the respondents want cable TV services as priority with ultra-high speed data.

LIMITATIONS

While working over any type of task we encounter certain limitations and resistance in the course of its performance. Some of the limitations faced by the researchers were:

1. The first problem faced was in getting the co-operation of the customers. Many of the respondents approached did not agree to the need and utility of the study initially and hence did not agree to provide information.
2. As the sample size of the survey was small and comprises of only 64 & 96 respondents, the conclusion drawn may not be generalisable, also because it was a small section of the market considered that too only in a single state.

CONCLUSION

Reliance JIO has emerged as a very successful and fruitful telecom brand in India & its main aim is to provide customer satisfaction. Its services like unlimited free calling and data services & SMS has made users habitual in daily lives. Its high speed 4G services and wide network coverage are meeting the customers' needs and wants, which earlier 3G services was unable to do. That's why 4G has been introduced for customers.

Reliance Jio's alluring tariffs and schemes and customer services as well as lifetime roaming free services. Companies main intent is to fulfil his customers' needs and wants and provide best services to make their customer feel delightful. Not only their 4G services but mobile phones and modems are also making customer satisfied. They aim to upgrade society to the advanced technology and compete on global platform.

From the details it can be concluded that large percentage of respondents are aware about Jio and its services and customers are satisfied with the existing services and eagerly waiting to upgrade. People are also eagerly waiting to upgrade their broadband to Giga Fiber the ultra-high speed internet access and the additional benefits that it is providing. Also good number of customers who are willing to switch from their current service providers showed interest in Reliance JIO. Reliance JIO is capturing the wide area of Indian markets increasingly day by day. Hence, these statistics imply a bright future for the company.

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EMPLOYEE ENGAGEMENT ACTIVITIES – A STUDY OF SELECT INFORMATION TECHNOLOGY (IT) COMPANIES IN PUNE CITY**Dr. Geeta Rao**

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ABSTRACT

Employee engagement is the level of commitment and involvement an employee has towards his organization and its values. It is a measureable degree of an employee's positive or negative emotional attachment to their job, colleagues and organization which profoundly influences their willingness to learn & perform at work. Employee engagement has a direct impact on the employee's productivity. Understandably, the most productive employees are those that are not only committed and loyal; but also those whose outputs are healthy and gratifying both for themselves as well as for the organization they work for. Obviously, these are the employees who can be called 'engaged'. In almost a bottom up fashion, the organization as a whole benefits from employees that are committed, loyal, productive, and engaged. This paper aims to explore the various Employee engagement practices carried out in IT companies in Pune city and suggest measures to improve the EE practices so that the employees will be more committed and emotionally attached with their job and organisation.

INTRODUCTION

Enthusiastic and committed employees add value to their organization not just in terms of productivity, but also customer satisfaction, retention, profitability etc., thus employee engagement is the buzz word nowadays in any organization. "Engagement at work was conceptualized by Kahn (1990) as the "harnessing of organizational members" selves to their work roles. In engagement people employ and express themselves physically, cognitively and emotionally during role performances. Employee Engagement essentially depicts our connection to our work, our organization, our customers, our efforts and to results".

"The Information technology industry in India has gained tremendous appreciation and has become a brand identity as a knowledge economy due to its IT Sector. The growth story in the service sector in India has been led by the IT-ITES sector, with significant contribution to increase in GDP, employment, and exports. The sector has increased its contribution to India's GDP from 1.2% in FY1998 to 7.5% in FY2012. According to NASSCOM, the IT-BPO sector in India aggregated revenues of US\$100 billion in FY2012, where export and domestic revenue stood at US\$69.1 billion and US\$31.7 billion respectively, growing by over 9%. (NASSCOM). The study is an attempt to understand the EE activities at IT companies in Pune city".

Objectives

1. To explore the various Employee Engagement activities carried out by Information Technology (IT) companies in Pune city.
2. To suggest measures to improve Employee Engagement activities.

Literature Review

Shweta Vaibhav Vohra 2013, “A study of Employee Engagement Practices in select IT companies in and around Pune” “This study establishes that for various elements or parameters of Employee Engagement there are different sets of relevant Drivers which need to be kept in mind while designing the Employee Engagement practices. Similarly, it also throws light on the Drivers that play a more important role in ‘Engaging’ various levels of IT employees’ viz. Junior Level, Middle Level and Senior Level.”

Preeti Thakur (2014), “A Research Paper on the effect of EE on Job Satisfaction in IT sector” “The purpose of this paper seeks to find out the Effect of Employee Engagement on Job Satisfaction in IT Sector. Primary as well as secondary data has been used to carry out the research. The study has been carried out on officers as well as the clerks of IT sector. The findings came out and this is identified that among the former work motivation could be improved through increasing job authority and accountability. At the clerical level, rewards and sanctions are significantly associated with job involvement.”

Purna Chandra Panigrahi 2015, “Employee Empowerment A Way To Employee Engagement: A Critical Requirement For Employee Retention “the study contributes to find the facilitators of empowerment, key drivers of engagement and individual and combined impact of empowerment and engagement on retention of employees based on the existing literatures by examining and confirming the propositions which ultimately lead to successful talent retention. The findings are congruent with the past researches pointing to a positive association between empowerment, engagement and retention. The results of the study support the notion that well-crafted measures for empowerment and engagement leads to successful employee retention. Third, the study is unique in explicating through the case study that organizations must align HR strategy with the business strategy for active empowerment, engagement and retention of human resources.”

Praveen Kumar Sharma 2016, “Employee Engagement and Retention: “A Study of Software Professionals, organizational variable (organizational culture) and individual variable (personality) both affect employee engagement, and in turn, employee engagement lead to job satisfaction, consequently, job satisfaction leads to employee retention. Moreover, good working condition (organizational culture) and positive employee personality (high core self-evaluations) leads to increase employee retention. In the long-term, this may enhance organizational performance and revenue.”

Arti Chandani & Mita Mehta (2016) “Employee Engagement: A Review Paper on Factors Affecting Employee Engagement”, “The article delves in detail the meaning of employee engagement and its importance, particularly with respect to its effect on employee retention and performance. The study identifies factors of EE to be implemented in an effective manner. The various factors of engagements which are at macro, i.e. at the organizational level and micro level, i.e. at the individual level are

discussed and the variations in factors may arise due to differences in individual and job characteristics, gender diversity; ethnic diversity, etc. Engagement can be improved by opportunity thinking, enhancing employee decision-making, and commitment, transparency from the senior leadership will also make the organization culture more open. By implementing these engagement factors organizations can reduce employee turnover and improve productivity.”

Research Methodology

Type of research is Qualitative exploratory research to gain an understanding of underlying reasons, opinions, and motivations about the employee engagement practices in IT companies. Secondary data is used for the study and suggestions & conclusions were given.

Findings

The researcher identified the following Employee Engagement activities in IT companies in Pune city.

- “Maitree (friendship) Maitree had started to support the spouses of the TCS employees who often had to settle in other countries outside India in a totally new environment and culture”.
- “PEEP (Proactive EE programmes) - focused on one-to-one interactions between junior and senior employees”.
- “PROPEL - promoted the culture of share-care-grow”.
- “TCS was recognized with “Employee Engagement project of the year by North American EE Awards Chicago in the year 2016”.
- “Smile Foundation motivates employees by screening award winning documentaries based on the true stories of underprivileged children living in difficult circumstances but still with tall aspirations in life”.
- “Infosys Leadership institute – nurtures leaders and advances the field of leadership development.”
- “Infosys Women Inclusivity Initiative (IWIN) – Counselling for female employees, day care facility etc.”
- “Other EE activities include -Content authoring & publishing, Organizational updates, Surveys and feedback, Awards & Recognition etc”.
- “JOSH – Program to create bonding of the employee with the company. (Wipro)”.
- “WOW- Women of Wipro- programs for women employees”.
- “Employee Advocacy Group (EAG) - A group of employees whose suggestions, ideas, recommendations to improve company policies and processes. (Wipro)”
- “Yammer- employee empowerment program. (Wipro)”
- “Employee Perception Survey (EPS) – Biennial survey to capture EE and feedback. (Wipro)”
- “Other EE activities include -Career opportunities- individual development plan, Training & Development, Rewards, Supportive work culture, (Wipro)”

- “Employee First Customer Second “is the management approach to build a strong engagement culture. (HCL)”
- “The Value portal enables and encourages innovation at grass roots level as it is where HCL employees collaborate, innovate and lead the implementation of their ideas to deliver value to HCL’s customers.”
- “MAD Jam - (Make a Difference Jamboree) to celebrate the best innovators at HCL that came out of Value Portal.”
- “The Power of One – is a special employee-driven initiative of the HCLT Foundation. Employees get to choose what Corporate Social Responsible schemes they want to support. The programmes include:
 - “Social Recycling - collection and distribution of clothes, books, toys etc.”
 - “Friend-in-need - health camps, blood donation initiatives, food-drivers and community policing efforts”
 - “Just like us - creating and supporting sustainable livelihood solutions for the destitute and physically mentally handicapped.”
 - “HCLT Youth Club - organizes sports and cultural events, vocational training and sponsorship for impoverished youth.”
 - “Renew - promotes environment-friendly programmes like tree- planting drives.”
 - “Other EE programmes include U & I initiative (online forum to interact directly with the CEO), Career Power (career planning & development programs), Xtra Miles (Reward & Recognition programs) 360 Degree Feedback etc.”
 - “Empowering people – to create an entrepreneurial culture that encourages responsibility, commitment, sharing and excellence across all layers. (Cognizant)”
 - “Right Tools to replicate their digital lives in workplace to engage them better. “Cognizant2.0 is web 2.0 based platform serving as avirtual town square for over 140,000 Cognizant associates who share knowledge such as best practices, process guidance and technological artefacts across the company’s global delivery network.”
 - “Other EE activities include coaching, feedback, career development etc.”

Suggestions

- “HR department should take the lead into building a consensus among the employees and the employer about the engagement activities. They should use their expertise in working out a practical balance wherein both the parties develop confidence and trust.”
- “HR department should act as an ombudsman to resolve conflicts of Employee engagement. They should have mechanism to identify conflicts of EE at an early stage. “
- “The organizations must focus on “reasonable levels of engagement” beyond which things should be curtailed. It should be understood that employees are human beings after all and they can develop unreasonable expectations on the part of the employer. To avoid this, limits are expected.”
- “Internal surveys should be regularly carried to find out the engagement activities that over a period of time have lost their sheen. Particularly in a sector like IT that is rapidly changing such surveys are important.”

Conclusion:

“Organizations have to give their employees the freedom to make their work exciting and an environment having an engaged work life .With increase in responsibilities at home and a desire to excel in their careers, employees often get distracted from their work which needs to be taken care of .Employees are the assets of the organization and if they are not given a space whereby they can make a perfect blend of both work, fun, optimum performance from them may be difficult. Employee engagement emphasizes the importance of employee communication on the success of a business. An organization should realize the importance of employees, more than any other variable, as the most powerful contributor to an organization’s competitive position

.Organizations and employees share a symbiotic relation, where both are dependent on each other to satisfy their needs and goal. Therefore; employee engagement should not be a onetime exercise, but a continuous process of learning, improvement and action. Eventually, measuring employee engagement does not enhance engagement or customer response. It is an initiative coined to identify employee engagement with work and trust in the company leading to action plans for forming a truly engaged workforce that creates internal value, promises organizations of employment stability and in effect, positions organizations for nonstop development and success. Thus, organizations today are actively looking forward to intently with and proceed on behalf of their employees` expectations and performances.”

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PORTRAYAL OF FURNITURE IN INDIA: A STUDY ON CUSTOMER PERCEPTION

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ABSTRACT:

Modular furniture is an important part of modern furniture, in the form of flexible, affordable, market prospects etc. The traditional idea of where we get the feeling of home has been disrupted. The objective of the project was to understand how customers perceive furniture in India. A pre study was performed to define the problem area and to set the requirements of the furniture. The pre study included: studies and discussions with the people, literature review within the field, market search and ergonomics study. Moreover, Indian customers expect a high variety for their furniture as well as short delivery times. Due to these factors, furniture companies that want to succeed in an industry are witnessing dramatic changes need to have innovative and underpinning strategies to have competitive advantage. To understand customers perspective companies need to plan, organise and will even have to adopt new technologies for decision making and effective management.

This study also includes the financial challenges faced by the companies to perceive their customers. The effect of the shift in attitudes and activities has led to a generation of people who want to redefine the spaces they live in.

Keywords: *customer perception, buying decisions, innovations and strategies.*

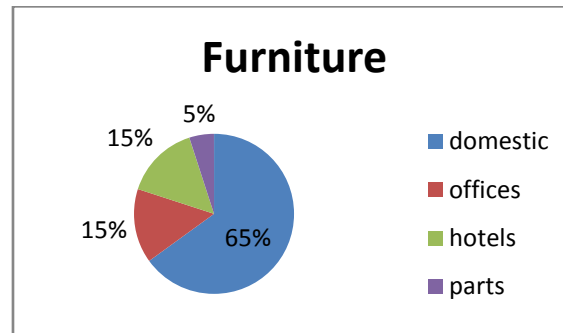
Introduction

Consumers make various purchase decisions daily. Some of these decisions, at one end of the continuum, are made quickly and with little mental effort especially when purchasing lowpriced, frequently bought goods. While on the other end, consumers would normally go through an extensive decision-making process as considerable time and effort are spent in searching information about the product, seeking alternatives, and then to finally decide which of the more expensive and less-frequently bought product to purchase. Faced with a multitude of products, deciding on a purchase may sometimes not be a simple matter to the consumer. How would the consumer then choose from the many available alternatives? Consumers would normally evaluate the alternatives based on a myriad of attributes like price, brand name, country of origin, quality and design. These attributes, with different importance in the consumer's mind form the selection criteria in purchase decision-making. It is through this alternative evaluation that consumers gain the information needed to make a final choice. Usually, consumers would compare less frequently purchased goods like furniture, based on suitability, quality, price, style and functionality .

The global furniture market can be broadly categorised into four categories - domestic furniture, office/corporate furniture, hotel furniture and furniture parts. Globally, domestic

furniture accounts for 65 per cent of the production value, whilst corporate/office furniture represents 15 per cent, hotel furniture 15 per cent and furniture parts 5 per cent. According to a World Bank study, the organised furniture industry is expected to grow by 20 per cent every year. A large part of this growth is expected to come from the rapidly growing consumer markets of Asia, implying significant potential for growth in the Indian furniture sector.

FIGURE 1.



The Indian furniture industry is estimated at around Rs 35000 crore (Rs 350 billion). 85 percent of this falls in the unorganised sector.

Objectives:

- To understand the customers perspective on furniture in India.
- To know the various factors that affect the purchasing decision of the customers for furniture in India.

Key players

Godrej & Boyce Manufacturing Co. Ltd.

- It is a part of the Godrej Group and was incorporated in 1932. The Godrej Group recorded revenues of around US\$ 513 million in FY'06
- It mainly manufactures consumer products, office equipment, consumer appliances, chemicals, agro products, security equipment, industrial products and offer office automation and storage solutions
- The company's manufacturing facility is located in Mumbai, Maharashtra.

Featherlite

- Featherlite is one of India's largest furniture manufacturing companies and was started in 1965
- Featherlite has been retailing furniture for the past 20 years and the first outlet was opened in Bangalore in 1987
- The company's manufacturing plants are located in Bangalore and Hosur. It has a presence in 22 locations across India
- It has around 25 exclusive showrooms in Mumbai, Chennai, Bangalore, Delhi, Kolkata and Hyderabad. It manufactures around 20, 000 chairs and 3, 400 workstations per month. 35 per cent of the total production is sold through retail outlets.

Style Spa

- Style Spa Furniture Limited is promoted by the Zuari-Chambal Group. Established in India in 1997, to manufacture and retail furniture, the company is headquartered in Chennai
- The US\$ 15 million manufacturing facility at Kakkalur, near Chennai, in the state of Tamil Nadu, is a sophisticated and fully automated plant, which is one of Asia's most modern and largest manufacturing facilities. The ISO-certified plant produces around 0.2 million furniture pieces annually
- The company manufactures home and office furniture that is retailed through about 92 exclusive retail outlets, spread across the country

Millennium Lifestyle

- Millennium Lifestyle is a family owned enterprise incorporated in 1999. The family had nearly 75 years of experience in retailing Indian art and antiques
- Millennium Lifestyle offers a one-stop solution to cater to the customers' complete furniture requirements, as it offers a wide range of furniture from around the world under one roof
- A number of brands across various product categories are sold from the company's retail stores - ArteM, Divani, Loddenkemper, RioArt, Sauder, Sherwood and Softplus. Millennium Lifestyle has its showrooms spread across the two southern Indian cities of Bangalore and Hyderabad
- The company also provides the 'designing your own interior sitting at home' service with the help of an online interactive room designer

Durian

- Durian is a major player in imported furniture, offering living, bedroom, dining room and office furniture
- The company has been set up by the Dokania Group, which has been involved in plywood manufacturing for about 25 years
- The company offers free interior design consultancy and free delivery and furniture installation

Nilkamal

- Nilkamal Group of Companies has a turnover of over US\$ 125 million. It is the leader in plastic moulded furniture
- The company has diversified into the lifestyle furniture business by launching @home, which is a complete home solution store offering contemporary readymade wooden furniture. The company has eight manufacturing locations in India. It also has joint ventures in Bangladesh and Sri Lanka FURNITURE 13
- It provides services like design solutions, professional guidance and interest free loans, besides furniture and accessories

Factors influencing the buying Trends

While upwardly mobile Indians are increasingly buying differently styled foreign furniture, they need to guard against poor stuff. Interior design for homes is no longer the preserve of the rich and wealthy. The concept of good living is catching up with the middle class Indians.

They do not mind spending an extra buck in decorating their new homes. This has resulted in a boom in the décor market. Imported and designer seem to be the key words when it comes to buying furniture at home. It's hardly surprising, considering that more and more foreign furniture manufacturers and traders have been finding their way into the country of late.

- While decorating a NEW residence: Buying Decision is left to a Builder/Architect/Interior Decorator or the owner.
- While RENOVATING a Residence: Buying Decision is made by an Interior Designer or by the owner.
- While furnishing a commercial complex: Buying Decision is made by the Builder/Architect/Interior Designer.

The major reason that has propelled the growth of the imported furniture market is the exposure that the Indian people have received thanks to globalization. The media too has played a very vital role in exposing the people to good living. Exposure coupled with easy availability of funds have made more and more urban middle class couples to look for interior decorators while doing up their houses. In conclusion, it is important to target: • Architects • Builders • Interior Designers • Participation in Furniture / Interiors Trade Fairs for good exposure.

Tariffs and Import Policy

In recognition of the significance of the continued supply of imported logs to its wood processing industry and following court-ordered restrictions on domestic logging in 1994-95, the Government of India began liberalizing wood product imports in 1995. Since then, there has been a gradual decrease in import duties on wood and wood products. For example, until 1995, logs were the only wood product item freely importable to India with a duty of 15%. Imports of other wood products were only against advanced licenses or special import licenses. Since 1996, import licensing requirements (quantitative restrictions) have been progressively removed on round wood, sawn lumber and several value-added products. By April 2000, there were no quantitative restrictions on any import tariff line in the entire forestry sector, with the sole exception of newsprint. Today, the situation is that logs are subject to a duty of around 5%, while the ad valorem duty payable on lumber is 20% and the duty on veneer and wood-based panels is 40%. The duties were reduced in February/March 2004 and further cuts are planned, as part of an on-going commitment to WTO. However, market commentators suggest that the duties on lumber and veneer will never be dropped completely and may even rest at around 15% for the long-term. For furniture the Indian government continues to reduce tariff rates from a peak rate of 300 percent in 1991 down to 36 - 40 percent on stated value of goods, in March 06. Item Import Duty Additional Duty Educational Cess Total Duty Furniture 15 % 16 % 2% 36% The duties are calculated as per the following methodology in India:

Assumed cost of bed 100 Euro

CIF Mumbai Basic Customs duties 15% =15 Euro

Total cost 115 Euro Addl Duty 16% = 18.40 Euro

Total 133.40 Euro Add Edu Cess 2% = 2.67 Euro

TOTAL LANDING COST 136.00 Euro

Challenges for furniture companies in India

- Returns on investment
- Local furniture makers
- ‘DIY’ culture
- Walmart & Co.
- Finding space for large stores

Literature Review

According to a World Bank study (2018), the organized furniture industry is expected to grow by 20 per cent a year. The study in its concluding remarks struck positive note that India, along with Russia and Brazil will witness a boom. The disturbing trend here is that 85 per cent of furniture manufacturing units belong to non-organised sector which precludes from going for innovations. The furniture industry in non-organised sector is mostly concentrated in the outskirts of cities require not a big investment. As the traditional furniture items do not require many skills, small units with a few lakhs as capital get spruced up. The manufacturers get self employed, thus augmenting their share in economic development of the nation. Therefore, the customer perspective relating to furniture is changing from traditional concept to modern concept.

According to Kim and Ko (2018) The present market which is already quite big is only growing with the entry of one major player at least every two months. This is clear from the fact that India was the biggest furniture importer in 2018-19 with a 17 per cent share in furniture imports worldwide. A total of 10476 importers shipped furniture to India during this period. This explains that the dealers in India feel the impact of growth in furniture market. The conservative attitude of the people has dropped in the sense that people are prepared to pay a little more for the quality and finish offered by branded imported furniture. The companies which bring in the modern furniture with the state of the art technology have been using the vernacular magazines and hoardings to popularize their brands. Further, the traders have their show rooms at the heart of the cities, which have facilitated the customers to roam around and make the purchase.

According to Allers (2015) The present trend has been preference to readymade furniture. As the furniture belongs to shopping goods, the customers use the occasion to go out to the units with their families to see for themselves and buy the furniture which meets their desires. Further, they can ill afford to wait for long period to place orders with the local carpenters and get the view finished. There is death of skill among the carpenters, which makes the customers prefer readymade furniture. It was found that only about 10 per cent of the public still have their furniture made by local carpenters. One more reason for the choice of readymade furniture is that there is no guarantee of after sales service when one is local carpenter. And no matter how skilled the carpenter is, he cannot equal the finish the readymade that imported furniture can give.

Brun et al. (2008) As the interest rates for housing finance started dwindling in 1990s and after, the construction industry witnessed boom. The trend is continuing now, as more and more offices are coming up. This has caused the need for quality furniture going up both at home and office. This has ultimately resulted in increase in the demand and the market is

getting to be more and more competitive. This means that the furniture manufacturer cannot afford to compromise on his quality and lose his market share. The furniture industry’s major strength is the growth and the possibilities of expansion. The market is growing bigger and bigger. Though this means less market share for the players in the market, it makes the customer the king. From a sellers’ market, today it is definitely a buyers market. In major cities, there are exclusive show rooms for furniture of different types with bedroom furniture, office furniture, kitchen furniture to name a few.

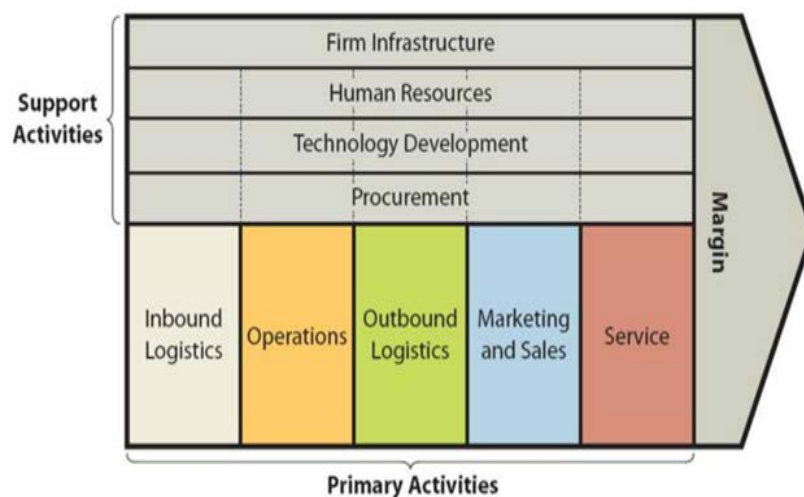
Data and Methodology

The study utilises data from various secondary sources including but not limited to annual reports of the companies, published articles, expert views and customers feedback.

The secondary data analysis of the market overview is followed by the development screening of the domestic players. Prior to that a literature overview provides input for the methodological approach.

Next step is the added value analysis of the Indian furniture manufacturing along the value chain. It aims at to reveal how the different players contribute to the added value, and what are the barriers for an improved performance. Strongly related to the above analysis, financial statement analysis is followed, focusing on operating rates. It is based on the online statistical data of the Indian companies, and the results are confronted with the other research results. The analytical phase is closed with a primary research of the management performance. With respect to added value, the management performance has decisive importance.

value-chain analysis is an analytical framework that assists in identifying business activities that can create value and competitive advantage to the global furniture retailer. “Each step in the manufacture of a product or the delivery of a service can be thought of as a link in a chain that adds value to the product or service. This concept of how business fulfils its mission and objectives is known as the value chain”



Business Strategies and competitive advantage of furniture companies:

- Offering the lowest prices
- Increasing variety of products
- International market expansion strategy.

Discussion and conclusion

From the emergent models, furniture durability, design details and finish are the most important attributes that determine satisfaction formation. This is in agreement with prior studies about furniture marketing. The implication is that, other factors constant, Small and Medium Enterprises need to focus attention on attractive and durable designs and impart more attractive finishes such that they increase the percentage of satisfied consumers. Surprisingly, price is not a strong predictor of satisfaction with furniture. This is in contradiction with many literatures cases where price has been reported as a significant predictor of satisfaction. However, the marketing implication for our study is that Indian consumers especially the middle income earners are becoming less price conscious but more quality minded. From a marketing perspective, this highlights a willingness to pay for quality in quest to satisfy their needs and this provides more potential for supply. Satisfaction for furniture also varied with age, income and education status of the consumers. A conclusion can be drawn that the furniture market is segmented based on these sociodemographic factors. With respect to age the middle aged, middle income and highly educated category preferred stylishness and appeal (shape and finish) to durability and cost durability while the old, low educated and low income earners were more price and durability conscious. The market implication is that producers need to be more responsive and sensitive to the varying needs of consumers within each of these segments. For instance, producers can orient product design and marketing strategies to capture and satisfy particular small but high market potential groups rather than sticking to the less effective strategy of wide market targeting. In addition, instead of following the dominant chain which favours the large scale producers, SMFEs should perhaps consider chains which better suit the purpose of their competitive differentiation. Differentiation should be in quality and functionality (preferred benefits) based on attributes preferences. In this way they can form a unique market niche and withstand competition.

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INNOVATIVE PRACTICE IN HRM: A RETAIL INDUSTRY PERSPECTIVE

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ABSTRACT

Employees respond best and exhibit utmost creativity not when they are tightly governed by the management but when they are entrusted to accomplish results in a free way. At present retail industry has seen drastic change within the last few years and managing its employees has become a great challenge to Human resource management personnel. The role of HR department has ever been changing striking a balance between the expectations of employees and demand of current business. The present paper aims at entrusting the HR department with innovative practices to be followed so as to attain the desired result from employees. This may cost a large deal to the organization in terms of planning and executing new procedures for employees but would reap benefits in long run. A review has been done to extract from the literature how HRM has an impact on various HR and organizational outcomes. Other industries have been studied to adopt best HR practices which has a good-fit in retail industry. Also, its been discussed that what are some of the innovative HRM techniques, being practiced by some the leading & successful retail firms. The paper concludes with the opinion that there is sheer need of bringing innovative practices in HRM to achieve the organizational and employees' personal goals.

Keywords: *Innovative HRM practices, Self-managed teams, Rigorous recruitment, Two-way mentoring, Flexible work arrangements.*

INTRODUCTION

Numerous research has been done linking innovative HR practices to organizational performance. Not only do innovative HR practices results in tangible organizational results but also assist organizations in developing innovative solutions in times of need. India's retail industry has undergone a lot of changes especially in the way HR department function. Initially HR was seen as a support function whose major job was to hire and manage of the employees. In fact the Key performance indicator of HR was purely on hiring numbers. But now with more up-gradation in education of HRM, the role of HR is evolved to be business partners. As far as retail industry is consider, talent acquisition and attrition has always been a challenging area and have adopted initiatives so as to address them effectively. Innovative HR practices have been defined as - the international introduction and use of any unused concept, practice, process or system to influence or adapt the behavior of employees with the focus being the organizational performance, identified and executed by HR practitioners (M. Suman Kumar, P. Archana, 2017). The incidence of new work practices in the United States was undertaken by Appelbaum and Batt (1994). The findings indicated that there have been growing trends in using innovative HR practices

since 1980. The proportion of firms with at least one employee-involvement decision-making process is large and growing. Since the majority of surveys are cross-sectional in nature, the data are insufficient to reveal more precise information about the evolution and growth of these new work practices (Appelbaum and Batt, 1994). Significant progress has been made linking innovative HR practices like High-performance work system to organizational performance.

RESEARCH OBJECTIVES :

- 1) To understand the concept of innovative HRM practices and its relevance to organization.
- 2) To review the literature with preliminary focus on describing innovative practices of HRM that has contributed organizations significantly.
- 3) To suggest the retail industry few innovative HRM practices for boosting its bottom line.

LITERATURE REVIEW :

Past research has shown a relationship between HRM and firm performance. The 'best practice' HRM leads to enhanced individual & organizational performance (Rosmah Mohamed,2007), Building on the notions of soft or "high commitment" HRM (Beer et al., 1984), research on the relationship between HRM and HRM outcomes such as employee attitudes has additionally gained importance (e.g. Gould-Williams, 2007; Kuvaas, 2008; Macky and Boxall, 2007). Various research has been conducted on contemporary HRM practices and its impact on different HR outcomes which is discussed below :

HRM and firm growth:

In a study, the linkage of human resource practices on firm growth' was assessed and found the extent, if any, to which, specific HR practices may contribute to firm growth. The Survey involved HR managers and recorded their perceptions about the links between HR practices and firm growth. Results indicated that compensation policy has the greatest role in determining the sales growth. Results provide overall support for all HR practices except for job security (Ilias P. Vlachos, 2009).

HRM and job satisfaction:

The role of autonomy to implement customer decisions on job satisfaction and turnover intention in retail employees was studied by Reed Young. The study indicated the connection between autonomy, empowerment job satisfaction, and the intent to quit identifying characteristics that affect an employee's intent to quit (Reed Y. Young, 2016)

HRM and retention:

The organizations are less likely to retain employees when there is unfairness in rewards and lack of growth opportunities. It is studied that Growth and Fairness of rewards are negatively associated with employee turnover. Perceived organizational support is positively and significantly related to Fairness of rewards and growth opportunities, as well as with employee retention. So to retain skillful employee there must be opportunities for growth and fairness in the reward system.

HRM and culture:

HRM practices must become the means whereby organizational culture is created and sustained which would generate an employee friendly atmosphere to work. Designing a new culture requires that HRM professionals are ahead of the cultural change curve with innovative and exciting HRM practices. HRM has been proposed by others to be a potentially powerful lever for shaping and changing the culture of an organization to make the organization more effective (Schien, 1983; Ulrich, 1997). Several previous studies shows a correlation between dimensions of HRM practices and dimensions of culture, thereby showing that HRM practices do affect the culture of the organization. Ulrich and Lafasto (1995) felt that HRM practices provide information and shape the behaviour and experiences of employees.

HRM and work engagement:

In a study conducted, where the literature was reviewed to check on antecedents and outcomes of work engagement to include human resources practices, such as Realistic Job Previews (RJP) and selection tests, as antecedents (David S. Gill, 2007). There were significant effect found on work engagement by those individuals who received an RJP

RESULT & DISCUSSIONS :

With a sudden spurt in the expansion of the retail market in India and with the entry of foreign players in the domestic market, there is surely a talent crunch in the near future. In retail attracting the right talent, grooming them as per your company demands and then retaining them is the biggest and ongoing task in front of any retail HR today. The HR practices have shifted its focus from just recruitment to nurturing talents. Various organisations have come up with different policies to motivate their staff. Monetary rewards may not be a very important factor for entry-level staff, there are various factors that affect the person's intent to be associated with a particular company, thus keeping all this in view HR department has to adopt a well-balanced approach to create a win-win situation for organization and employees. Some of such interventions are discussed below:

1) Rigorous recruitment: In today's globally competitive marketplace, the organization looking for qualified candidates and attracting these candidates requires organizations to invest a large amount of effort towards high-quality recruitment practices. To tackle attrition, retailers are increasingly turning to diverse sources of recruitment. For instance, organisations are recruiting differently abled candidates for certain roles, which is, in fact improving retention in these roles.

2) Extensive training: The best companies offer more and better training facilities to develop their employees. A focused approach will thus be required to develop talent through multiple ways, identifying unique ways which go beyond regular classroom training and on the job exposure to unearth and utilize the full potential of its talent. In retail, HR employees conduct mystery shopping visits. This gives them the real picture of the challenges faced by the front line and serves as a key input for training needs identification.

3) Performance-based appraisal and compensation: The linkage of PMS to rewards has been one of the key objectives as part of the HR plan for the retailers and also one of the key focus areas in view of the critical challenges faced. Thus many retail organizations are in a process to develop a robust performance management system. The retail industry operates with minimal margins and, therefore, managing compensation expectations in a situation of scarce talent is a key challenge. Organizations in the Retail sector are opting to increase the variable pay provided to employees rather than invest in increasing increments so that competitive advantage is maintained in an increasingly competitive environment.

4) Self-managed teams: The retail industry is known to hire a high percentage of temporary staff, mainly in the sales team, and hence the demand for temporary staff continues to show an increasingly upward trend. These personnel works for providing them opportunity having involvement in the decision-making process, related to their jobs and workplace environment. Empowering them to feel good about the collective effort of the workgroup and hold a sense of pride in the organisation

5) Flexible work arrangements: There are plenty of part-time opportunities in retail, but the lack of part-time roles in retail management is preventing thousands of skilled workers from progressing their careers and earning potential. Rather flexibility is the second most important reason to work in retail. Thus companies that embrace flexible working in more senior roles are also more likely to decrease their gender pay gap, as well as retain key skills.

6) Management development programs: Many retail companies has their own academy for undertaking skill development of its people. For a planogram role, skills are developed in-house. The curriculum is devised keeping in mind each and every role and rolled out through the Learning Management System. With the help of specific tests development needs towards KPIs are addressed. Also training time is regularly tracked and monitored to further plan.

7) Social benefits: To ensure that retail employees' benefit packages stand out in the retail world — and retain those high-performers that help build the business, careful thought should be given towards deciding compensation packages. Retailers stand in a better position to offer benefits to employees that other industries can't. For example, if a merchandise discount is given to employees, it can go a long way towards creating loyal employees. In addition, sales bonuses are a great way to keep retail employees engaged and interested in moving product. Most of the retail employees are still in college or are recent graduates, if there is provision where their tuition fees can be reimbursement or any other assistance program which would help to retain them.

8) SUGGESTIONS

Based on the studies done on other industries like IT-ITES, hospitality there are certain innovative practices being embraced by them befitting retail sector, which are discussed below

a) Customizing the job roles for the talent: Progressive HR managers are changing job descriptions, opting for building the position based on an employee's strengths and

interests. Though challenging, this new practice is highly successful if managed correctly. It takes a mix of knowing the employees and accurately measuring their skill sets.

- b) **Raising above job titles:** The “hierarchy” feel of traditional businesses are getting discarded. The opinion here is that titles stifle creativity and produces an unproductive hierarchy. Removing them fosters a more united, cohesive team of employees. Going with a flat structure of the organization will serve better as far as employee contribution is concerned.
- c) **Two-way mentoring:** When newer employees join the company, they learn the valuable product knowledge and process requirements from company veterans. At the same time these seasoned veteran employees can get their imaginations ignited, learn new technology, and discover new “knack” from the newbies. Retail companies also have to tap into the mentoring relationship as a back-and-forth, not up-to-down.
- d) **Fostering workplace flexibility:** Focusing less on work/life balance, and more on the integration of life and work, is a paradigm that is emerging in the workplace. All what matters is that how a company values the contribution of an employee, not only the hours worked but time off for appointments and leaving early for personal work brings about loyalty and satisfaction in employees. Retail company has to successfully offer a variety of flexible components for its employees.
- e) **Asking for feedback:** If employees provide valuable feedback and management holds meetings to discuss the results, then the company can bet on getting newer ideas to improve business. Also sometimes it allows an assessment of the problems and creates opportunities for resolution. For this Employee should be encouraged for open-door policies and welcome the voice of even entry-level trainees.
- f) **Showing empathy:** Successful entrepreneurs believe in consistently showing genuine care to employees makes them feel happier and more engaged at work. One of the management’s task is to find out what is bothering the team. Even a Small issue like replacing an uncomfortable office chair or playing music while at work has helped to show the employees, that their company care for them.

CONCLUSION:

Human Resource Departments across retail organizations will need to adopt innovative practices to attract and engage employees. Today technology would be a key enabler to ensure that interventions reach the masses at breakthrough speeds. HRM must behave differently and ensure critical and trained employees are used effectively for new formats that may be developed in the near future. The need of the day is the ability to attract talent and retain them by progressively responding to the growing need of the industry and being able to do a tight rope walk. In order to address the on-going challenges of retention, HR needs to continue to deploy effective onboarding programs, engagement initiatives. At the same time, it’s imperative to measure the effectiveness of existing programs and improvise as needed to ensure goals are consistently being met.

- Hire from Tier 2/ Tier 3

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MICROFINANCE AND DIGITALIZATION :- A CHANGE IN THE ASPECT

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ABSTRACT

Digitalization is rapidly changing how individuals access financial services and interact with financial service providers. The spread of mobile technology has paved the way for a new era of financial services in many countries. Technology enabled businesses allow people to perform many basic transactions, such as bill payments, deposits, person to person payments etc. to take place without even stepping inside a bank or any other microfinance companies/institutions.

Keywords:- Digitalization, Technology, Microfinance

A. Introduction:-

A. Introduction:-

Technology plays an important role in microfinance institutions and is also an important element of innovation to promote financial inclusion.

The use of technology by microfinance service providers can increase organizational efficiency. Digitized portfolio management and record keeping systems improve the ability of a provider to measure and understand its organization's state accurately. It also helps regulators and fund providers report. Greater access to mobile devices and better communication technology enable microfinance staff working in the field to capture and transmit real time data to the headquarters and provide their customers with up to date information on balances to be paid and the status of pending loan applications. With rapid changing in the technology, providers should continuously assess their systems and processes and identify different ways to improve the technological advances in order to improve the business efficiency.

Innovation is additionally quickly evolving. The spread of portable innovation has made ready for another period of money related administrations in numerous nations. Innovation empowered organizations enable individuals to perform numerous fundamental exchanges, for example, charge installments, stores, person to person installments and so forth to occur without venturing inside a bank or some other microfinance organizations/institutions.

B. Evolution of Microfinance:-

MFI's emerged in India in the late 1980s. Their business rapidly grew in the 1990s under the open economy regime. In India, microfinance operates through two main channels:-

- Microfinance Institutions (MFIs)
- Self-help groups (SHGs) {SHGs are also considered to be a part of Microfinance}

Microfinance in India has evolved into a various segments of the financial sector, introducing a variety of business models. Irresponsible actions and non cohesion of rules of some MFIs had brought a setback to the sector, temporarily. The microfinance sector regained traction from 2012 or 2013 onwards and is showing consistent growth. The policy actions that helps in strengthening the regulation of the microfinance sector which includes RBI guidelines on NBFC-MFIs and inclusion of loans to MFIs by banks has benefitted the microfinance sector in a broader way.

C. Objectives of the study:-

- To find out the necessity of the microfinance becoming digital.
- To find out the benefits of digitalization in microfinance to customers and the microfinance companies.
- To find out the different channels of digitalization that a microfinance company can opt for.
- To find out the challenges faced by the microfinance while going digital.

Statement of Research Problem:-

- Digitalization in Microfinance has greater benefits to customers as well as the microfinance companies.

D. Should Microfinance go Digital?:-

Technology and innovation have become key drivers of economic growth. In recent past, technology has triggered economic growth, impacting the microfinance sector too. According to the World Bank, two billion people in the world today lack access to financial service. Digitization is profoundly changing the way financial services are being delivered by MFIs in India. Convergence of digital platform in financial inclusion benefits MFIs and clients alike. Automation of transactions due to digitization enables MFIs enhance capital inflow as well as outflow, flow of information and makes it convenient to organize and scrutinize data. It has opened various opportunities by reducing use of cash in operations which has resulted in significant cost savings and has led to increase in outreach in cost effective manner. Database is easily searchable through internet by maintaining digitized information on web. Moreover, loan applications with a client in remote village are now processed using handheld device, eliminating need for paper loan application. Simultaneously clients are also benefitted by faster loan processing & approval, safe and secure way of repayment of loans through mobile wallets.

“Nothing is as powerful as an idea whose time has come”- Victor Hugo

Recently, a new partnership has emerged between digital financial service providers and microfinance institutions to address the challenges of financial access among the unbanked populations globally. The partnership can offer benefits to not only the two partners but also other stakeholders including customers, MFI staff and mobile money agents.

❖ Benefits for Microfinance due to digitalisation:-

- With the use of digital finance, MFIs can reduce the cash risk as well as increase operational efficiency. The group lending microfinance model is highly cash intensive where both loan disbursement and repayment is made in cash, generally at customers' doorsteps. The MFIs and their customers are therefore exposed to cash risk in storage and

transit and incur cost to manage cash and related risks. This also increases the MFI's staff time. They could have used this time more gainfully by sourcing new clients or perhaps providing more quality service to their existing customers. Carrying of cash to and from group meetings to the MFI's branch and for deposit at the bank branch poses a threat to the lives of MFI's staff. As a result of all of these factors, the operational efficiency of MFIs is affected. With digital finance, customers can deposit cash into the MFI's accounts at the nearest agent outlet. However, in such cases, the agent bears the cash handling risk.

- The MFIs can offer multiple products efficiently using digital finance. Traditionally MFIs have been providing a single credit product to their customers. Numerous research studies have shown that the clients require other financial products including, varied credit products, savings and other deposit products, insurance, pension and many more. The need to diversify product offering for MFIs is more pronounced in India, especially after the Andhra crisis. Partnership with digital financial service providers gives MFIs the access to their partner network. Thus, the MFIs can offer complementary financial and non-financial products and services which they might not have been able to offer otherwise. In India, where MFIs are not allowed to accept savings, such partnerships have provided MFIs the opportunity to offer 'saving deposit accounts' serviced at the doorstep of the clients. The product diversification helps the MFI to further strengthen their relationship with clients and at the same time gain insights on their financial behavior. Since the customer transaction information is available in digital form, customer-centric products can be designed and delivered in an analytical manner.
- Digital finance as an alternate delivery channel can help the MFI increase outreach in a cost-effective manner. The MFIs can leverage the digital distribution channel of finance to design and deliver micro-credit products to non-MFI customers who regularly transact at such agent outlets. The microfinance models are resource intensive and sometime serving customers in remote areas and difficult terrains becomes difficult. The large network of agents really provide helpful outreach to such remote locations.

❖ **Benefits for customers**

- The partnership of MFIs and digital financial service providers have also benefitted the customers. Micro finance clients get the flexibility to repay loans through their mobile phones without even going to MFI branches and avoid cash in transit risk.
- Additionally, they get access to other financial products and services, including saving, insurance, pension and remittance – all serviced through their mobile phone. Several MFIs have already started to get into partnerships with digital financial service providers to leverage these benefits. Kenya are now using mobile banking services to allow clients to make loan repayments and deposits using their mobile phones. Though many MFIs have started using digital finance, there are obvious challenges that need to be overcome. Some of the challenges such as being reluctant of clients to pay mobile money charges, low penetration of mobile money agents and bringing change in customer's existing behavior to adopt mobile money still needs to be carefully addressed.

❖ Digital Channels used by Microfinance Institutions:-**➤ Mobile Device:**

India's mobile banking subscriber base crossed one billion landmark in January 2016. Several MFIs have made a successful entry into mobile technology for their operations through better tracking of transactions on real-time basis, digitization of huge physical records, bringing higher levels of transparency in operations, time-saving & process efficiency and greater scalability.

➤ Biometrics:

Biometric micro ATMs integrated with biometric modality for authentication are contributing towards development of micro finance. Launch of biometric micro ATM device "Aadhaar Enabled Payment System" (AEPS) in 2012 by Unique Identification Authority of India (UIDAI) has enabled beneficiaries with Aadhaar to withdraw money near their doors through core banking system. Micro ATM is connected to banks across country. Biometric identity authentication is must before performing transactions like withdrawing or putting money into their bank accounts. It enables MFIs to conduct secure transactions remotely.

➤ Personal Digital Assistant (PDAs):

PDA as used by SKS microfinance for their operations is a portable computer like platform running software programs to standardize lending methodologies and assist in collection of information. Software leads to reduction in the time by conducting loan scrutinization and disbursement of funds.

➤ Management Information System (MIS):

Automation due to development of computers and software applications like MIS has transformed the way MFIs operate. Information is readily accessible through MIS. It facilitates loan officers track clients' repayment schedules and balances and monitors progress toward attainment of operational objectives.

❖ Digitalization of SHGs through eshakti:-

Digitization of SHGs has given access of members to wide range of financial services. It concentrates on integrating SHG members with national financial inclusion and bringing persons under the facility of Aadhar. Moreover, it facilitates banks in extending financial facility to SHGs by assessing their financial health. Keeping in view Government of India's mission for creating digital India, NABARD launched a pilot project "EShakti" for digitization of SHGs on 13 November 2014. EShakti enables maintenance of records of SHGs in electronic form and creation of MIS. Information about SHG and its members is uploaded on website. This can be done by SHG members themselves also through an application using tablet or mobile. EShakti ensures complete transparency of operations and updates the members regarding financial information through SMS alerts.

E. Challenges in digitalization for Microfinance:-

Though all of this sounds exciting, Is it affordable? Is it reliable, feasible and viable? These are obvious questions which force the MFIs to hold back their steps towards digitization. Such digital innovations incur huge costs and therefore lowers profits and burning holes in

the pockets of investors. This is where affordable digital solutions are desirable in order to move cashless. And the main issue is low internet connectivity which is the premise for most digital solutions. These hold good for niche segments, but while dealing with poor, illiterate masses, we need to be absolutely aware and mindful of the fact that they are not just low on the financial situation and financial literacy, but also lack technology knowhow. The poor refrain from such transactions as they just don't gain confidence and are in habit of using cash which is convenient. The MFI needs to take extra efforts to educate the poor and make them 'Digitable' or technology able. And what about data security and restriction of personal information from flowing out? This again is a huge risk and needs due attention. With so much data flowing, it is not an easy task to keep data and personal information confidential. In the MFI space it also at times is required to share data, especially the credit behavior of members which also includes sensitive personal and family data, which needs some decent protocols. These are some factors that need special attention and care.

The path to the digitization of microfinance institutions is not hurdle free. Digitization brings with it certain challenges These are:-

➤ **Education:**

Customers of MFI are often illiterate or educationally deficient, usually lack even basic understanding of how to interact with technology that is vital to the success of microfinance.

➤ **Infrastructure:**

Lack of transportation, communication, electric wiring in remote and rural areas act as a hurdle in implementation of a digital mode by MFIs. Even if there is proper infrastructure, there are additional transaction costs associated as clients are spread out in rural areas.

➤ **Affordability and Sustainability:**

Small microfinance institutions are either not able to afford software packages or they are unsuitable for them. Lack of skilled staff to support MIS, lack of budget to upgrade technology and high need of localization of software act as a hurdle to small MFIs in adopting digital channels

F. Conclusion:-

Honestly, there is no question about the paradigm shift that this digital revolution will bring about in the MFI industry, there are still doubts on the viability of such digitization for MFI sector. In other sectors no doubt the digitalization has brought tremendous changes which are more of positive, it definitely calls for a few years of successful demonstration of cases and continuous improvement to make digitization common phenomena in this industry. While everyone wishes for an easy cashless economy to flow, one also anticipates the issues, risks and resistance which comes with it. Some of the ways to prevent data sharing risks are to create lenders' code of conduct, finalize responsible data sharing protocols, exploring data security systems, etc. It will take some time for the sector to become resilient to digitization but there surely is light at the end of the tunnel. It goes without saying that digitization is the way ahead and with its popularity and success, the availability of options will be plenty. Some of the MFIs have gone a step ahead and passed on a part of the benefits to the members by lowering the interest rates. Technology undoubtedly will play a crucial role in bringing

about financial Inclusion and it is a great time to watch out for some really interesting and intriguing interventions.

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**INTERNATIONAL MARKETING FOR BUSINESS RESEARCH
REPORTS-(CASE STUDY ON ALLIED MARKET RESEARCH)****Tejas Ajay Sinagare**

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ABSTRACT:-

The objectives of the research paper are to understand the field of digital marketing and online sales, understanding requirement of clients, formulating strategies for clients, executing those strategies and understand the change in consumer buying behavior. The company's strategy should support the overall marketing objectives of the firm this may be to increase overall market share or profile.

Keywords:- *International marketing, Business research ,Digital market , Buying behavior.*

Introduction:-

Computerized showcasing and online deals, understanding necessity of customers, defining techniques for customers, executing those systems and comprehend the adjustment in purchaser purchasing conduct. The organization's system should bolster the general showcasing goals of the firm this might be to expand by and large piece of the overall industry or profile. is an umbrella term for the focused on, quantifiable, and intuitive promoting of items or administrations utilizing advanced innovations to venture and change over leads into clients. The key target is to advance brands, fabricate inclination and increment deals through different computerized showcasing strategies.

Partnered Market Research. is multi year old Pune based internet showcasing and Sales firm centered around giving the Research reports and counseling vital answers for the organizations. Since it is blasting industry, the development of advertising is colossal and expected to develop more.

Advanced promoting works by utilizing various diverse techniques. Each of these may fill a very surprising need despite the fact that they have a shared objective. The procedures cooperate so as to drive applicable traffic to a business (either on the web or off) and after that convert a one time guest into a returning, steadfast client. Very much organized battles may utilize any mix of various diverse methodologies.

Customer inclination is vital piece of Digital Marketing and deals in Allied Market Research.

Objectives:-

- To understand the process of sales and business development in an international market”.
- To gain first hand experience in international sales.
- To analyze changes in marketing strategies.

- To analyze the trends of Digital era with which the sales can be done.
- To see how OUT-BOUND Sales are effective.
- To Generate potential leads of client for the company

Scope:-

- 1) Customer approach with the use of email campaigns.
- 2) The following methods were used to pool the data :-
 - Data Generation
 - Data Nurturing
 - Data Maintenance
 - E Mail Campaign
 - Lead Generation And Cold Calling
- 3) Worked on U.S region only.

CASE STUDY ON ALLIED MARKET RESEARCH:-

Unified Market Analysis works in the area of Training and Development. Their administrations basically include giving preparing substance, coaches, and preparing offices to their customers that are from both IT and Non-IT Sectors. Associated Market Analysis have a worldwide nearness with more than 25 office and impressions in 12 nations like Australia, China, India, Kenya, Malaysia, Oman, Singapore, Tanzania, UAE, USA and so on

United Market Research, a statistical surveying and warning organization of Allied Analytics LLP gives business bits of knowledge and statistical surveying reports to extensive just as little and medium undertakings. The organization helps its customers to strategize business strategies and accomplish manageable development in their separate market space.

Associated Market Research gives one prevent arrangement from the earliest starting point of information accumulation to venture counsel. The investigators at Allied Market Research uncover factors that assistance customers to comprehend the importance and effect of market elements. The organization applies customer's knowledge on the components, for example, procedures, future estimations, development or fall determining, opportunity examination, and shopper reviews among others. As pursues, the organization offers predictable business savvy backing to help the customers to transform into conspicuous business firm.

Work Methodology (Finding and arranging of data):- Step 1: Choose a company you want to reach out to.

Step 2: Create a data base. You can use LinkedIn (Premium). Follow following steps:

- ✓ As a very first step, add “**skrapp**” <https://www.skrapp.io/> and “**Hunter**” <https://hunter.io/> as extension on chrome and signup using any email address.
- ✓ Then go to Sales Navigator (LinkedIn) and type the name of company, for which you would like to generate data.
- ✓ Click on filters (provided on Left Hand Side of the page) as per your specific requirements. For example: you can select VP, Director under seniority level; Marketing,

sales, Business Development, Strategy under Function and so on.

- ✓ Once the contacts appear, click on **export page results Export as file** (this option will be displayed only on adding **Skrapp** as chrome extension).

In in next dialogue box, untick “**search for email address**” when you would like to download data in bulk (since you have a limitation of only 200 email address for a free account, after which the account cannot be used to generate any more data). Finally click on “**Launch**”

- ✓ The data will be extracted into an excel sheet as in below format.

Step 3: Finding the email format.

- ✓ “**skrapp**” <https://www.skrapp.io/> and “**Hunter**” <https://hunter.io/> can be used to extract the email address.
- ✓ While using skrapp, make sure you select only 1 or 2 contacts (by applying the filters) and tick on “**search for email address**” before downloading the data. The email address if available, will be displayed in the downloaded excel sheet.
- ✓ In case you would like to use hunter, open a profile of person whose email ID you would like to find and click on the hunter chrome extension displayed on address bar and the email address will be displayed.

Step 4: Generating email address for the generated database.

- ✓ Create a new tab in the excel sheet and include the following columns - “First Name”, “Last Name”, “Punctuation” (if it is present in the email format), domain and email.
- ✓ To generate the email address Click on E2 cell and type ‘=’ and Followed by ‘A2’ and ‘&’ ; ‘C2’ and ‘&’ ; ‘B2’ and ‘&’ ; ‘D2’ and ‘&’ and finally press **Enter** key
- ✓ Drag down the ‘+’ sign so the email address is generated for the rest of the contacts.
- ✓ EMAIL CAMPAIGNS:-

Using Mail Merge

Step 1: Keep the email template ready in a word document. Also, the list of contacts that you would like to campaign is kept ready in an excel sheet with “First Name” and “email” column in it.

Step2: Open the email template on word document and click on “**Mailings**” on File Menu Bar. Then click on “**Select Recipients Use an Existing List**” to browse the excel sheet.

Step 3: Select the name on the word file and click on “**Insert Merge Field**” and replace the name with the “**First Name**”. Any further customization can be made if necessary.

Step 4: Finally click on “**Finish & Merge Send Email Messages**”. Fill-in the necessary details in the dialogue box appeared and click on “OK”. The email will be sent in bulk to all the contacts mentioned in the excel sheet.

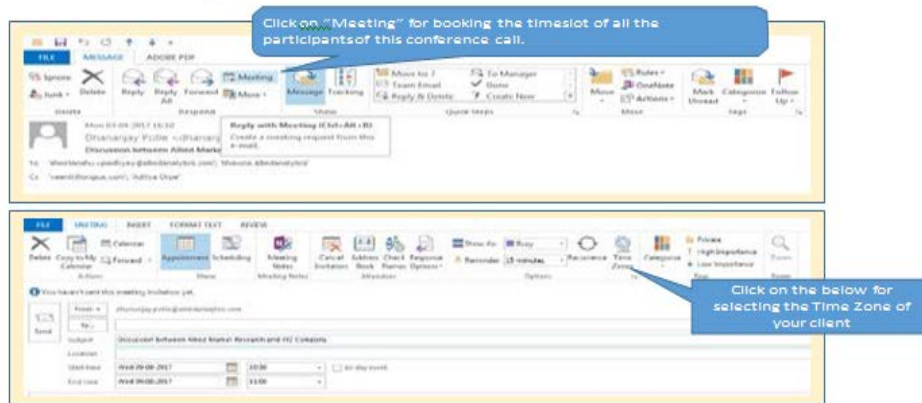
DATA ANALYSIS

These are my potential clients :-

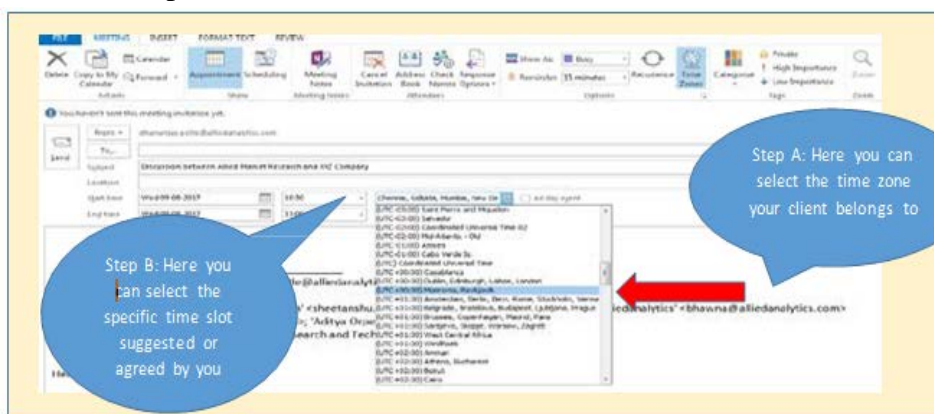
Sr No	company	industry	last follow up	first name	last name	email id	number	call status	call done
1	HP	ICT AND MEDIA	6/9/2018	Lamb	Andrew	andrew.lamb@hp.com	6597821747	done	OK
2	rockwell collins	ICT AND MEDIA	6/7/2018	megan	Rossia	megan.rossia@rockwellcollins.com	6597821748	done	OK
3	Zodiac	Aerospace	6/6/2018	Edgar	Arroyo	edgar_arroyo@zodiac.aerospace.com	6597821749	done	OK
4	Siemens	Aerospace	6/20/2018	Lambert	Brain	brain.lambert@siemens.com	6597821750	done	OK
5	honey well	Aerospace	6/20/2018	andrew	Morton	andrew.morton@honeywell.com	6597821751	done	OK
6	G.E	Aerospace	6/20/2018	Brinson	Nancy	nancy.brinson@ge.com	6597821752	done	OK
7	Siemens	Aerospace	7/6/2018	Williams	Gray	gray.g@siemens.com	6597821753	done	OK
8	G.E	Aerospace	7/10/2018	Hitesh	Tanwani	hitesh.tanwani@ge.com	6597821754	done	OK

After getting replies from potential clients we make a list of all the clients then we need to get send them calendar invite with their possible time so they must be available at that time on bridge call.

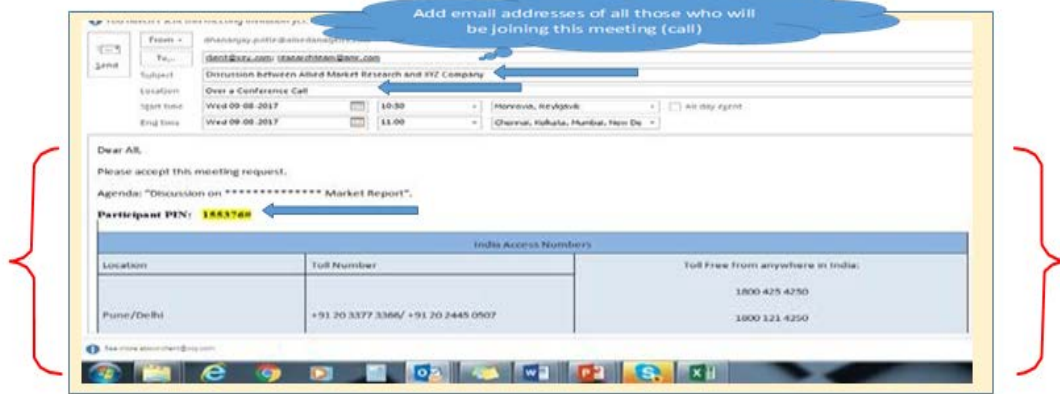
Step 1: Once the participant(s) are known follow the steps mentioned below in your outlook account for setting-up a bridge call for query handling. Select the meeting tab shown below followed by the time zone.



Step 2: The below snapshot depicts the time zone selection as per suitability of client, the start time, date and expected end time.



Step 3: Add all the participant involved in meeting so that can be intimated about the scheduling of the meeting and accordingly reminders would be sent prior the actual meeting.



Step 4: Post confirmation of the details, click on send to complete the setting-up bridge call
Step5:-We use to share this bridge call with our senior sale’s executive Mr. Shriram Dighe and then he continue with the further process.



This are the process of taking a bridge call with all the information given below:-

1. About AMR
2. Global Presence.
3. Our Offering
4. OUR EXPERTISE
5. RESEARCH METHODOLOGY
6. Our Capabilities:
7. INDUSTRY domain we work are:
8. License Options:
9. USE OF OUR PRODUCT:
10. Our Clients:

OBSERVATIONS

- With the use of technology how to find the Client’s.
- How to converted client details into data.
- How the data is used.
- Then the use and execution of the 4 major steps:-
 1) Data generation. 2)Data nurturing. 3)Lead generation & 4) E- Mail campaigns.

FINDINGS

- The MNC works in the efficient and friendly manner within the employees .
- The email campaign's were send in the bulk. Which saves the efforts and the cost of the company.
- The generation of Leads are done with the use of different tools such as LinkedIN and Skrapper.
- The pooled data was use to send the email campaigns to generate the potential leads.
- The Data was filter to get the accurate leads.

SUGGESTIONS

- Many other applications are there to collect the data.
- They can use different sites to generate data.
- They can make their own small application which help them to test the email format.
- They must save the email format of each and every company to approach the same with no issue next time. Which saves time and man power.

Conclusion:-

- As a part of this project quite a few number of the leads were successfully converted to potential customer with the good amount of the revenue in \$ terms for Allied Market Research.
- Online Sales and Digital marketing has a wide scope and market to operate in due to continuous technological advancement.
- Virtual reality is definitely playing a big role in sales and marketing and in future as well will show steady growth.
- Limitations of Internet marketing create problems for both companies and consumers. Slow Internet connections can cause difficulties. If companies build overly large or complicated web pages, Internet users may struggle to download the information.

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- www.kln.ac.lk/fcms/ICBI2011/ICBI%20CD/.../Papers/ICT%20201.pdf
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STUDY AND OPTIMIZATION OF THE OPERATION COST OF BRICKS FROM TRADITIONAL METHOD TO ADVANCED BRICK CUTTING MACHINE

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ABSTRACT

Brick industry in India is one of the long-established industries. Indian brick makers are undergoing an absolute conversion through the embracing of automation and mechanization. In India's Brick Industry broadly four types of bricks are available: clay brick, fly-ash brick, concrete block, AAC block and others. Though India is the second largest Brick manufacturer in the world after China but still Indian brick industry is almost completely unorganized and characterized by the presence of large number of small scale manufacturers which compete with one another at the regional level. ABI established in 2005 in Kobrakhamar, Ranibazar, Tripura. 15 years of this company gains lots of name and popularity and good will. It Provides Bricks to government suppliers and also to the commercial people. yearly production 40lacks(approx) of bricks. Founder of this company Shri Ashish Das has more than 35 years of experience in this field. Company spread in 30acr of land where 6 mixing machine, one head office 3 different houses for labors and kiln with fixed chimney is present. In 15 years of life spend this brick field changed in very few sectors only. As this company has already earn good will which is totally depends upon the shape, finishing and colour of the final brick. Due to heavy competition in market sustainability is too tough in this business. The location of ABI is near to river so that during rainy season all work shut down due to flood. But still this is one of the famous business in this state. Although there is no substitute present in market yet which can replace this red fired bricks. A lot of business man tried before to change the brick cutting system by automatic machine, and also they tries to replace fixed chimney to forced draught chimney but both system failed. People reject the bricks which is made by those systems and again brick filed owners change the automatic system to traditional system. That's why still whole business run under traditional way so that labors are much needed to run this business

Keywords: Automation Brick industry, Competitive sustainable growth, Conversion, entrepreneurs, Unorganized.

Purpose and Objectives: This case is mainly written with the following objectives:

- observation ,Analyze and optimization of the operation cost of manufacturing of bricks ,from traditional method to advanced brick cutting machine

Research Methodology:

Primary data: primary data collected by actual working on the machine and understanding each and every process. After every process supervisor examine the work , check the quality (Visually),Shape of the brick and also count the unit produced after process and damaged unit during process.

source: Interview, Observation, Group discussion

Secondary data: Research methodology used for this project based on secondary data collection only.

Sources: case study on ABI, Magazine, Research paper

CONCEPT- process of manufacturing bricks in traditional way: This case is primarily focused on **Red Fired Brick**. The process to manufacture brick is discuses in the following paragraph: local clay is used to make brick, sometimes Sand also added to mixture to make perfect mixture of material .but still now there is no exact machine or device which can measure the perfect proportion for this mixture .After the mixing next process is to supply this all raw material to the different area where brick take its own structure, this all process of manufacturing has been done by labors there is very less automatic machine are present in the market for that. Then bricks are kept in open area to dry up to it become hard. This is the most crucial part of the brick filed industries because it takes minimum seven days to dry one brick perfectly and likewise there are thousands of bricks kept in open every day. In between that if rain occur then it causes huge loss for the brick filed industries .This also leads to fluctuation of the price of the bricks. So Weather is one of the biggest problem in large scale brick industry .Next step is to carry all the dry brick to kiln for fired the brick .All Bricks are systematically arranged by Bujhai mesturi. This is very important step to arrange bricks so that the supply of coal would be free to go upper side to the bellow of the kiln. If this does not happen properly the fire system will be imbalanced and may cause more consumption of coal.

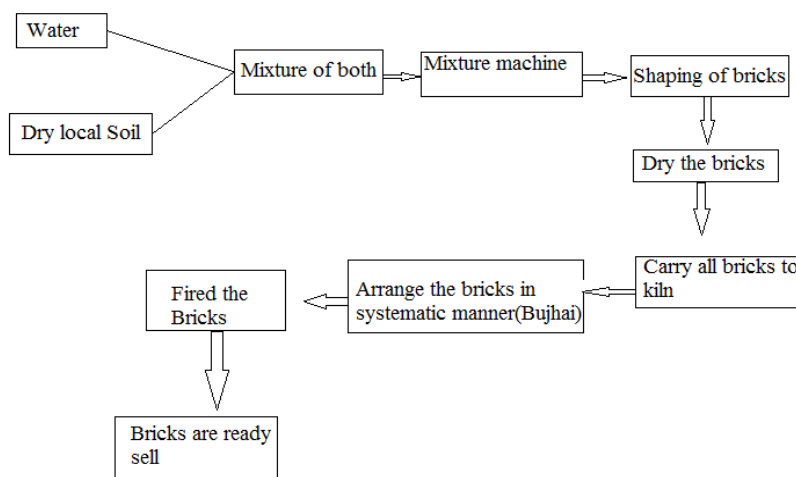


Figure -Block diagram of brick manufacturing

Manufacturing process of Bricks by using frame:



SnPC Company Advanced Brick cutting Machine :

SnPC Machines a leading manufacturer of Brick making machines based on Moving technology, delivers products supporting our design philosophy of Economic, Efficient and Ecological.

SnPC Machines Group has started from 2013. supported by a team having 5 years in experience in the Brick making Machine Technology. They are one of the fastest growing companies of Brick Production Industry in India since 2013. Their key strengths are Technological innovations, Strong infrastructure and Customer focus are the ultimate goal. Today their group total team size is 55 and out of that, they have 30 members technical related functions. Their Customer Focus has enabled us to continuously learn from the customer experience. In short SnPC Machines, a leading manufacturer of Brick making machines based on Moving technology delivers products supporting our design philosophy of Economic, Efficient and Ecological. Their Machines are brilliantly engineered products: built to exacting specifications and serve the needs of the international user community.



(SnPC Automated Brick cutter) Data analysis:

Comparison with traditional brick cutting process with advanced automatic brick cutting system :

Traditional :

40,000-50,000 brick can be produced by 75 labors per day (took 45,000 approx) approx 500 bricks per day /labour = 325 RS wages.

total cost of brick cutting in a day is 75RS * 325 = 24,375 RS

total 40,000 brick can be produced in industry daily. per brick costing -0.54 RS

total costing of brick every year -0.51 *40,00,000=20,40,000RS

Advanced SnPC machine :

There are 2 variant in SnPC model

BMM 150 = capacity 5000-6000 brick per hour and 14liter/ hour consumption of diesel

BMM 300 = 11000 - 12000 brick per hour and 16.8liter/ hour consumption of diesel

(**Select top model BMM300 for analysis and compare)

now for BMM150 =14liter /per hour For BMM 300=16.8lt /per hour

$3.75 \sim 4 \text{ hours} * 17(\text{litter}) * 68\text{rs} = 3468 \sim 5000 + 16000/30 (530) + 10000/30(340)$

$= 5890/45,000 = 0.13\text{Rs}(\text{per brick costing})$

total costing of brick every year = $0.13 * 40,00,000 = 5,20,000\text{RS}$ Total Saving = $(20,40,000 - 5,20,000)\text{RS} = 15,20,000 \text{RS}$

To complete 45,000 production per day the machine has to run for 10 hours for BMM150 and 4 hours for BMM300.

(**initial cost of automatic machine is 60,00,000-70,00,000rs which is too high = as per calculation the ROI will be covered in 4.5 years approx.)

So as a result if we run any of the machine the per day cost is too less than traditional process of Brick cutting process

Result :

If we use SNPC advanced brick cutting machine to manufacture green brick it will save 15,20,000rs per year as compare to Traditional brick cutting system. And also to cover the cost of investment of machine it will take 4.5 years to complete .

Conclusion :

The above study and observation shows that the advanced (SNPC)brick cutting machine 15,20,000 RS and lots of time saving as compare to traditional Brick Manufacturing system .

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**DATA DRIVEN MARKETING: CONCEPTS AND CRITICAL
ANALYSIS REVIEW****Ms. Bhinge M. M.**

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ABSTRACT:

In today's internet era brands are living in the Era of Data. Data is a "heart" of digital marketing. Every company is using data to drive the marketing efforts, but still there is lot of confusion about collecting the right data and how to use it at right time and right place. Amongst the big data collected, each element of it is critical and essential key useful in developing a marketing solution. Marketing executives should look into creating meaningful sense and thus make the data fit in to achieve the purpose. Data have their own meaning. Data must be interpreted. Numbers do not speak for themselves. Interpretation is the process of attaching meaning to the data. Bit by bit data can be collected and a full picture should be gradually sketched. This paper explains data-driven marketing, its concepts, the people, process, technologies and critical analysis. It then summarizes a way forward, with a 6-phase model on how to kick start the journey from data collection and end on using the collected data to drive the marketing efforts.

Introduction:

In today's internet era brands are living in the Era of Data. Data is a "heart" of digital marketing. Every company is using data to drive the marketing efforts, but still there is lot of confusion about collecting the right data and how to use it at right time and right place. This data is then converted into useful insights to improve decision making while deciding marketing strategies. Data is so powerful asset that it determines the direction of a business process of a company.

Marketers must be extra vigilant and caring to manage data to maintain the integrity of this valuable company asset in the whole business process. The data is the wealth in the database, which marketers can separate most accurate and actionable information about consumer audience and new prospects.

So, answer to what is data-driven marketing (DDM)? It is an ability to have actionable insights available to make better decisions in customization of marketing copy by considering overall audience needs so that it can achieve the timing of advertising by using specific communication media to cater to specific audience segments.

According to Financial Times, Data driven marketing refers to a detail analysis of data about the customers and gaining marketing insights and improve decision making. This data can come internally from a client organization, or externally from social media and other variety of sources. This is evocative of Gartner's definition of the 3 V's of big data, volume,

velocity, and variety. Big data is a reality to today's marketers, and marketing agencies. Noticing this trend, Gartner predicted that 'By 2017 the CMO will spend more on IT than the CIO. This spend is mostly aimed at upgrading the IT infrastructure required for marketers and marketing agencies.

With the accurate data, brands can know which customers are engaged with their marketing efforts through which channels, and even at what time of day they are active. This can assist the business in edging their marketing efforts to the right communication media in the most effective timings. These insights are then used which help the company to decide where and how to focus marketing resources, customers blending of types of creativity in the posts and many more crucial details which will ultimately help the marketers in shaping the brand growth. The insights will also help in maximizing the efficiency of marketing efforts by reducing the wasteful spend which will empower the brand in delivering more customer centric approach in marketing. Gaining a better understanding of a brand's prospects and its preferences will help in improving ROI, increasing customer reliability and conversion rates.

According to a global survey by Teradata (2013), data driven marketing is the process of collecting online data and then connecting it to the offline data, analysis using different metrics and gaining cross channel insight about customers. These insights are then used to hyper personalization of the customers by crafting a compelling message and deliver at his point of need. Four pillars which enable DDM are people, process (techniques), technology and marketing strategy. No doubt how strong the tech stack is an expertise is required to refine the data and make the data available in a compliant way. The marketing force with a skill set for data driven marketing are Director, Manager, VP, SCP, EVP, Associate, Consultant, CMO and Others. The different management information and support systems used are DSS, MIS, ES, EIS, CRM, ERP, KBS, BI and AI. To understand the collective gaps in between the technologies and the expertise different techniques are helpful. The different techniques used are data warehouse, data mining, data analysis, data interpretation, segmentation and correlation, sorting, ranking, binning and filtering, co-mingling website and social media data and data visualization. The technologies used in DDM are e-mail marketing, social media, web analytics, surveys, white papers, webinar/webcasts, brand advertisement, corporate blog, case studies, articles, info graphics, videos and many more.

Critical analysis Review:

According to releases of Teradata, Global Data-Driven Marketing Survey, marketers who are ready to adopt and go with an integrated and data driven marketing approach, then they are empowered in all areas of customer engagement (on the page of the 2013 survey). At the occasion of the launch of the survey, Teradata said it noted that the companies using data, integrated marketing platforms and customer centric data driven marketing strategies obtained a great business value. The key findings of this survey were A) 90% of marketers want to go beyond segmentation and towards hyper personalization in real time. B) Making data as a key element in faster and accurate decision making. C) DDM is all about improving customer acquisition and retention.

D) 78% marketers use data systematically, which was 36% prior.

Mark Flaherty, executive vice president of advertising at Sunday Sky, comments that the new evolution in marketing sector is to understand all about the data, data you have, data you can get, and then organize the data and put it in action.

IBM, in its survey of insights from global Chief Marketing Officers (CMOs), “From Stretched to Strengthened: Executive Summary” reports that 71% of CMOs practically not at all prepared to handle the “big data” which is providing a commendable ROI.

A report from Forbes Insights in Turn (2015) says that 66% senior marketers agreed that in the global economy, DDM proves as very crucial to become successful. According to the “Data-Driven Marketing Benchmarks for Success” report by Ascend2 and ZoomInfo, only marginal professionals are able to achieve a good level of success with DDM.

David Berkus, Managing Director, Berkus, Technology Ventures & Kodiak Ventures, comments that seeking and identifying the audiences is easy but getting the precise audience is like un mining the gold.

David Ogilvy a legendary advertising guru said: Do not stop testing your data, and then automatically your advertising business will never stop improving.

Megan Heuer, VP & Group Director of Data-Driven Marketing at Sirius Decisions says a data driven marketer is all about exploring new ways to engage with your customers and make the desire to buy from you, and in that way start delivering growth matrix. **Russ Glass of LinkedIn explains how data revolutionizes marketing and what best data-driven marketers can do to succeed. In his view**, Big Data is really about is creating great customer experiences: It about understanding your customer better, about being able to serve that customer with more of what they need, and about being able to improve your business by being smarter about all of this exhaust that consumers are creating as they move around the web

Filed under: data driven marketing tagged with big data, big data marketing, CRM data, predictive marketing optimize your marketing for the mobile web, January 4, 2015 by Brain Goffman, says **mobile has changed the way people engage with email, social and web browsing. B2B marketers will have to adjust accordingly.** According to the Pew Research Centre, 58% of American adults have a smart phone and 42% have tablets. Of smart phone owners, 81% use their phone to send text messages, 60% access the Internet, and 52% check their email and 50% download apps. No online marketer can ignore the shift to mobile. Mobile Internet and data is growing at 1.5 xs per year and projected hit 30% of Internet traffic by 2015.

According to marketing automation platform Paradox, understand the usage of mobile in DDM as potential buyers are shifting their time and attention to mobile. 45% companies have a mobile-optimized website, according to adobe.

According to Flurry, apps account for 86% of the time people spend on the web compared to just 14% of time spent on mobile browsing. This shows the importance of apps to succeed in the mobile web. When creating a mobile app, metrics are different. Research from Loyalties indicates that 20% of apps are only opened once and 60% of apps are opened fewer than 10 times. As consumers shift to mobile, marketers need to respond in the same kind.

In the Kentico Marketers' Survey- What do digital marketers really want? Says online marketing effectiveness is not sufficient but having overall business value is the success factor.

Recently, the Global Direct Marketing Association (GDMA) an organization that represents, supports and unites marketing associations from around the globe that focus on data-driven marketing, looked at the state of data-driven marketing and data-driven marketing practices in 178 global markets. It did so in collaborations with strategic consultancy for the advertising and marketing industry, Winterberry Group.

Among the key take away of the data-driven marketing report by the GDMA (2017):,

A) 77.7% marketers are confident in the DDM approach and 47.4% expect to increase data marketing budgets this year B) Data efforts should be pushed in the direction of offers, messages and content marketing. C) Customer experience optimization is one third. Maximizing efficiency and return ranks second followed by gaining more knowledge of customers and prospects.

According to the Q1 Gleanster Research customer experience survey, eight out of ten senior marketers believe that the companies are doing a better job in the usage of customer data in planning marketing strategies for customer acquisition and retention. Kate Cooper, CEO of Bloom Worldwide. The main challenge with DDM today is that there is a lot more data available, but separating the data elements useful for analysis is the ultimate benefit of the data collected.

Marc Michaels, director of behavior and planning at DST says: Company should have a right timeframe (duration of payback) to measure ROI. Business has to decide the metric based on which they are measuring ROI. The metrics can be marketing campaign, increased customer retention, build brand awareness, brand equity and brand identity.

Salesify, has found a new way to tap bog data for the business process. They have used social media listening, natural language processing which was paired with human insights. Our goal is to accurately deliver sales and marketing professionals not just more data, but relevant data.

Brayan Clayton, CEO of lawn service GreenPal has found that marketing success depends on leveraging both external (public census data) as well as internal (business data warehouse) data sources into big data.

Salesforce contributor Jean Spencer wrote, marketers should ensure that their customers have a unique buying experience based on the real time offers and discounts provide. This real time customization strategy will surely get connected with the brand by the shoppers and retailers.

6-phase model:

Marketers should focus on their own data requirements and then collect the data accordingly (Phase 1 -Data Collection). Find the different trends in the data. They should have proper metrics in place for analysis and interpretation (Phase 2 - Analysis & Interpretation). This proper funneling of the data will highlight the specific data elements. From these data

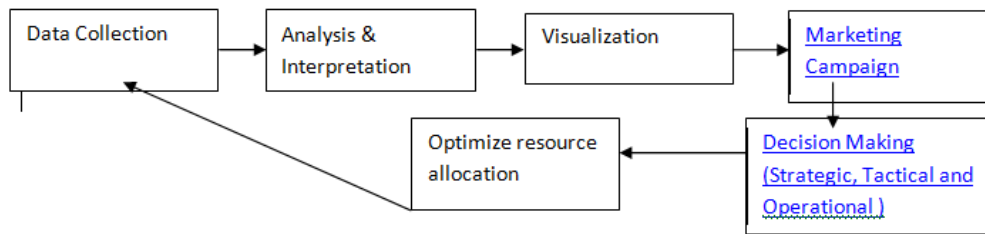


Figure:1 6-phase model

Collect —> Use —> Deploy —> Test Repeat

elements deep insights can be gained by applying specific visualization tool (Phase 3 - Visualization). Designing data driven campaigns based on these insights (Phase 4 – Marketing Campaign). By crafting a compelling and winning message specific to the customer for his unique requirement, will then be converted into a desire for buying. This will convert the prospects into buyers. These data will help in improving the strategic, tactical and operational decision making (Phase 5 – Decision Making). Finally, Optimizing resource allocation using prescriptive analytics could be achieved. A 360° view of customer can be created with enhanced data driven marketing.

Findings:

Based on the concepts and the critical analysis of theory and practical approach, as such no literature is available for standard step by step DDM implementation. Marketers know the importance of data driven decisions, but as data is available in huge amount and in scattered way.

Funneling the data and deriving required insights is a big challenge. With the availability of so many techniques and technologies the marketers should be able to use it in the right place and right time. Competition has lead the company in the dilemma of which marketing campaign will be successful with which marketing channel and media. Each company should have their own DDM cloud.

Conclusion:

The proposed framework of DDM can provide a detail lifecycle of how data can drive the marketing efforts. This framework can be assessed using a case study approach. This framework should have the outer and inner outline. The outer line will have important industry levers while inner line will have main value drivers. Reference of the above suggested 6-phase model can be taken for further development.

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EQUITY RESEARCH ANALYSIS ON INDIAN IT SECTOR

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ABSTRACT:

Information Technology (IT) industry in India is one of the fastest growing industries. Indian IT industry has built up valuable brand equity for itself in the global markets. IT industry in India comprises of software industry and information technology enabled services (ITES), which also includes business process outsourcing (BPO) industry. India is considered as a pioneer in software development and a favorite destination for IT-enabled services.

The origin of IT industry in India can be traced to 1974, when the mainframe manufacturer, Burroughs, asked its India sales agent, Tata Consultancy Services (TCS), to export programmers for installing system software for a U.S. client. The IT industry originated under unfavorable conditions. Local markets were absent and government policy toward private enterprise was hostile. The industry was begun by Bombay-based conglomerates which entered the business by supplying programmers to global IT firms located overseas. Today, Indian IT companies such as Tata Consultancy Services (TCS), Wipro, Infosys, and HCL etc. all are renowned in the global market for their IT prowess.

Introduction:

India is a developing country. Now days many people are interested to invest in financial markets especially on equities to get high returns, and to save tax in honest way. Equities are playing a major role in contribution of capital to the business from the beginning. Since the introduction of shares concept, large number of investors are showing interest to invest in stock market.

In an industry plagued with skepticism and a stock market increasingly difficult to predict and contend with, if one looks hard enough there may still be a genuine aid for the day trader and short term investor.

The price of a security represents a consensus. It is the price at which one person agrees to buy and another agrees to sell. The price at which an investor is willing to buy or sell depends primarily on his expectations. If he expects the security's price to rise, he will buy it; if the investor expects the price to fall, he will sell it. These simple statements are the cause of a major challenge in forecasting security prices, because they refer to human expectations.

The field of equity research is very vast and one has to look into various aspects of the functioning of the company to get to any conclusion about the possible performance of the company in the market. Investors like Warren Buffett made a fortune out of investments in the stock market, which is quite impossible without proper research about the companies. The field of equity research is full of challenges. It is your door to fame, fortune and, above all, professional challenge. In a world that is shrinking in size due to information

technology and blurring boundaries between nations, the stock market (or the equities market), which is considered to be in its infant stage, is all set to grow in size.

Objectives:-

- 1) To analyse the financial health of selected IT companies stock.
- 2) To examine the growth of IT sector in Indian capital market.
- 3) The primary objective of equity research is to analyse the earnings persistence.
- 4) To find out potentiality of selected companies through ratios.
- 5) To study and examine the relevance of fundamental analysis in investment decisions making process.

Scope:-

- 1) The analysis is made by taking into consideration three companies i.e. TCS, Wipro, and Infosys.
- 2) The scope of the study is limited for a period of five years.
- 3) The scope is limited to only the fundamental analysis of the chosen stocks.

Limitations:-

- 1) This study has been conducted purely to understand Equity analysis for investors.
- 2) The study is restricted to three companies based on Fundamental analysis.
- 3) The study is limited to the companies having equities
- 4) Detailed study of the topic was not possible due to limited size of the project.
- 5) Suggestions and conclusions are based on the limited data of five years.

Valuation of Equity:-**1. Technical Analysis****2. Fundamental Analysis Technical Analysis:**

A method of evaluating securities by analysing statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity. A Technical analyst believes that share prices are determined by the demand and supply forces operating in the market. These demand and supply forces in turn are influenced by a number of fundamental factors as well as certain psychological or emotional factors. Many of these factors cannot be quantified. The combined impact of all these factors is reflected in the share price movement. A technical analyst therefore concentrates on the movement of share prices. He claims that by examining past share price movements future share prices can be accurately predicted. Technical analysis is the name given to forecasting techniques that utilize historical share price data

Fundamental Analysis:

Fundamental analysis is a method of forecasting the future price movements of a financial instrument based on economic, political, environmental and other relevant factors and statistics that will affect the basic supply and demand of whatever underlies the financial instrument. Fundamental analysis is the cornerstone of investing. The basic philosophy underlying the fundamental analysis is that if an investor invests re.1 in buying a share of a company, how much expected returns from this investment he has. It insists that no one should purchase or sell a share on the basis of tips and rumours. The fundamental approach calls upon the investors to make his buy or sell decision on the

basis of a detailed analysis of the information about the company, about the industry, and the economy. Fundamental analysis is really a logical and systematic approach to estimating the future dividends and share price. It is based on the basic premise that share prices are determined by a number of fundamental factors relating to the economy, industry and company. Hence, the economy fundamentals, industry fundamentals and company fundamentals have to be considered while analysing a security for investment purpose.

Research Methodology:-

Research mythology is a way to systematically solve the research problem. It may be understood as a science of studying research done systematically. The present study is based on secondary data sources, procured and extracted from the financial statements of the selected companies. The published annual reports of the selected companies are taken from related websites, magazines and journals on Economic and Finance have also been used as a source of data.

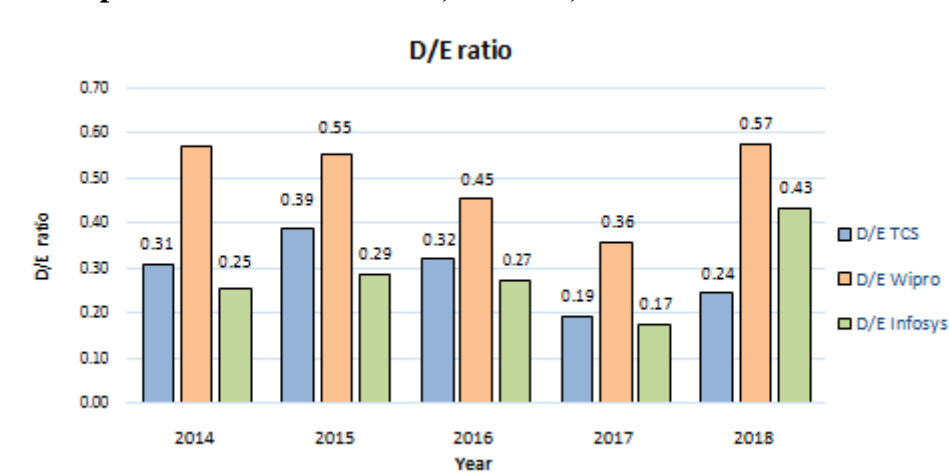
Data which are not originally collected but rather obtained from the published or unpublished sources are known as secondary data. The data which we get directly from the company's intranet, companies website, books, magazines, etc. are the sources.

- Websites
- Magazine
- Company's financial statement
- Research Papers

Data Analysis and Interpretations:

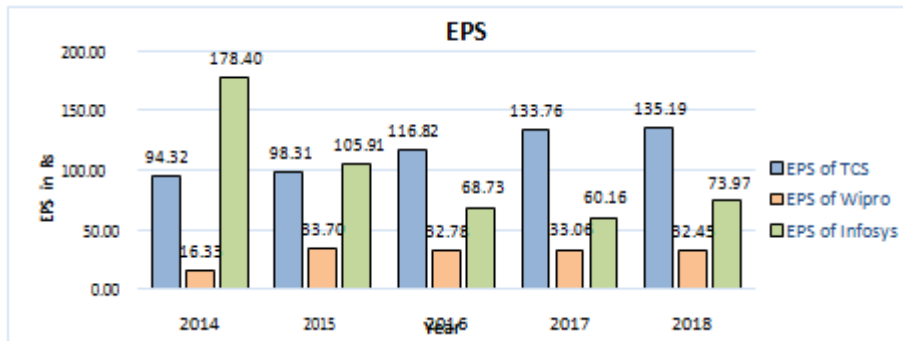
- a) Debt to Equity ratio = Long term debts/ Equity share holder fund
- b) EPS = Earnings available to Equity share holder/ No of Equity shares
- c) P/E ratio = Market value per share/ Earning per share (EPS)
- d) Current ratio = Current assets/ Current liability
- e) Return on Equity = (Net profit/ Equity investment) * 100

Graphical Comparison of ratios for TCS, WIPRO, INFOSYS from calculations:

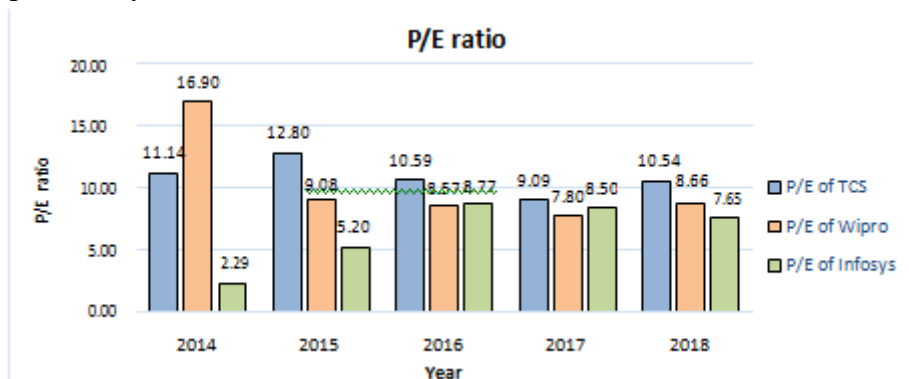


Interpretation: A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result

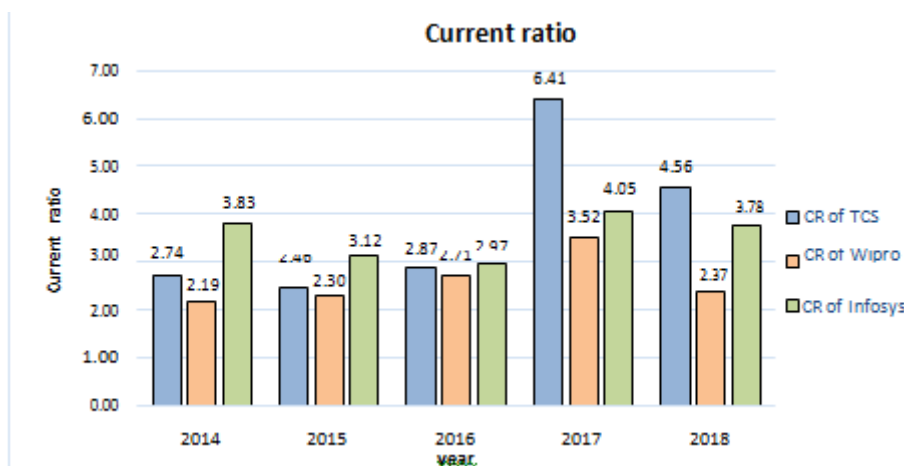
of the additional interest expense. From the analysis it can be said that Wipro is having high debt to equity ratios over the others.



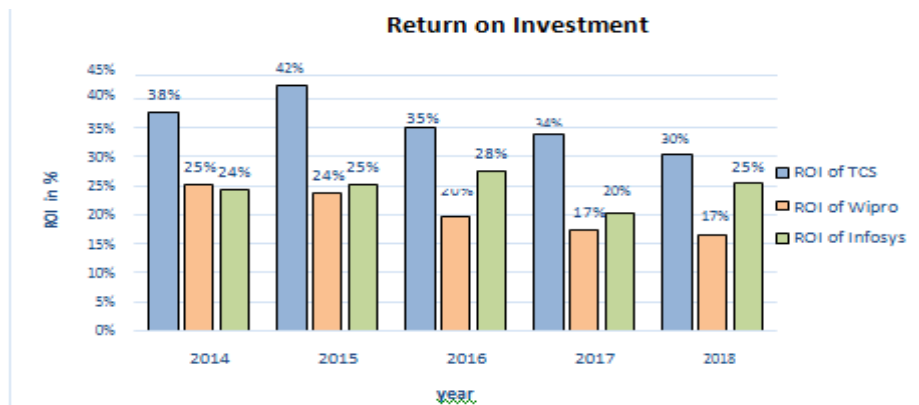
Interpretation: A company with high EPS is capable of generating a significant dividend for investors, or it may plow the funds back into its business for more growth so a high ratio indicates a potentially worthwhile investment.



Interpretation: From the above interpretation researcher observe that P/E ratio of all three companies are in line with each other.



Interpretation: The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they came due at that point. So for TCS, current ratio shows that they have more current assets than current liability. As graph shows that they have potential to pay its obligation so short term solvency for TCS is strong



Interpretation: ROI is the profitability ratio that calculates the profit on investment as a percentage of original cost. It is a performance measure used by a business to identify the efficiency of an investment or number of different investments. A high ROI means the investment's gains compare favourably to its cost. Generally any positive ROI is considered as a good return so higher the ROI is are always better than lower return rates

Findings:

- IT/ITeS industry has led India's economic growth and this sector's contribution to the national GDP has risen from 6.1 per cent in 2009-10 to an estimated 7.7 per cent in 2017-18.
- These three companies were performing well till 2014 with a positive trend in the earnings per share. But there was a downward trend in 2015 in most of companies because of recession.
- TCS is found with more current ratio as compare to other companies. As it proves that the company is more capable of paying its obligations than others.
- The overall performance of the companies is good, and there is a continuous flow of project business. The companies are continuing its drives for volume with a continuous focus on profitability.
- By analysing the current trend of Indian Economy and IT Industry researcher found that being a developing economy there is lot of scope for growth and this industry still has to cross many levels so there are huge opportunities to invest in.

Suggestions:

- Long term investors can include these top three IT companies in his portfolio because the growth rates and earnings are good compared to others stocks. Therefore investors can include this in their portfolio to earn the higher return on their investment.
- Investing in TCS for long time could be a good option because they are spreading their business.
- An investor must take research about stock of company and its previous data before investing.
- Current ratio must be improved by company and it should be in ideal ratio 2:1 so that there are possibilities to meet the current obligations for the company.

Conclusion:

Global recession had an effect on the growth of IT industry but it was a short term phenomenon. The industry is bouncing back. One factor favoring this point is that India has become a hot destination for companies of diverse nature to invest in.

In spite of it being a tough year for all the companies across the globe, Indian market has given good performance as compared to other companies in the world. A continuous effort at cost cutting and improving productivity will help the companies in making reasonable profits despite the impact of higher commodity prices and weaker rupee.

The analysis gives an optimistic view about the industry and its growth which recommends the investors to keep a good watch on the major players to benefit in terms of returns on their investments

A STUDY OF E-COMMERCE BUSINESS IN INDIA

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ABSTRACT

My research is aimed at studying the E-Commerce market in India. The central focus of the research revolves around the analysis of E-Commerce sector and challenges faced by them in the current market scenario. An e-commerce firm would be any business that derives a substantial part of its total revenue from internet transactions. E-Commerce in India is now characterized by low pricing, fast shipping and a multitude of options to choose from. India is home to over 5000 E-Commerce hubs dedicated exclusively to exploiting the burgeoning growth rate of this sector.

Keywords: *E-Commerce, Fast shipping, Growth, Internet transactions.*

INTRODUCTION

E-commerce is a transaction of buying and selling online. Electronic commerce draws on technologies such as Mobile commerce, Electronic funds transfer, Supply chain management, Internet marketing, Online transaction processing, Electronic Data Interchange (EDI), Inventory management systems and Automated data collection systems.

Contemporary electronic commerce involves everything from ordering "digital" content for immediate online consumption, to ordering conventional goods and services, to "meta" services to facilitate other types of electronic commerce. Data integrity and security are pressing issues for electronic commerce. Aside from traditional e-Commerce, the terms M-Commerce (mobile commerce) as well (around 2013) t-Commerce have also been used.

E-COMMERCE IN INDIA

India had an internet user base of about 354 million as of June 2016 and is expected to cross 500 million in 2017. Despite being the second-largest user base in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 million, 84%), or France (54 million, 81%), but is growing at an unprecedented rate, adding around 6 million new entrants every month. The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorized distributors and e-commerce offerings. In 2016, the largest e-commerce companies in India were Flipkart, Snapdeal, Amazon India, and Paytm.

TYPES OF E-COMMERCE:

Based on the type of relationship between different sides of a transaction, a transaction can be categorized in different types. Some of the more popular ones have been given below:

1. **Business-to-Business (B2B):** B2B e-commerce is simply defined as e-commerce between companies. This is the type of e-commerce that deals with relationships between and among businesses. About 80% of e-commerce is of this type, and most experts predict that B2B ecommerce will continue to grow faster than the B2C segment. E.g., Snapdeal.
2. **Business-to-Consumer (B2C):** Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods or information goods and, for information goods, receiving products over an electronic network. B2C e-commerce reduces transactions costs (particularly search costs) by increasing consumer access to information and allowing consumers to find the most competitive price for a product or service. E.g., Makemytrip, Paytm.
3. **Consumer-to-Consumer (C2C):** Consumer-to-consumer e-commerce or C2C is simply commerce between private individuals or consumers. This type of e-commerce is characterized by the growth of electronic marketplaces and online auctions, particularly in vertical industries where firms/businesses can bid for what they want from among multiple suppliers. Consumer - to - consume electronic commerce involves electronically facilitated transactions between consumers usually through some third party. E.g., eBay
4. **Consumer-to-Business (C2B):** Consumer-to-business (C2B) is an electronic commerce business model in which consumers (individuals) offer products and services to companies and the companies pay them

MAIN FUNCTIONARIES OF E-COMMERCE INDUSTRY:

1. **Online Travel:** Customers buy tickets, book hotels and purchase tour packages online. The ticketing services can be for airlines, railways or buses. E.g., Makemytrip, Yatra.
2. **E-Retailing:** Online sale of products such as clothing, mobile handsets, electronics and home and kitchen appliances among others, Booking movie tickets. E.g., Amazon, Myntra, Bookmyshow.
3. **Classified:** Portals connecting buyers and sellers by providing classifieds space where the sellers can advertise their product. E.g., OLX, Sulekha.
4. **Digital Media:** Paid music, videos and games download. E.g., Flipkart, AVS (AmazonVideo Services).
5. **Financial:** Mobile Wallets, Online sale of insurance, loans and mutual funds. E.g., Paytm, SBI.

AFFECT OF DEMONITISATION ON E-COMMERCE INDUSTRY:

- Indian E-Commerce growth projection cut to 55.5% from 75% for 2016: Like many other sectors, the ongoing cash crunch has impacted online shopping. To tackle growing cancellations, leading e-commerce companies had to limit or suspend payments through cash-on-delivery, the most preferred choice of payment. E-commerce companies are already dealing with a decline in growth.
- Flipkart: Flipkart and Snapdeal limited cash on delivery orders to below Rs 1,000. The demonetization move has hurt the E-Commerce conversions of various companies from Flipkart to Zomato, which is a food discovery and delivery portal with other companies that mainly generate revenues through hard cash that accounts for around 60-70% of total orders.
- Amazon: Amazon India stopped accepting cash-on-delivery, asking customers to instead use electronic payments or keep valid currency at hand.
- OLA & Uber: While cab hailing applications Ola and Uber were accepting cash payments. Ola said it saw a 15-fold increase in number of wallet recharges, with small towns with high cash usage seeing a 30 times jump.

OBJECTIVE

- To understand the working of E-Commerce Business in India.
- To analyze the E-Commerce Business in India.
- To study the factors affecting E-Commerce Business in India.
- To evaluate the market conditions of E-Commerce business.

RESEARCH METHODOLOGY

Research is a careful, patient, systematic, diligent enquiry or examination in some field of knowledge undertaken to establish facts or principles. The search for knowledge through objective and systematic method of finding solution to a problem is research.

My type of research is Descriptive research.

Sources and Method of Data Collection

Secondary Data: Secondary data is the data that have been already collected and available from other sources. Secondary data is information that is already available somewhere, whether it be in journals, on the internet, in a company's records or, on a larger scale, in corporate or governmental archives. In this research, all the information is collected through secondary data. The secondary data has been collected by information from various websites, various research papers, library, journals, books and magazines

REVIEW OF LITERATURE

A Review of Literature is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic.

Anjali Gupta, Assistant Professor, E-COMMERCE: ROLE OF E-COMMERCE IN TODAY'S BUSINESS, With developments in the Internet and Web-based technologies, distinctions between traditional markets and the global electronic marketplace-such as business capital size, among others-are gradually being narrowed down. India is showing tremendous growth in the Ecommerce. The low cost of the PC and the growing use of the

Internet is one of reasons for that. There is a growing awareness among the business community in India about the opportunities offered by ecommerce. Successful ecommerce will become a notion absolutely inseparable from the web, because e-shopping is becoming more and more popular and natural. To attract more customers e-store-owners will have not only to increase the number of available services, but to pay more attention to such elements like attractive design, user-friendliness, appealing goods presentation, they will have to opportunely employ modern technologies for their businesses to become parts of ecommerce future.

Nisha Chanana, FUTURE OF E-COMMERCE IN INDIA, The E-commerce Industry in India has come a long way since its early days. The market has matured and new players have entered the market space. E commerce includes not only buying and selling goods over Internet, but also various business processes within individual organizations that support the goal. The future of E- Commerce is difficult to predict. There are various segments that would grow in the future like: Travel and Tourism, electronic appliances, hardware products and apparel. There are also some essential factors which will significantly contribute to the boom of the E-Commerce industry in India i.e. replacement guarantee, M-Commerce services, location based services, multiple payment option, right content, shipment option, legal requirement of generating invoices for online transactions, quick Service, T & C should be clear & realistic, the product quality should be same as shown on the portal, dedicated 24/7 customer care centre should be there.

DATA ANALYSIS AND INTERPRETATION

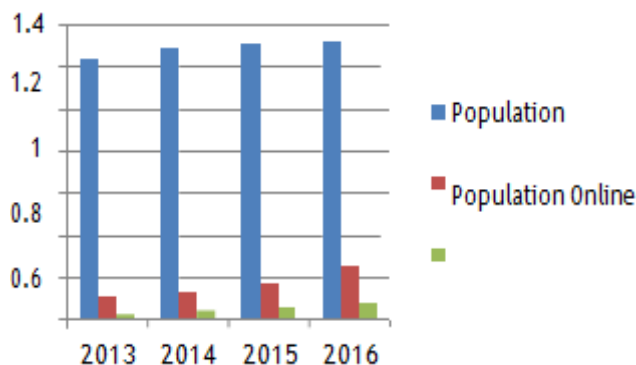
Case 1: Internet Penetration: Following is the data of India’s population and number of e-shoppers in India:

Particulars	2013	2014	2015	2016
Population	1,24,33,40,00	1,29,52,91,543	1,31,10,50,527	1,32,68,01,576
Population Online	11,11,76,051	13,49,88,180	16,76,36,631	25,45,14,239
Number of e-	2,50,00,000	4,00,00,000	5,41,00,000	8,23,00,000

Interpretation:

As per the statistical data, India has a very low Internet penetration i.e. 27%.

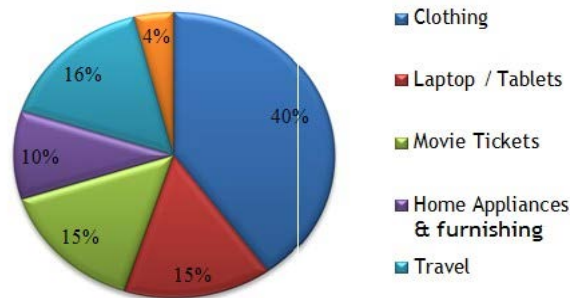
This figures might change because there is increasing awareness among the people about the digital media and their facilities.



Case 2: Market share of most popular products: As per the records, following information is obtained about the preferences of people for the online products:

Popular products	Percentage
Clothing	40%
Laptop / Tablets	15%
Movie Tickets	15%
Home Appliances & furnishing	10%
Travel	16%
Others	4%

Popular Products



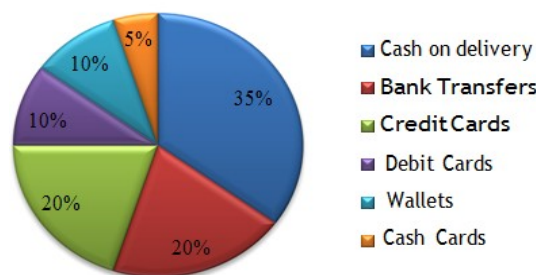
Interpretation:

The statistical data shows that most of the people prefer clothing and Electrical products to be purchased online. It provides with wide rang

Case 3: Top Online Payments Method: Following data is retrieved about the payment methods of the customer to E-Commerce Companies in the year 2012 to 2016:

Mode of Payment	Percentage
Cash on delivery	35%
Bank Transfers	20%
Credit Cards	20%
Debit Cards	10%
Wallets	10%
Cash Cards	5%

Top Online Payment Method



Interpretation:

Most of the people prefer cash on delivery method for payment. This secures their money from getting affected from the unsecured websites. With the increasing awareness of this percentage will get reduced in future and credit cards and debit cards will be more preferable.

Case 4: E-tail Industry: Following is the details of e-tail industry and their market value:

Particulars	Flipkart	Amazon	Snapdeal
Net Revenue (In Crores)	179	169	154
Year Founded	2007	2013	2010
Latest Market Value (In)	11bn	NA	2bn
Model	Inventory	Marketplace	Marketplace
Head Office	Banglore	Hyderabad	New Delhi
Funding so far (In Dollars)	1.76bn	2bn	866mn
Employee Strength	15000+	8000+	2000+

Search generated over the Internet

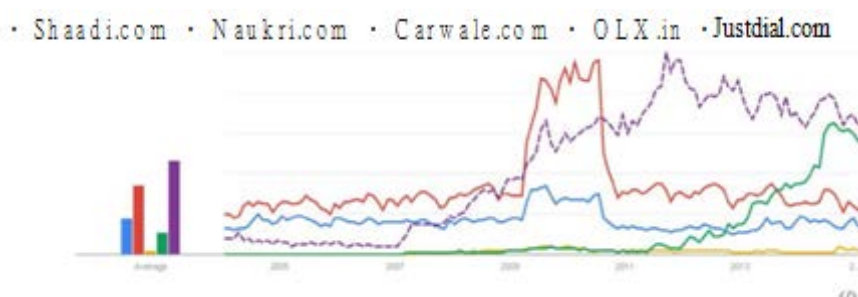


Interpretation:

It can be analyzed that Flipkart has a huge market share than Amazon and Snapdeal. People are accessing Flipkart website more as compared to other two, but in the recent years Amazon has given a huge competition to Flipkart and it has become its one of the competitor. Snapdeal is also progressing to give competition to these two giant companies.

Case 5: Classified Industry

Search generated over the Internet



Interpretation:

Shaadi.com has had a steady search interest over the years due to regular advertising. Carwale.com also has a steady but low interest due to lesser advertising. Naukri.com has had a steady search interest, which had a spike during 2009' 11

when the unemployment rate had risen from 6% to 11% due to the economic scenario. Olx.in has been steadily rising and becoming a preferred choice for advertisement of used goods as they have been aggressively marketing recently. Justdial.com has too been steadily capturing user interest as it aggressively began campaigning using Amitabh Bachchan as its brand ambassador and after it went public in 2012.

FINDINGS

India has a very low Internet penetration i.e. 27%. Most of the people prefer clothing and Electrical products to be purchased online. It provides with wide range of products at one place. Most of the people prefer cash on delivery method for payment. This secures their money from getting affected from the unsecured websites. The progress of Amazon was fallen down in the last quarter of 2016 and it was because of the demonitisation which took place. The company has to cancel its many orders due to shortage of availability of cash in the market. Flipkart has a huge market share than Amazon and Snapdeal. People are accessing Flipkart website more as compared to other two. Makemytrip has made a tremendous growth in the Online travel agency sector. Yatra and Cleartrip has to take huge efforts to compete with Makemytrip. Shaadi.com has had a steady search interest over the years due to regular advertising. Carwale.com also has a steady but low interest due to lesser advertising. Naukri.com has had a steady search interest, which had a spike during 2009-11 when the unemployment rate had risen from 6% to 11% due to the economic scenario. Olx.in has been steadily rising and becoming a preferred choice for advertisement of used goods as they have been aggressively marketing recently. Justdial.com has too been steadily capturing user interest as it aggressively began campaigning using Amitabh Bachchan as its brand ambassador and after it went public in 2012. There was almost 27% drop in user sessions 8PM onwards i.e. after the announcement of demonitisation. Demonitisation has a great short term impact on the E-Commerce sites.

CONCLUSION

The E-Commerce industry in India may currently be behind its counterparts in a number of developed countries and even some emerging markets. However, with India's GDP growth pegged at 6.4% by the International Monetary Fund and the World Bank, it is expected to grow rapidly. Moreover, the Indian E-Commerce industry has access to funds from within the country and international investors. Overall, the E-Commerce sector is maturing and a number of serious players are entering the market. The future of E-Commerce is difficult to predict. There are various segments that would grow in the future like: Travel and Tourism, electronic appliances, hardware products and apparel. There are also some essential factors which will significantly contribute to the boom of the E-Commerce industry in India

i.e. replacement guarantee, M-Commerce services, location based services, multiple payment option, right content, shipment option, legal requirement of generating invoices for online transactions, quick Service, T & C should be clear & realistic, the product quality should be same as shown on the portal, dedicated 24/7 customer care centre should be there.

We found various types of opportunities for retailers, wholesalers/distributors, producers and also for people.

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APPLICATION OF INTERNET OF THINGS (IOT) IN INTELLIGENT TRANSPORTATION SYSTEM (ITS)

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ABSTRACT –

Intelligent Transportation System (ITS) is collaboration of people, vehicles, roads, and a balanced application of science. Internet of Things (IOT) refers to uniquely identifiable objects and their representation in an Internet-like structure. At the core in technological part of ITS, it constitutes advanced sensor technology e.g. RFID (Radio Frequency Identification Devices) etc., DSRC (Dedicated Short Range Communication), VPS (Vehicle Positioning System), information technology, network technology, automatic control technology, computer processing technology, cloud computing, GPS etc. Some of the concept of Intelligent Transportation System has been already accepted by the community and has also been widely used. Meanwhile, the some of the drawbacks of Intelligent Transportation Systems (ITS) have revealed. Here, the Internet of Things can provide a new way for the development of Intelligent Transportation System. The purpose of our research work is to understand the feasibility of implementing Internet of Things in Intelligent Transportation System which has scope for improvement in terms of technology being used for transportation purposes. There is a dire need for the consumer to understand and evaluate different transportation options in an efficient manner and this is where Internet of Things infrastructure can help.

Keywords: IOT (Internet of Things), ITS (Intelligent Transportation System), RFID, DSRC, VPS, GPS, Cloud Computing.

I. INTRODUCTION

With the progress of technology, there are more and more objects which are being installed with sensors and are having the ability to communicate with each other. The way in which information is getting transferred is changing as the physical world outside is becoming more of an information system. Internet of things (hereafter referred to as IOT) deals with having physical objects we see around us in a network in one form or the other. It mainly deals with RFID (Radio Frequency Identification), Infrared sensors, GPS (Global Positioning Systems) and Scanners. These help the objects to not only sense information but also interact with the physical world.

EVOLUTION/EMERGENCE OF INTERNET OF THINGS:

Internet of things is formed by the interconnection between the networks of everyday objects we use. It involves the wireless sensors which are used to send the information to every object and to the people responsible for them. The term internet of things came into existence 10 years ago with the founders of MIT “Auto ID centre”. The Auto id refers to the broad class identification of technologies such as smart cards, sensors, voice recognition and biometrics used in industry to help in automating, reducing error and increasing the efficiency of the technology. Since 2003, RFID (Radio Frequency Identification) tags and EPC (Electronic Product Code) played a major role as a standard identification of technologies, in which RFID tags were used in tracking of the objects whereas EPC served as the link to data. Meaning of internet of things has expanded since then. Using sensors and sensor networks, more information about the objects and environment can be noted clearly. In present world of internet we still have to generate our own ideas to make things work such as recording a video. Our ideas and information is not the main reasons for the survival of our society, hereafter it will be based on the things. Software embedded in the object helps in keeping track of them making the computers analyze and think, feel and sense the information without limitations of human intervention using sensor technology such as RFID to the utmost capabilities rather limiting them to just sensing the barcodes. The future expectations for the Internet of Things would be managing the huge data wherein the users will be connected to more and more users in the coming years. In Europe, many projects are being addressed in connection with the Internet of Things.

ITS (INTELLIGENT TRANSPORTATION SYSTEMS)

ITS constitute advanced sensor technology e.g. RFID (Radio Frequency Identification Devices) etc. , DSRC (Dedicated Short Range Communication), VPS (Vehicle Positioning System), information technology, network technology, automatic control technology, computer processing technology, cloud computing, GPS used in the transportation management system to form a kind of information, intelligence, socialization transport integrated management and control systems. Intelligent transportation system makes transport infrastructure to maximize performance. The technology originated in the 1980s in the United States and other countries are actively pursuing the development in this area. With the evolvement of Internet, smart communication technology, sensor networks and other new forms of technology, IOT have taken shape in Intelligent Transportation System and will have a strong potential for development in the next few years.

CORE OF INTELLIGENT TRANSPORTATION SYSTEM

The core of intelligent transportation is collaboration of people, vehicles, roads, and a balanced application of computer science. In order to balance the transport users, vehicles and limited roads, we can find out the time of the arrival of next vehicle, availability of empty seats, the best route and avoidance of congested roads. We can sense the vehicle brake in front of you in the shortest time and avoid the accident by taking measures in the

future transport system. Therefore, the first important step of intelligent transportation system is to achieve the data. Through the placement of sensors everywhere, transportation managements can access real time transportation information to help monitor and control transportation flow. Through the installation of GPS in cars and radio frequency tags, the traffic police can exchange surrounding traffic information at any time to obtain valid transportation information to guide vehicles to change or optimize travel routes. In a sense, intelligent transportation is the application of IOT technology in transportation fields. To develop people, vehicles, and roads collaboratively is the core of intelligent transportation systems, which can be just a perfect interpretation of the concept of transportation IOT.

IOT AND INTELLIGENT TRANSPORTATION

Intelligent Transportation System can be one of the strategic initiatives of IOT. Through Intelligent Transportation System the whole transportation can be tracked to ensure transport safety; intelligent urban transportation management and achieve much more transportation information of vehicle, automatic driving implementation and so on. Actually, in real life we can see specific applications of transportation IOT, such as non-stop electronic highway toll, intelligent transportation systems, mobile emergency command and scheduling, transportation police mobile law enforcement, vehicle transportation violation monitoring, vehicle anti-theft system etc. But these are just the beginning and are not yet a huge network. In the future, with the use of IOT, we can imagine the connections between vehicles and vehicles, between people and vehicles and between vehicles and roads as a huge intelligent transportation system so as to solve a lot of transportation congestion, environmental pollution and traffic security.

II. RELATED TECHNOLOGIES AND APPLICATIONS

The core of IOT is the information data collection and processing. The key to transport vehicle networking technology is how to achieve information exchange between vehicles and roads and between vehicles and vehicles. Undoubtedly wireless technology plays a major role. Current vehicle location, communications and tolls are more based on the application of DSRC (Dedicated Short Range Communications) technology and VPS (Vehicle Positioning System) technology. DSRC is a microwave technology, mainly used in the electronic road pricing system. The VPS is GPS + GSM technology. It is more widely used in car navigation and voice communication. There is no need to discuss it because these technologies are existing technologies. In addition, infrared and ultrasonic technology is also widely used, which is simple and environmentally friendly technologies. The other core technologies in Intelligent Transportation System include RFID (Radio Frequency Identification Devices), Video Detectors, Magnetic Sensors, Wireless Sensors, GPS (Global Positioning Systems), Internet and wireless communications and Industrial application software.

Among these technologies, the most critical one is to develop the underlying chip embedded devices, which leads the entire industry development. Based on the integration of IOT and embedded systems, existing products will be upgraded to make services more intelligent so as to engage remote device management, scheduling and maintenance.

Software is the core and key of IOT application. The major software companies have invested heavily in related software research and design and middleware (SaaS, SOA, cloud computing, etc.). The proposed concept of cloud computing will play a major role in transportation IOT. Transportation is a complex science because of uncertainty of each transport objects. Cloud computing as a highly scalable method of calculation provides users with resources in form of "on-demand service" via Internet and meets the complex transportation requirements "use on demand, charges for use and no use after completion." From a technical level, the key technologies to develop transportation IOT include: (1) DSRC-short-range communications technology, (2) the vehicle running state detection technology, (3) infrastructure and environmental performance detection technology, (4) driver assistance technologies, (5) a new generation of transportation control system.

III. APPLICATION MODE OF IOT TECHNOLOGY IN INTELLIGENT TRANSPORTATION SYSTEM

To apply IOT to create Intelligent Transportation system, we require *RFID-based Electronic License Plate System Functions*. RFID (Radio Frequency Identification) commonly known as E-tag is a non-contact automatic identification technology, which achieves the relevant data through RF signal automatic target recognition. It can work without human intervention in harsh environment. RFID technology can identify fast moving objects and multiple tags quickly and easily. RFID is a simple wireless system with only two basic components. The system is used to control, detect and track objects. System consists of an interrogator (or reader) and a lot of transponders (or tags). It utilizes frequency RF to have non-contact transmission of data in two ways between the reader and RF card in order to achieve target identification and data exchange. The main functions of RFID-based electronic license plate system in the transportation management are:-

Mobile / Specific Road Vehicle Inspection: Normally traffic police inspect vehicles for traffic rules and regulation enforcement to ensure safe and orderly transportation on the road with vehicles lawfully driven, no over speed and no stopping on the road.

The Statistical Transportation Data and Vehicle Specific Information Management: It is for illegal operation and security. It provides accurate transportation flow data of urban roads, highways, and an accurate basis for the transportation planning in order to have the smooth and orderly transportation.

License Information Management: License information can be successfully obtained through the radio frequency identification devices at the road junctions and for information database of license plate information center when the vehicle is passing. The vehicle will be automatically prompted to take the necessary measures if the license has expired or the vehicle fails to do the annual car inspection. Electronic License Plate can also provide services for the vehicle inspection with no need to be at a fixed location. The driver can do it at the small and large frequency identification terminal in the cities. When the vehicle passes at the terminals, the IC card of the car can be automatically updated, and recorded in the database. Thus it is more efficient to complete inspection work and saves a lot of time for the drivers and as well as a lot of manpower and resources for managements.

Monitoring Illegal Driving and Vehicles Involved: Transportation management can not only monitor transportation on the main road through the fixed radio frequency identification devices but also actively implement the vehicles safety driving management on the road by using mobile RFID terminal with dynamic monitoring of vehicles on certain roads, especially for the over-speed vehicles in order to take the appropriate measures to ensure the orderly driving. The radio frequency identification RFID technology is used in the key management and services for dangerous goods and freight vehicles and also security pass and vehicle access control limit, etc. Radio frequency identification devices are installed at the important exits and entrances to spot dangerous goods vehicles and illegally driven cars through a certain frequency band identify and control their access, which is much quicker and more efficient than manual detection. Due to the need for vehicle control in and around the Expo, The application of car driving detection system played a great role during the Shanghai Expo. The roads around the Expo were appointed as transportation control area. RFID was installed in the key control area to monitor vehicles around the Expo for 24 hours and transmit the information back to the Expo transportation control centers. If any unusual circumstances, the center can spot first at once and send transportation control command to traffic police at the various locations to take the relevant transportation management measures. Meanwhile, automatic alarm system was on for detecting suspect license plates. Suspect vehicles will immediately advise to stop and perform relevant measures if license plates do not meet the requirements.

Toll Collection without vehicle stopping: Toll collection without vehicle stopping happens mainly at inter-provincial highway and expressway tolls. Charges and fees will be deducted through the automated radio frequency identification technology by automatically scanning IC cards of the passing vehicles and of course, IC card management services are also provided, such as, IC card processing, cancellation, replacement, and recharge. This will greatly improve the efficiency of toll services to ensure vehicle nonstop while the size of the toll itself can be greatly reduced so as to save money and resources.

Automatic Parking Management: On automatic parking management functionality, the application of intelligent electronic license plates has stated in details in the above transportation management. So the statements will not be repeated here.

Monitoring of Traffic Flow: Monitoring transportation flow can be an important basis for Police traffic control and administrative management to make some decisions. In addition to radio frequency identification technology, the sources of transportation data are also obtained through GPS (Global Positioning System), GIS (Geographic Information System) and other ways of data collection. Using GPS is to achieve the dynamic positioning of the vehicle tracking and the necessary information about certain vehicles. The use of geographic information system is mainly to obtain information about fixed sections of roads, such as, numbering the fixed peak sections, road network data and information of transportation flow. Sometimes timely access to transportation flow data is also to monitor transportation, detect illegal transportation behavior and deal with traffic accidents for the first time. The common installation of monitoring devices is gantry type. To make efficient transportation decision-making is bound to have a high standard for data: accuracy, a large amount and timely updates. Here, modern network communication

technology has contributed a lot. With the large number of advanced GSM network running, access to transportation data can be transmitted at a great speed between the transport networks. Moreover, the quality can be guaranteed with accurate data transmission and there is no limit for the transmission. In the information center, it is possible to use database technology to maintain a large amount of database. Computers can receive a large amount of data in time to classify and store it. Data can be searched and obtained when needed. The data is also updated at a fixed time because it is related to accuracy which transportation managements will base on and also it is significant for transportation decision makers to make a decision. A large amount of data can be used for the simulation in the information center, depending on the cloud computing technology so that scientific and reasonable conclusion will be presumed. These findings are important information for decision- makers to base on. Meanwhile it is also important for drivers to refer to the transportation information, for instance, routing selection. Drivers can select the most suitable routes according to real-time information of surrounding transportation flow and history transportation flow. Today, the availability of new means of communication provides an accessible tool to put the functions into practice.

Drunk Driving Monitoring and Management: It is well known that it is dangerous to drive after drinking alcohol. But it is quite difficult to deal with it. Radio frequency identification technology is used to monitor the car driving on the roads. If the driving is found not steady or parallel to the road, the car will be tacked and monitored by using image analysis techniques to further determine whether the vehicle is drunk driving and contact the device in the car through the exchange of real-time information service and finally instruct police patrol to have alcohol testing.

IV. CHALLENGES AND DRAWBACKS OF INTERNET OF THINGS TO CREATE INTELLIGENT INFORMATION SYSTEM

One of the main challenges for the Internet of Things is in the transformation of the connected objects into the real time sensing actors which also involves the societal and ethical considerations. IOT technologies enable or control the capabilities of the people and how this influences people's capabilities to satisfy accountability demands. The multiple dimensions of accountability such as visibility, responsibility, control transparency and predictability should be taken into consideration to be controlled with the capacities of IOT technologies. Internet of things is spreading widely in the present world which accounts for at least two objects connected per person. The key challenge that sparks for this innovation is protection of privacy. Three very important barriers that exist for IOT development are having a single standard, the development and transition to the newer IPv6 and developing energy sources for the huge number of sensors. Another challenge in building IOT is lack of common software fabric and how to combine all the software systems in building the common software platform. The first direct challenge for this is that the generation of huge scale of data may even have digital twin in cloud that could be generating regular updates as a result of which the messaging volume could easily reach among 100 to 10000 per person. Existing research on the topic of Internet of Things shows a dearth of research on its implementation in transportation systems.

Sensors in Vehicle: There would be sensors at the entry and exit of each vehicle to calculate the vacant seating capacity of a particular vehicle. The sensors would be preferably using short wireless technologies like active RFID. Active RFIDs have a read range of 300 feet or more and are battery powered. The most crucial advantage with active RFIDs is that it can automatically broadcast its signal unlike passive RFIDs which transmit a signal upon receiving RF energy from a reader. Another better option is to use BLE (Bluetooth Low Energy) sensors. These sensors drastically reduce the cost of buying as well as the power consumption cost. This information goes into the embedded device inside the vehicle.

Embedded Device: The embedded device in the bus collects the information of the bus related to its location, time and speed. Location details are received through GPS from satellites and this is essential for establishing the “time tags” of each location. These details are also sent to the cloud server after every minute through any standard protocols that 3G/4G telecom support to ensure freshness of data.

Satellite: Satellite transmits signals to the vehicle on ground as well on a very accurate time reference which is provided by atomic blocks. Satellites provide synchronized information so that accurate information is provided at the exact same instant. GPS architecture has three major segments of division:

1) *GPS Space Segment (SS):* The space segment contains the GPS satellites. There are 24 GPS satellites in the GPS design which are distributed into 8 circular orbits. The satellites move around the earth in orbits in such a way that the angular difference between each orbit is 30, 105, 120 and 105 degrees.

2) *GPS Ground Segment (GS):* This segment is responsible for the proper functioning of all operations of the global positioning system like replacement of a dysfunctional satellite. It also helps keep the GPS system operational and functional within its specific also responsible for the security issues of the system.

3) *GPS User Segment (US):* This segment contains GPS receivers. It receives the GPS signals and solves the navigation equation to determine the accurate co-ordinates and accurate time. There are two types of users, the military users who use the Precise Positioning Service and the civilians who use the Standard Positioning Service.

V. CONCLUSION

From the above we can conclude that if we want to achieve the various functions of Intelligent Transportation System, one technology is far from enough and we can use a variety of IOT technologies especially global positioning technology, geographic information systems technology and comprehensive use of radio frequency identification technology for intelligent transport management so as to bring a qualitative leap. With the development of IOT technology, there will be more and better applications of intelligent transportation based on IOT. It will have a great significance to create a change from manual transportation management system to Intelligent Transportation System. It will lead to many benefits for the stakeholders involved in the system. Road environmental status will be provided to people on travelling so as to optimize people's travelling. Road infrastructure will be greatly utilized through the management and

scheduling mechanisms so as to maximize network transportation and improve transportation safety. Assume that we use IOT technology to achieve the goal, i.e. optimized application prospects: People will know in advance to avoid the transportation congestion and drive along the fastest route to reach destinations so as to reduce fuel consumption and carbon dioxide residual emissions. People on travelling can obtain timely weather information. Drivers can always find the nearest parking space and even they can use auto pilot to ensure driver's relaxation. Passengers can enjoy high-quality online entertainment services on their journey.

IOT has good prospects for ITS, but after all it is just an emerging technology to develop from the Internet. It must be combined with existing industry to develop products to bring the commercial value. It can be well integrated into intelligent transportation field due to IOT technical characteristics. With the further development of IOT technology and the construction of intelligent transportation system in big cities, a wide variety of industrial applications can be put into practice through Intelligent Transportation System moreover Intelligent Transportation System in urban area will bring a qualitative leap. Therefore, the research was aimed to find out the feasibility of using of Internet of things in creation of Intelligent Transportation System.

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INNOVATION IN MANAGEMENT THROUGH INDUSTRY 4.0: HR PERSPECTIVE

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ABSTRACT:

The Fourth Industrial Revolution is a phrase that explains our present technological age. It is defined as the fourth industrial era since the preliminary Industrial Revolution of the 18th century. The Fourth Industrial Revolution in diminutive describes the huge changes brought about by smart technologies.

Omnipresent mobile, super-computing, Artificially-intelligent robots, self-driving cars, Neuro-technological brain enhancements, Genetic editing and numerous the evidence of dramatic change is all around us and it is happening at exponential speed. Previous industrial revolutions liberated humankind from animal power, made mass production possible and brought digital capabilities of billions of people.

This Fourth Industrial Revolution is, however, essentially different. It is identified by a range of new technologies that are synthesizing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human.

Keywords: *Industrial Revolution, Artificial Intelligent, Smart technology, Neuro Technology, Genetic editing, Human resource.*

Introduction:

Industry has made human life very easy today. The lifestyle we are living today was such a time when we could not even imagine it. But as the needs increased, the person changed yesterday's face of factories too.

We know this gradual development of entrepreneurship as industrial revolution. India has not been so fortunate enough in the English rule to become a partner in the initial benefits of the Industrial Revolution.

When the first and second industrial revolution took place then the country was not free. At the time of the Third Industrial Revolution, India was struggling with the challenges of independence, which was new. But in the last 7 decades, India presented a model of development in front of the world, which is also inclusive as well as durable.

Now India has the power house of such youth power and innovation, which is why it is ready to lead the fourth industrial revolution.

The fourth industrial revolution will definitely bring a big change in India; this will change the nature of jobs and create more opportunities. With the development of artificial intelligence, healthcare will improve, employment will increase, and enhancing efficiency will increase as well as transparency. Although there may be some negative effects, they will be called a big NO in front of these benefits.

Some things that should be taken care of

- Skills Development will be focused on.

- Last education levels will be strengthened in the backward areas
- It will increase awareness
- We have to pay special attention to the industries
- It should also be noted that robot or artificial intelligence will not displace human role.

Research methodology

Research can be defined as “The systematic and objective analysis and recoding of controlled observations that may lead to development of generalizations, principles, or theories resulting in prediction and perhaps ultimate control of events”.

Research methodology is simply the framework or plan for the study that guides the collection and analysis of data. It is an important stage in the process of conducting research as facilitates systematic and smooth conduct of the research project. It acts as guide for the researcher to work step by step.

Source of data collection: What is Primary Data?

Primary data are those which are collected for the first time by the researcher himself and thus happen to be original in character. Primary data collection begins when the researcher is not able to find the data required for his research from secondary sources or the nature of the problem demands that primary data can be used.

Primary Data:

The data was collected for the study through discussion with the manager, personal observation and by preparing questionnaire. Questionnaires were used for collecting information from employees and workers working in the company.

What is Secondary data?

Secondary data is data taken by the researcher from secondary sources, internal or external. There is a large amount of data that has been already collected by others, although it may not necessarily has been analyzed or published.

Secondary Data:

Library Research: The organization books, Magazines and internet etc.

Challenges of Human Resource Management:

Characteristically, the main challenges of HR manager include totaling worth to an organisation both the labour force and the business itself, manage talent within your organisation – try to draw and keep talented and hard-working people in the organisation; managing globalization, Information Technology, business control, Information-workers and info-management.

The modern business cannot effectively maneuver in the business world if the human force is not well equipped with the latest technology and techniques. This is the accountability of the human force manager to properly train the work force and to see the basic things the human force needs to achieve the competitive advantages of business in 21st century.

To cope with this situation the today’s HR manager is also facing a variety of issues and challenges on how they can best manage and solve all these issues and challenges with splendid ways.

Economy Changes:

- **Reduced Time – to – Market:** In business, time to market (TTM) is the length of time it takes from a product being conceived until its being obtainable for sale. TTM is important in industries where products become obsolete quickly.
- **Improved Innovation Process:** Business best positioned to endure and flourish in the highs and lows of economic cycles are those that continue to innovate, despite the consequences of the economic cycle. During tough economic times, innovation can help the business make real gains in competence and efficiency.
- **Higher Level of Customization and flexibility:** Flexibility and rigidity in customization and build-to-order production is the new status quo for the business and industry 4.0 is fostering this.
- **Increased Collaboration required:** A few other imperative aspects that group effort brings to the table include: Equal contribution- alliance gives team members equal opportunities to participate and communicate their ideas.

Social Changes:

- **Lesser younger workforce entering market to replace those retiring:** Since the average retirement age of a baby boomer lies somewhere between 61 and 65, it's not hard to see that this so-called silver tsunami is going to create some serious challenges for HR; the main one being, how are they going to fill the talent gap that's left between the number of baby boomers that retires and the number of younger workers with the right skills to replace them?
- **Younger generation demands contrary social values:** The hum around ethical or socially-minded business has gradually decreased and, so as consumers' demands for values-driven companies reach a fever. Generations X has the highest expectations for brands to take a stand on values.
- **Improved work life balance:** Work-life balance is indispensable to shun suffer exhaustion in your career.
- **Convergence physical world with virtual world:** Artificial Intelligence validates key rudiments of the virtual world to commence, and between the virtual entities and the physical participants of the newly-created world.
- **Complex processes require higher qualification:** course of action rationale is defined as the collection and evaluation of data, from the process intend stage throughout production, which establishes methodical evidence that a process is capable of consistently delivering quality products.

Technical Changes:

- **Ability to deal large amount of data efficiently:** Organizations are careworn to supervise Big Data. According to the studies, the amount of information formed, captured or computer-generated has exceeded available storage for the first time

since 2007. The dimension of the digital universe this year will be tenfold what it was just five years earlier.

- **Standardized protocols and open architecture to deal with heterogeneous environment:** The Internet of Things (IOT) covers a enormous range of industries and

use cases that scale from a single constrained device up to massive cross-platform deployments of embedded technologies and cloud systems connecting in real-time. Tying it all together are numerous legacy and emerging communication protocols that allow devices and servers to talk to each other in new, more interconnected ways.

At the same time, dozens of alliances and coalitions are forming in hopes of unifying the fractured and organic IoT landscape.

- **Cyber-security having everything attached to everything:** Cyber-security demonstrates practically every characteristic of our network-based activity, because in the digital financial system, almost everything is connected. That means that everything is at risk for a cyber attack. Yet, the national agency charged with the oversight of the nation's electronic networks has walked away from its cyber responsibility.
- **Inter-connectivity of platforms and devices:** IoT helps to advance daily life in a number of ways. Interconnectivity between devices capacitates augmented efficiency at home or within industrial settings. This interconnectivity comes at a price, as the status increases and the number of devices and networks amplifies, the lack of interoperability between them becomes an issue.

Conclusions

Hardware and software won't touch the toughtware of human being, none the less industry 4.0 could be the benchmark pertaining to:

- Complex problem solving
- Critical thinking
- Creativity
- People management
- Coordinating with others
- Emotional intelligence
- Judgment and decision making
- Service orientation
- Negation
- Cognitive flexibility

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MUTUAL FUND AS AN INVESTMENT AVENUE: A GROWTH TREND ANALYSIS

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ABSTRACT

The advent of Mutual Fund industry has brought a big financial change in the investment pattern of people. This option is giving opportunity to the common man, for getting high returns from their investments when compared to other traditional sources of investment. The main purpose of this study is to analyse the growth trend of Mutual Funds Industry in India over a decade and to identify the reasons behind these changes. Further, it will help in identifying the factors that influences the investors in selection of Mutual Fund as an investment avenue. Moreover, this study will suggest recommendation for the Mutual Fund companies and suggestions for future research. This study uses secondary data collected from various sources and is descriptive in nature.

Keywords: *Mutual Funds, Investment Avenue, Investment Pattern, Investors, Mutual Funds Growth*

1. Introduction:

1.1 Background

Mutual fund investments are famous these days for providing the best investment to achieve long-term creation of wealth. It is one of the best investment avenue to earn high returns. Mutual funds are comparatively more famous than other investment avenues because person from any walk of life can invest in it easily.

A Mutual Fund is a kind of trust which pools savings of a number of investors having a common financial goal. The money collected, is then invested in various capital market instruments such as equity shares, debentures and other securities. The total income generated through these investments and the capital appreciation obtained is shared by its unit holders as per the ratio of the number of units owned by them. Thus, a Mutual Fund can be the best investment option for the common man as it gives an opportunity to invest in a diversified, carefully selected and professionally managed basket of securities in a cost effective way.

During 19th century, Mutual funds were first emerged in England. It didn't succeed much because it was highly speculative in nature. In 1900, Mutual funds started in USA, but they picked up only after 1924 when a number of such funds were started. After World War II mutual funds expanded rapidly.

In India first mutual fund was started in 1964 when Unit Trust of India was established to mobilise savings of small investors and provide them a productive investment option. UTI

brought out a variety of schemes that can benefit every category of investors. The history of mutual funds in India can be divided into 4 distinct phases:

Phase One (1964-1987)

In 1963, Unit Trust of India (UTI) was established by an Act of Parliament. It was set up by the RBI and functioned under its Regulatory and administrative control.

Phase Two - 1987-1993

1987 witnessed the entry of non-UTI, public sector mutual funds set up by public sector banks, General Insurance Corporation of India (GIC) and Life Insurance Corporation of India (LIC). The first non-UTI Mutual Fund established in June 1987 was SBI Mutual Fund. It was followed by funds like Canbank Mutual Fund, Punjab National Bank Mutual Fund, Indian Bank Mutual Fund and many others.

Phase Three - 1993-2003

1993, witnessed the entry of private sector funds, starting a new era in the Indian mutual fund industry, giving the Indian investors broad choice of fund families.

Fourth Phase - since February 2003

In February 2003, after the repeal of the Unit Trust of India Act 1963, UTI was divided into two separate entities. First one is the Specified Undertaking of the Unit Trust of India. It functions under administration and the rules framed by Government of India. It does not come under the Mutual Fund Regulations.

The second is the UTI Mutual Fund, sponsored and supported by SBI, PNB, BOB and LIC.

1.2 Objectives of the study

- To analyse the growth trend of Mutual Fund Industry in India over years.
- To analyse growth trend of investors in Mutual Fund.
- To identify the factor that influences the investors in selection of MF as an investment avenue.

2. Literature Review

According to **Arathy B .2015**. The mutual funds is emerging as one of an important class of financial investment avenue which is as per the needs of the retail investors. The major factors that influences the investment decision of investors are returns, tax benefits, price and capital appreciation. Equity based schemes are generally preferred over other options. Bitter past performance is the major preventing factor while considering investment decisions.

Priyanka Sharma and Payal Agrawal (2015) in their study revealed that the investors' perception depends on their demographic profile. Investor's age, occupation and marital status has a direct impact on investors' choice of investment. The research also reveals that the liquidity and transparency are some factors which have a high impact on investment decisions. **Preeti Khitoliya (2014)** observed that majority of the respondents wish to invest in mutual fund was in the age of 35-44, which in turn ensures wealth maximization followed by balanced fund and income funds. Same trend was observed in the age group of 25-34. But an opposite result was seen for the age group of 45 above where majority of people were risk averse as they wish to invest in mutual fund schemes which guarantees safety. **Prof Prabhu G. et al (2016)** believed that Mutual Fund Industry in India is at growing rapidly. But still people are not aware of the inside way of investing in it and about the benefits of investing in Mutual Funds.

3. Methodology

The data for this descriptive study is taken from various secondary sources. It include internet, journals, e-articles, books, publications of various research agencies like, AMFI, SEBI Handbook, etc. The data taken is analysed and interpreted to draw conclusion and inferences.

4. Limitation of the Study

The scope of the study is not wide as it is confined only to the Mutual Fund Industry. Also, in order to avoid the lengthiness of the paper we have covered only AUM and Net resources mobilised by Mutual Funds companies and analysed their growth trend accordingly. There is no coverage beyond it.

5. Results and Discussions

i) Growth Trend of Mutual Fund Industry

Table 1: AUM Trend Over Years

Year	Assets Under Management (Rs. Trillion)
2010	6
2011	5.6
2012	5.7
2013	7.2
2014	12.11
2015	13.55
2016	18.58
2017	22.7
2018	24.52

As we can see that there is a proper positive increase in the total number of assets managed by mutual fund companies. We can infer from the above that the growth was quite steady till 2013 after a fall in 2011 from approximately 6 trillion to 5.6 trillion rupees. Further, in 2014 we see abrupt increase in the total number of AUM held by the companies. The MF Industry's AUM has grown from 7.2 trillion as in 2014 to 24.52 trillion in 2018, more than 2 ½ fold increase in a span of 5 years. The reason behind this could be the actions taken by the government from 2014 to promote other investment avenues to common population of the country. Also because of this even mutual funds companies came up with general public targeted schemes.

Table 2: Trend of Net Resources Mobilised by Mutual Fund

Year	Amount (in CR)
2010	-49366
2011	-29769
2012	76539
2013	53783
2014	103288
2015	134180
2016	343049
2017	313842
2018	204299

From the above data we can infer that there is fluctuations in resource mobilization by Mutual Fund companies over years. Before 2012 it was in negative with potential increment in 2011 from 2010. But a huge change is seen in 2016 where there is abrupt increase of approximately two times. The main reason behind this could be due to the change in government policies and more diversified market.

ii) Growth Trend of Number of Investors Investing in Mutual Funds as an Investment Avenue

Table 3: Number of Investors in Mutual Funds

Year	Investor Account (In CR)
2010	4.8
2011	4.72
2012	4.65
2013	4.28
2014	3.95
2015	4.17
2016	4.77
2017	5.28
2018	7.13

It can be inferred from above that still there is not much increase in number of investors account in mutual funds. But comparatively we can see the increment in 2018 from what figures we had in 2014. This is quite positive and it may be due to the changes in government policies.

ii) Factors affecting investors view on selecting Mutual Fund as an investment avenue

The various factors that affect the viewpoint of investors in mutual fund industry can be as: 1. Risk factor 2. Return factor 3. Liquidity factor 4. Consistency factor 5. Awareness factor 6. Specialization factor

Risk Factors: All the investments are subjected to market risk and the NAV of the mutual fund schemes may change depending upon the various factor and forces that affect the securities market. Various risks associated with a mutual fund investment can be categorised as:

a) Market Risk: Share prices are always sensitive to the current status of the economy (local, national and international). Performance of an economy is indirectly related to the risk involved. Market risk may include: Country risk, Political risk, Interest rate risk and Currency risk

b) Liquidity risk: Liquidity risk tells the possibility that an investor may not be able to buy or sell an investment as and when desired as opportunities are limited. The liquidity of any stock depends upon the nature and the type of fund that is chosen. Equity funds investments hold volatility over a period whereas debt funds hold a risk related to interest rates.

c) Credit risk: This refers to the chances that a particular issuer of bond can't make the interest rate payments or any other repayment. Credit risk generally occurs in circumstances where the bonds of a particular company being downgraded by the rating agencies causing fall in its price.

Return Factors

Returns on investment is the percentage increase or decrease in the value of the investment after a particular period. The return on various mutual funds can be calculated in three different degrees:

- a) Absolute Return
- b) Compounded Annual Growth Rate (CAGR)
- c) Total Return

Liquidity Factors

Liquidity factors can be categorized as:

1. Funding (cash flow) liquidity: It is a credit risk that covers the inability to fund liability and thus produces defaults. The basic ways of calculating it are current ratios and quick ratios.
2. Market (Asset) liquidity: It is a market risk that covers the inability to sell an asset when it's required. The market liquidity of an investment is measured in respect of depth (position size), width (bid ask spread), and resiliency.

Consistency Factors

The investments in mutual funds also depends upon the need and financial objectives of the investor. For example, for short term objectives, debt instruments may not be appropriate. Further, for medium to long term objectives, equity fund investments are advisable. Also, historical long term performance, while a good indicator of fund's position, can't guarantee its future performance. Fund's performance consistency can be measured in terms of its performance as compared to its benchmarks and category average.

Awareness Factors

From investor's side, the level of awareness of mutual funds is the first and foremost stage for investment in any such fund. A survey says that if the investors have been provided more funds, most of the investors would like to invest in the Real Estate, followed by Mutual Funds and only few percentage in Equity Shares.

Another survey revealed that high salaried and high incomes people are major investors as they enjoy tax concessions. It was also observed that farmers, small businessmen and persons belonging to rural and semi-urban areas having low income group have no awareness about the mutual funds. So, it's very important for investor to have awareness. For this, government has decided to set up a committee to increase awareness among investors.

Specialization Factors

Specialization factors includes financial literacy. Financial literacy is crucial if mutual funds want to extend their reach to smaller towns. The financial knowledge is very vital to fully participate in the economy or to make sound decisions of own financial future.

6. Conclusion

From the above results and discussions we can clearly infer that the growth trend of Mutual Fund Industry as an investment avenue is on the positive side. We can see that the number of investors as compared to the number of investors that existed before has also increased. But the increase in this number is not that much satisfying when looking at the total population of

India. Further, looking at the resource mobilization of mutual fund, we can see that previously past six years it was in negative. But, now it's growing on a positive note.

Moreover, from the past two years it's growing on a rapid pace. It might be due to the promotion strategies of government and other awareness programs for educating common person on benefits of investing in mutual fund. Government should focus on promoting financial literacy and financial inclusion among the common people. It will definitely help in increasing the number of investors choosing mutual funds as an investment avenue. Also, there are many factors that affect the viewpoint of investors on choosing mutual fund. It is concluded after looking at all the factors that almost all the factors are prominent, but the most important ones are awareness and specialisation factors, that should be considered for increasing the number of investors. From investors point of view, returns and consistency factors are generally considered, in order to make decisions regarding choosing mutual funds.

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STUDY ON PRE-ACQUISITION AND POST-ACQUISITION BY SUN PHARMACEUTICAL- EMPIRICAL ANALYSIS

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ABSTRACT:

Mergers and acquisitions are increasingly becoming strategic choice for organizational growth and achievement of business goals including profit, empire building, market dominance and long term survival. The ultimate goal of this strategic choice of inorganic growth is, however, maximization of shareholder value. The phenomenon of rising M&A activity is observed world over across various continents, although, it has commenced much earlier in developed countries (as early as 1895 in US and 1920s in Europe), and is relatively recent in developing countries. Objectives of the study are to study performance evaluation of Pre-merger and Post-merger per share and Valuation ratios of Sun Pharmaceutical company and to suggest and conclude based on finding of the study. Exploratory research has been undertaken for the present study. Majority of the data of Sun Pharmaceuticals industry for the study is collected from the secondary sources. This covers four years annual period of pre- merger and post-merger from 2010-2013 to 2014-2107. Money control.com and annual reports of sun pharmaceuticals have been extensively used for the data collection in general. In addition the researcher referred various Journals, magazines, books, newspapers, publications and reports. Data collected has been systematically tabulated: appropriately analysed using descriptive and inferential statistical tools and scientifically interpreted for drawing inferences, findings and suggestions.

It is evident from the paired comparison 't' statistic that null hypotheses are accepted Hence there are no significant differences between pre-merger of all Per Share Ratios of Basic EPS, Book value per share, PBDIT per share & net profit per share and all Valuation Ratios of Enterprise value, Market capitalization/Net operating revenue, Price/ Book value ratio & Earnings yield ratio post-merger of Sun pharmaceuticals It is concluded that there is no fruitful results from the merger decision of sun pharmaceutical industry.

INTRODUCTION :

To protect the business from the drastic downfall, many firms chose to take a step by making business combinations. Stepping towards M&A is a winning way to combine to successful alike business. With M&A synergy power of the two companies are combined to cater a business that is most suitable for the demand of the market and its stakeholders.

Merger is a case where the acquired company deliberately delivers it assets and liabilities in the hands of the acquiring company. As a result, the company being acquired can

survive another phases of competition in business cycle. However, the phenomena of merger and acquisitions of the two businesses would certainly leave an impact on its stakeholders; it may be negative or positive. Due to the financial stress of the company being acquired the stakeholders may feel the off-putting impact and hence it is quite obvious for the stakeholders to be nervous and uneasy at the kick-off of the initial phase of M&A.

Mergers and acquisitions are increasingly becoming strategic choice for organizational growth and achievement of business goals including profit, empire building, market dominance and long term survival. The ultimate goal of this strategic choice of inorganic growth is, however, maximization of shareholder value. The phenomenon of rising M&A activity is observed world over across various continents, although, it has commenced much earlier in developed countries (as early as 1895 in US and 1920s in Europe), and is relatively recent in developing countries

In India, the real impetus for growth in M&A activity had been the ushering of economic reforms introduced in the year 1991, following the financial crisis and subsequent implementation of structural adjustment programme under the aegis of International Monetary Fund (IMF). In recent times, though the pace of M&A has increased significantly in India too and varied forms of this inorganic growth strategy are visible across various economic sectors.

The term mergers and acquisitions encompass varied activities of stake acquisition and control of assets of different firms. Besides, there are several motives for different types of mergers and acquisitions seen in corporate world.

II. LITERATURE REVIEW

Mergers and Acquisition is a vast area and the number of research conducted in this area is large, so it was easy to get literature on this particular topic.

According to reference [14], the financial performance of M&A is influenced by the organizational culture, integration decision and process management.

In reference [15], article the success of merging firm depends on the degree of association and cultural differences that separates the merging firms. Controlling the socio cultural factors in an effective manner will also help the merging firm to increase their profit.

According to reference [16], the turnover of a M&A firm can be International Journal of Pure and Applied Mathematics Volume 118 No. 20 2018, 4411-4417 ISSN: 1314- 3395 (on-line version) url: <http://www.ijpam.eu> Special Issue ijpam.eu 4411 determined only after a minimum of four years and after four years only we can determine whether the M&A is success or not.

In reference [10], study, they are discussing how performance and turnover is related and they have found that it is related only during active turnover periods and the takeover activity has an immense effect on the managerial discipline. They have founded this by studying the takeover which was happened during two five year periods.

Reference [1], states the stakeholders are the one affected due to M&A process, After 5 years of merger completion they suffer a loss of 10% on their wealth. The amount of loss depends upon the size of the target company and if the size is high the possibility of loss is also high.

Reference [6] Highlights the tax attribute has an effect on the targeted and acquiring company during the acquisition announcement period. After conducting a cross sectional test they have found out that tax variable is affected by the stock return in a hypothesized direction.

Reference[4], is stating that mergers and acquisition is a large area to conduct a research and there are many areas available that has not even touched by any of the researcher's. He also says that doing a research in M&A has an excellent future. Reference[5], research shows that the impact of mergers and acquisition on people at work is mainly depend upon the culture of the merged firm, the long term and short term response of the employees and the method in which their process is managed.

In reference[7], are discussing how M&A benefits the banking sector and they have found out that the bidding banks are getting more benefits as compared to targeted banks and the result of M&A is purely depends on the financing method used by the acquiring bank.

According to reference [11] study inflation is an important factor that will affect mergers and acquisition. In his paper he is discussing about the various factors that can affect the inflation.

In reference [8] the study is focusing on how the liberalization has affected the M&A and corporate enterprise.

Reference [3], focuses on finding out in which sector M&A have happened more during a particular period. The study finds out that most of the M&A is happening in financial and pharmaceutical sector. Reference [9] focuses on studying the recent trends that have been happening in M&A based on Indian companies.

Reference [15] examines how M&A affects the Indian Financial Service sector. The study was conducted by analyzing 80 cases of M&A that has happened from March1993 to February 2010. From the literature review it is found out that there are only limited number of researches relating to mergers and acquisition in India. So this paper will be focusing on Indian Mergers and Acquisition because of its large scope and why companies are going for these process and what benefits they are getting from these. To find out the relationship between the factors affecting Mergers and Acquisition, system dynamics approach can be a good technique. In this paper we have developed causal loop diagram to understand the relationship between two factors.

In reference [2], system dynamics model is used to assess how financing and investing policy can affect the firm value. To find out these they have used financial management approach, sustainable growth approach and resource based approach. So from these it is clear that system dynamics can be used in research areas based on finance.

According to reference [13] system dynamic model is used to find out the effectiveness and efficiency of system dynamics in corporate governance. By this study the importance of system dynamics in corporate governance is identified.

In reference [12] system dynamics is used to find out how the performance of corporate can be improved by using system dynamics methodology. The conclusion of the paper is that system dynamics has high potential in in understanding the performance behavior of corporate.

According to reference [17] Causal loop diagram is a system which visualizes the relationship between various variables in a system. It consists of a set of edges and nodes where variables are represented as nodes and edges show the connection between variables. The relation can be either positive or negative. A positive relation means the variables are moving in the same direction and negative relation means the two variables are moving in opposite direction.

OBJECTIVES OF THE STUDY

The study is aimed to attain the following objectives: -

1. To study performance evaluation of Pre-acquisition and Post-acquisition per share and Valuation ratios of Sun Pharmaceutical company,
2. To suggest and conclude based on finding of the study.

Hypothesis Testing:

H₀ : There is no significant difference between Pre-acquisition and Post-acquisition status.

H₁ : There is significant difference between Pre-acquisition and Post-acquisition status.

RESEARCH METHODOLOGY

Exploratory research has been undertaken for the present study. Majority of the data of Sun Pharmaceuticals industry for the study is collected from the secondary sources. This covers four years annual period of pre-acquisition and post-acquisition from 2010- 2013 to 2014-2017. Money control.com and annual reports of sun pharmaceuticals have been extensively used for the data collection in general. In addition the researcher referred various Journals, magazines, books, newspapers, publications and reports. Data collected has been systematically tabulated: appropriately analysed using descriptive and inferential statistical tools and scientifically interpreted for drawing inferences, findings and suggestions.

I. PER SHARE RATIOS

□ BASIC EPS (Rs)

Basic earnings per share is the amount of a company's profit or loss for a reporting period that is available to the shares of its common stock that are outstanding during the reporting period. It is a useful measure of performance for companies with simplified capital structures.

□ BOOK VALUE SHARE (Rs)

Book value of an asset is the value at which the asset is carried on a balance sheet and calculated by taking the cost of an asset minus the accumulated depreciation. Book value is also the net asset value of a company, calculated as total asset minus intangible asset (patents, good will) and liability. For the initial outlay of an investment, book value may be net or gross of expenses such as trading costs, sales taxes, service charges and so on.

□ PBDIT / SHARE (Rs)

Earnings before interest, taxes, and depreciation (EBITD or EBDIT), sometimes called **Profit before Depreciation, Interest, And Taxes (PBDIT)**, are an accounting metric.

Users of this calculation attempt to gauge a firm's profitability prior to any legally

required payments, such as taxes and interest on debt, being paid. The idea behind removing depreciation is the depreciation is an expense the firm records, but does not necessarily have to pay in cash.

□ **NET PROFIT PER SHARE (Rs)**

Net profit represents the amount sales remaining after all operating expenses, interest, taxes and preferred stock dividends (but not common stock dividends) have been deducted from a company's total revenue.

II VALUATION RATIOS

Valuation ratio is ratios computed on the basis of parameters in the financial statements of a company and used to estimate the value of a company. These can be used to easily compare companies and determine which is a better investment.

□ **ENTERPRISE VALUE (Cr)**

Enterprise value is calculated as the market capitalization plus debt, minority interest and preferred shares, minus total cash and cash equivalents (EV = market value of common stock + market value of preferred equity + market value of debt + minority interest - cash and investments).

□ **MARKET CAPITALIZATION/NET OPERATING REVENUE**

Market capitalization is the aggregate valuation of the company based on its current share price and the total number of outstanding stocks. It is calculated by multiplying the current market price of the company's share with the total outstanding share of the company.

□ **PRICE TO BOOK VALUE PER SHARE**

The price-to-book ratio (P/B Ratio) is a ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share. It is also known as the "price-equity ratio".

□ **Earning yield**

Earning yield is the earning per share for the most recent 12-month period per share. The earning yield (which is the inverse of the P/E ratio) shows the percentage of each rupee invested in the stock that was earned by the company.

FINDINGS

The major findings of the present study are

1. Average pre- acquisition basic EPS of 34.31 of sun pharmaceutical is higher than that of post- acquisition of 20.68.
2. Book value per share of pre- acquisition of sun pharmaceutical is Rs 194.24 is as against post- acquisition of Rs 138 during the study period
3. The PBDI per share of post- acquisition of sun pharmaceutical is Rs 46.20 in comparison with Rs 39.72 of pre- acquisition. The consistency and growth rate of pre- acquisition is better than those of post- acquisition.
4. Net profit per share of Rs 36.58 of post- acquisition is greater than that of pre- acquisition.

5. Enterprise value of post- acquisition is 171033.5 corers exceeding the value of 115757.7 corers of the pre- acquisition.
6. Market capitalization of post-acquisition is 8 times of operating revenue and pre-acquisition is 6 times of operating revenue.
7. Market price of equity share during post- acquisition is 5 times of book value and pre-acquisition is 6.36 times of book value.
8. Earning yield ratio of post- acquisition is 0.04 times of MPS earning yield of post-acquisition is almost double of percentage.

It is evident from the paired comparison 't' statistic that null hypotheses are not rejected since their prob. Values are more than 0.05. Hence there are no significant differences between pre- acquisition of all Per Share Ratios of Basic EPS, Book value per share, PBDIT per share & net profit per share and all Valuation Ratios of Enterprise value, Market capitalization/Net operating revenue, Price/ Book value ratio & Earnings yield ratio post-acquisition of Sun pharmaceuticals

SUGGESTIONS & RECOMMENDATIONS

- The net profit of the post- acquisition is not proportionately increased in the number of shares out of acquisition.
- The sun pharma should adopt effective measures for effective utilisation of resources employed in the business.
- The sun pharma has not taken advantage of financial leverage as it was with pre-acquisition.
- The sun pharma maintains more liquidity at the cost of profitability and hence, it has to maintain a proper balance between liquidity and profitability.
- It has to strengthen marketing mechanism to make its goods fast moving as it was in pre- acquisition.
- The sun pharma has to devise for diversification of its investment due to reduction of retention ratio.

CONCLUSIONS

In nutshell, it has been found that there are no fruitful results from the acquisition decision by sun pharmaceutical industry. The result shows that there is no significant difference under various parameters of financial ratios between pre-merger and post-merger. Hence the decision of merger is unfavourable.

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Appendix-1										
I PER SHARE RATIO										
Basic EPS (Rs)										
Parameters	Duration				Aver	S.D	Consist	Grow	Paired- comparison t-test	
Pre-acquisition	28.8	25.7	17.5	65.23	34.31	13.23	0.39	-0.24	One tail prob. Value: 1.88163E-07	
Years	2017	2016	2015	2014	Average	S.D	Consistency	Grow th		
Post - acquisition	29	19.6	18.9	15.2	20.68	20.56	0.99	0.24	Two tail prob. Value: 3.76327E-07	
Book Value Per Share (Rs)										
Parameter s	Duration				Average	S.D	Consistency	Grow th	Paired comparison t- test	
Pre-acquisition	160.5	129.3	99.75	387.3	194.2	142.9	0.73592	-0.254	One tail prob. Value: 0.260738	
Post - acquisition	168.5	147.4	137.3	98.72	138	66.70	0.48338	-0.254	Two tail prob. Value: 0.521477	
PBDIT/Share (Rs)										
Parameter s	Duration				Average	S.D	Consistency	Grow th	Paired-comparison- test	
Pre-acquisition	44.65	37.15	40.63	36.46	39.72	3.757	0.09460	0.069	One tail prob. Value:0.315022069	
Post - acquisition	51.03	35.49	22.38	75.93	46.20	23.01	0.4981	-0.124	Two tail prob. Value:0.630044138	
Net Profit Per Share (Rs)										
Parameters	Duration				Average	S.D	Consistency	Grow th	Paired-comparison- test:	
Pre-acquisition	32.66	24.23	26.5	18.73	25.53	5.765	0.22581	0.203	One tail prob. Value: 0.213636276	
Post - acquisition	33.5	29.38	18.42	65.03	36.58	20.00	0.54682	-0.198	Two tail prob. Value: 0.427272552	
II VALUATION RATIOS										

Enterprise Value (Cr)										
Parameters	Duration				Average	S.D	Consistency	Growth	Paired -comparison t- test	
Pre-acquisition	1617 40.9	1956 2.94	2111 77.9	1155 72.3	1710 33.5	4234 5.8	0.2475 8	0.118	One tail prob. Value: 0.092449646	
Post - acquisition	8252 2.91	5703 6.67	4476 0.39	3682 3.26	5528 5.81	1997 1.4	0.3612 4	0.308 632	Two tail prob. Value: 0.184899293	
Market Capitalisation / Net Operating Revenue										
Parameters	Duration				Average	S.D	Consistency	Growth	Paired -comparison t- test	
Pre-acquisition	5.27	6.98	7.72	7.38	6.837	1.08 7	0.1591 0	- 0.106	One tail prob. Value: 0.051265228	
Post - acquisition	7.5	7.35	7.99	9.5	8.085	0.98 2	0.1214	- 0.075	Two tail prob. Value: 0.102530456	
Price to book value ratio										
Parameters	Duration				Average	S.D	Consistency	Growth	Paired -comparison t- test	
Pre-acquisition	4.5	6.28	8.28	6.41	6.367	1.54 4	0.2425 3	- 0.111	One tail prob. Value: 0.123427035	
Post - acquisition	5.65	4.82	4.82	4.73	5.005	0.43 2	0.0863 3	0.061	Two tail prob. Value: 0.24685407	
Earning Yield										
Parameters	Duration				Average	S.D	Consistency	Growth	Paired -comparison t- test	
Pre-acquisition	0.04	0.02	0.02	0.03	0.027	0.00 9	0.3481 5	0.100	One tail prob. Value:0.05136	
Post - acquisition	0.04	0.05	0.04	0.04	0.042	0.00 5	0.1176 4	0	Two tail prob. Value:0.10273	

(Source: moneycontrol.com database)

TO STUDY THE EVOLUTION OF HR POLICIES FROM GENERATION X TO Z

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ABSTRACT-

The world's workforce comprises of people belonging to different generations starting generation x being born in 1980s, hard -working and committed individuals to the current generation z which is the youngest, born in the age of technology, self-directed and free spirited individuals. We shall be considering generation x, y and z in this study since they make today's major portion of the workforce. This diverse workforce therefore becomes the determining factor for organizational performance therefore their perspective towards HR policies will decide their performance and commitment level towards organization. This research paper will explain the evolution of HR policies from generation x to z and how the three generations differ from each other.

Introduction-

Introduction-

The firm's performance is highly affected by the impact of HR policies in the field of human resources and industrial relations (Huselid, 2013). HR policies are a collective term for the responsibility towards the workforce of the organization keeping in mind the organizational goals. HR policies are used as guidelines to manage people in various aspects of which the core responsibilities are

- Procurement (recruitment, selection, talent acquisition, induction, orientation)
- Managing the workforce (compensation, performance management, wellbeing and safety, employee engagement, management information systems (MIS)).
- Exit management (employee layoff, retirement and downsizing).

The performance of an organization is highly affected by the HR policies and has been a hot topic for research by professionals in the field of human resources. It has been argued that an effective HR policy covering procurement, performance management, compensation management, high employee engagement, training can prove to be an important tool to increase workforce knowledge, capabilities, their motivation and skills. HR policies are used for retention of good quality employees and the removal of non- performers from the organization. Though the hr policies and practices intend to vary from one country to another and from one employee to another and are also influenced by the type of industry in which it is being used. An important relationship is shared between HR policies, organization and employees to cope with the changing environment and competition prevailing in outside world.

One of the most important characteristic of an organizational workforce is its diversity. The workforce is highly diversified in age comprising of different generations working together

with different needs and values. The generation x and y makes the major portion of the entire workforce while the youngest generation z is about to enter into labour work and will ultimately replace the previous generations for many decades. The ultimate sync amongst these generations is what keeping an organization running smoothly despite of different mind sets and personalities. Generation x is characterized by the people who were born between 1965 -1980. The workers of this generation were not as loyal as their predecessor. They were independent and self-directed. The successor to them were Generation Y also known as millennials characterized as independent and looking for continuous feedback and clear goals and objectives. Then the latest Generation Z arrived into the world between 1997 to 2010 being youngest, seeking freedom and full autonomy and is about to enter into the workforce. All these generations bear different kind of role and responsibility towards their families and society in such case it is difficult for the organization to devise hr policies that are friendly for all. In such a situation productivity measures, work structure, and organization culture needs intense study and change. The time has come that the organization realises that its workforce is aging and getting older and to acknowledge the fact that the variations in the workforce and their perception towards the HR policies can become a major concern in coming time. To curb these differences and make these generation work as team effective policies needs to be formulated in such a way that it is employee friendly for all generations.

Objectives-

- 1) To study the hr policies pertaining to organization
- 2) To study the evolution of hr policies
- 3) To study the paradigm shift occurring in hr policies from gen x to gen z

Literature Review-

HR policies are well versed statements that help the organization to manage their workforce. Today's organization consists of culturally and generationally diverse workforce who have their own interests, needs and values. HR policies cover almost all the aspects related with employees, right from procurement till their separation from the organization. These policies help organization to make maximum use of workforce to achieve goals while help employees (Ogedegbe, 2014) to secure a better life and career. The diversity in the employees can be viewed as a positive aspect of labour but can be conflicting since they differ in their personalities and thought process. In today's scenario the workforce majorly comprises of three generations – Generation x, generation y and generation z.

Characteristics of generations-

Generation x

The people were born between 1965 and 1980 and have a different attitude towards work from their ancestors. They had a difference in opinion and did not trusted in ways of working of their parents. Therefore they tried to mend their ways and explored other means than the traditional working styles. This generation was sceptical and questioned the traditional working styles and welcomed change unlike their previous generation which never questioned and went on working in the same pattern for years. They had a strong desire for work life balance and career growth opportunities.

Generation Y

Generation Y also known as millennials were born between 1981 and 1996. They form the major part of the workforce .They have been characterised as self-confident individuals, independent and goal oriented. Though the media created a negative image of this generation as self- centred and lazy kids. This generation is a tech savvy which have made more easy for them for adapting to the major technological change than the previous generation. They seek managers who respect their ideologies of freedom and give them regular feedback (Jeni and Karen, 2007).

Generation z

Generation z is the youngest of all being born during 1997 to 2010 in the age when technology entered into the lives of common man. Generation z differs from generation x and y by several factors entrepreneurial, autonomy, motivated, and in person communication. The evolution of previous generations from being traditional to practice autonomy has help in shaping the behavioural traits of this generation. This is the youngest blood who’s a very small percentage is in industry while the rest are about to enter. (Wiedmer,2016)

It is forecasted that they will become one of the most powerful generations of all times. They seek full autonomy in their work and cannot tolerate monotony .The current workforce is majorly generation x and y individuals with very less of generation z. Generation z being born in the era of technology they feel more attracted towards it. Technology is in their blood and they have grown to use the maximum of it, therefore the technology has also played a major role in developing these induvial and they are better able to cope with the complex environment.

It is very much evident that the people of all three generations differ in their needs, values and personalities. These generational differences are posing the challenges for human resource specialists and managers and they are exploring how to manage and work with people from different generations in the workplace and how hr policies can make an impact on these generations so that they can work as a team towards achieving organizational goals.

A comparative study of generation x y and z is as follows-

	Generation x	Generation y	Generation z
Birth year	1965-1980	1981-1996	1997-2010
Characteristics	Independent, disciplined, traditional	Confident, highly educated, goal oriented	Autonomy, freedom of work, enthusiastic, open mindedness
Importance	Highly experienced, good managers	Making major portion of workforce, technologically sound	Fresh blood, energetic, zeal to prove themselves

A study by Conway (2004) established a relationship between HR practices and commitment level and how it varies with age of the employees. He suggested that the older age group was more committed towards organization than the younger generation. It was an important finding since it can reveal the possible causes and solutions for retaining the younger employees. The old workers who were highly committed were more satisfied with job

security (Finegold et al. 2002). A theory was proposed by Higgins (1997) that there are majorly two types of focuses, one being promotion focus involving aspirations and accomplishments and other being prevention focus involving responsibility and safety. Later Freund (2006) concluded that the promotion focus was seen in young employees while the prevention focus was more prominent in old employees. Motives related to work and career change with the age of the employee so it can be said that the impact of HR policies can also vary with age (Kooij et al., 2011).

Research Methodology-

The research was done with the help of secondary data collected from various research papers and then extensively studied.

Analysis and Findings-

The time has arrived where the generation x has taken over the senior positions in organization. Though not born in the age of technology they seem to fit with the fast changing technological advances as they have witnessed the major ups and down in the technological field. This generation has been in industry for more than 25 years and has the ultimate pool of rich experience that can train young individuals. While the generation y forms the major part of the current workforce and is enthusiastic to become future leaders and have high aspirations for future. Then there is generation z which is highly energetic and a young blood filled with determination to prove themselves, though they have a different mind-set and thought process but with sincere attempt this generation can work well with their predecessor generation x. An experienced generation can carve a route towards organizational success with the young generations along with building their future as well.

As the difference lies within the core values of these generations so there is always a chance of conflict in opinion, then it is the time where strategists have to come up with a common solution that can be beneficial for the entire workforce. There can be many instances where employees of different generations can end up in conflicts. For example generation x people have traditional approach towards work policy while employees of generation y and z expect to work on their own terms and conditions at this point the policy makers are expected to devise such solution which can help in achieving the task completion which is the ultimate goal. Working conditions, work life balance, work location, time flexibility are some of the domains where HR policies can be formulated keeping in mind the workforce diversity. As in coming time the generation z will be in their prime phases so it is necessary for the organization to look after the procurement of generation z employees. Development of Human resources information system and HR analytics is gaining popularity with the evolution of technology, this advancement can prove to be a boon for generation z as they will be able to adapt better to this technology The generation z is marked as the intense technology users therefore this technology can be used for their recruitment by connecting to them through internet technology and social media for example LinkedIn, Facebook etc. Retention of generation z employees can be a hassle since they want full autonomy that is the reason they can be founded as freelancers and contract based employees. With the evolution of generations there has been a major change in HR trends. Health and safety were the prime benefits which were given to the employees but the current trend has tremendously changed giving more autonomy to the employees related work location and timings. The flexible work

time policy can be very helpful in retaining the current generation of employees. The primitive HR policies never considered curbing stress during working hours but stress management can become a new topic of research. Organization back then gave a hike of fixed percentage of salary with limited means of extra income. But with policies of perks and incentives they can motivate current employees to stay longer in the organization and thereby increasing their loyalty. Organizations have started to invest hefty amounts in recreational activities like adventure trips, cycling, yoga classes, celebration of women days etc. Learning organization is a concept where an organization and its employees are open to learning. This can help employees to sharpen their skills and enhance the level of knowledge. By introducing new techniques of learning such as on job training, rotational jobs, conferences and seminars can give an opportunity to both generation y and z to explore more of their inner skills and capabilities. With change in generation the training methods have also evolved since then, off the job training has gained popularity over traditional on job training. Case study analysis, lectures, role play are some of the off job training methods. Since the demand has changed in these years the consultancies have come to a big picture functioning into other aspects of HR rather than just in recruitment and staffing like earlier. These little changes in policy can actually make a big difference in coming future.

Conclusion

HR policies are meant not only for smooth functioning of the organization but also for the well-being of the employees as well. Policies are formulated in such a way that can cater the needs of the organization and can be moulded as and when required. The labour market is facing a transition phase where the focus is being shifted from generation x and y to generation z. The new talent is emerging and getting ready to step into the industry and will rule it for several decades. The organization must gear itself for this transition and make policies which are flexible enough to keep up with the pace of changing environment.

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**“A STUDY ON INFLUENCING FACTORS IN THE SELECTION OF
SPECIALIZATION OF MBA PROGRAM”****Surabhi Chandane, Hemanshi Yadav, Sarvesh Kshirsagar**
SIOM Pune

ABSTRACT-

Now a day's management skills are important. Many a times it is observe the students who are in academics for manager program are not able to select the specialization for MBA course.

This paper will make an attempt to find out what are the various method students used for selection of MBA specialization.

This study will collect the primary data with survey method in two parts first the MBA student who are they already finished there MBA course and second who they are in academics for MBA 4th semester

INTRODUCTION

An MBA or “Master in Business Administration” is an internationally recognized degree designed to develop skills required for careers in business and management. It could be trigger needed by those striving for their own business venture.

Good selection of business specialisation as “the major best capable of helping the student to achieve their educational and post education goals and the one which provides a match between the students’ abilities and interest”. These abreast of the fact decisions increase student’s satisfaction, influence their career opportunities and also improve their academic results.

As an MBA aspirant, student have so many options to choose. Be it in the field of human resource management, marketing management, or finance, there is huge scope in every field that makes decision making even more tough.

For MBA, we get opportunities in different field according to the demand in the market. Students get to grow and learn from different specialisation. MBA program provides a vast platform for their convenience and choice. Pune university provides various specialization like Marketing Management, Financial management, Information technology management, Operations management, Human resource management, International Business management, Supply Chain management, Technology management, Banking and Insurance management, Healthcare management, etc. Selection of specialisation could be a stressful and pressurizing job because students don’t make decisions in vacuum, with this view, we are trying to understand the factors which would have an impact on students’ career. Selection of the specialisation plays an important role especially in the career and standard of living.

LITERATURE REVIEW-

1) Jane W. Wairimu’s (2009)

“Factors Influencing the choice of specialisation of MBA courses by students at Institutions of higher learning in Kenya”

As per researcher it is clear that personal, cultural, social, geographical and emerging industrial factors played a key role in the students' choice of MBA specialisation.

As per social factor is concerned, to some extent parents influence on the student where as members and role models contributed most in the selection of specialisation.

2) Aamir Sarwar, Rizwan Masood (2015)

“Factors affecting selection of specialisation by business graduates”

As per researcher, factors analysis extracted six important components which are academic, social, capital, future prospect, human capital, market demand and job prospect factor. Hence these factors help an individual in his/her career development and personal abilities. Thus, all the factors play an important role and has an equal impact towards the selection of specialised sectors irrespective of their parent background and family income.

3) Swati Mittal

“Top 10 MBA specialisation choice and options”

When as a MBA aspirant, we plan to take admission in MBA course, there are so many options that it leaves us confused. We must consider not only our preference but a lot of other factors such as the job scope, collage offering the programs etc. There are instances where we choice the wrong specialization because we did not have enough knowledge about it or we have wrong perception of that particular course or some other reasons, be it influence or something else.

4) Milind Marathe,2016

“Study of factors influencing the brand choice in MBA program and Source of communication creating the awareness about an MBA Institute “

Since MBA student are forcing on select parameters like Brand Name, Academic credentials, Ranking by coaching class. It can be suggested that management institutes should highlight about these features in their brand communication with respect to these stakeholders. Websites of respective MBA institutes are also important source for knowing about the Institute.

OBJECTIVES-

- 1) To identify the factor for the selection of specialization in MBA course.
- 2) To identify the impact of MBA specialization selection.

PROBLEM STATEMENT-

There are a variety of MBA specialization that prepare graduate for more specific career paths. Selection of specific career paths that means selection of specialization plays an important role as it carves out the future of the students.

The aim of this research is to know the influencing factors which affect the students preference for their selection of specialization. This will also give us an idea to know which branch student prefer from different background. This also includes the identification of impact of the selection of specialization on the salary and career of the student.

RESEARCH DESIGN –

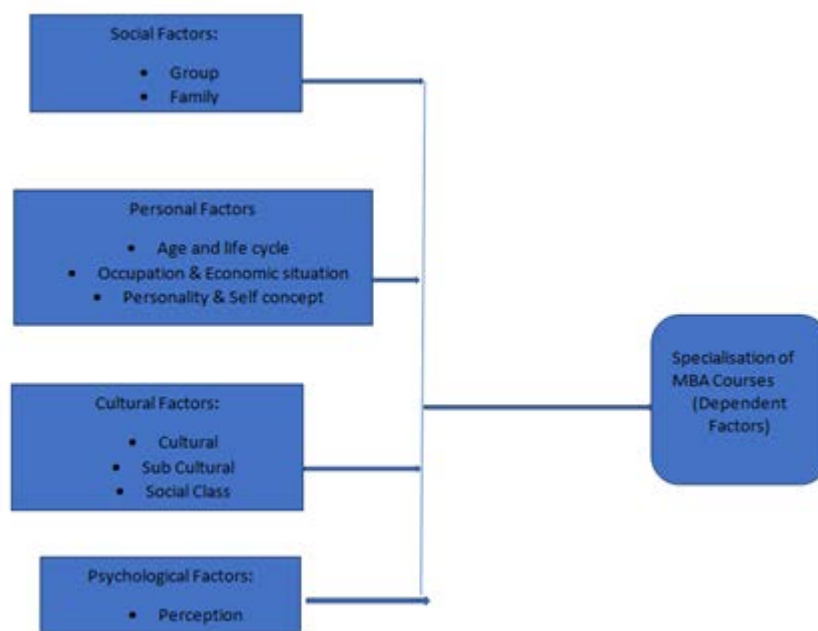
This is quantitative and Exploratory research. Primary data has been collected through structure questionnaires. The questionnaires have divided in two sections,

A. MBA second year students.

B. MBA pass out students.

The study has used secondary data for literature review through published research paper, journals, articles and books. Further study has also used published online material on websites.

This Research is limited to Sinhgad Institute of Management, Pune. We have not covered all other institute for this research.

VARIABLES-**Sampling Technique:**

- This research will use cluster sampling technique to collect the primary data for the mentioned hypothesis.
- This sample size of study is 200, reason being cluster sampling technique because it is mutually homogenous yet internally heterogenous groups are evident i.e. different specialisation in MBA, group of factors affecting the selection of specialisation,

The Margin of Error: $n = N/1+Ne^2$

where, n = sample size N = population size

e = Margin of error

I is constant

therefore, $n = N/1+Ne^2$ i.e. $200 = 600/1+600*e^2$

therefore $1+600e^2 = 600/200$ $1+600e^2 = 3$

$600e^2 = 2$ $e^2 = 2/600$

and $e = 0.0577$

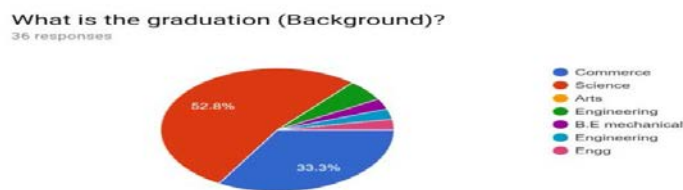
The study will use structure questionnaires technique to collect the primary data for fulfilment of mention hypothesis.

HYPOTHESIS-

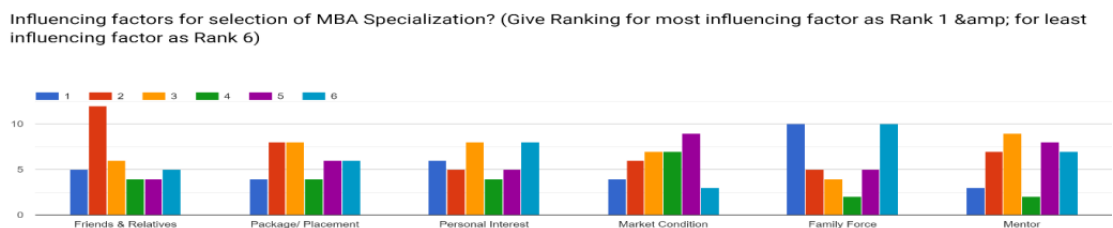
1. H₀- There is no significant relationship between MBA CGPA score and selection of MBA specialisation.
 H_A- There is significant relationship between MBA CGPA score and selection of MBA specialisation.
2. H₀-There is no significant relationship between influence of relatives and MBA specialization.
 H_A- There is a significant relationship between influence of relatives and MBA specialization.
3. H₀ – There is no significant relationship between graduation and MBA specialization.
 H_A- There is significant relationship between graduation and MBA specialization.

DATA ANALYSIS AND INTERPRETATION

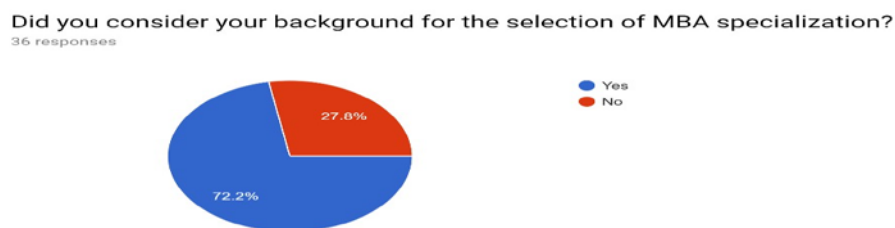
SURVEY OF SELECTION OF MBA SPECIALIZATION FOR 2ND YEAR STUDENTS.



Interpretation: The above chart shows that 52.8% of respondents are from science background, 33.3% of respondents are from commerce background and 13.9% of respondents are from Engineering background.



Interpretation: It can be concluded that Friends & Relatives influence effectively, Family Force and Market Condition following the rank.



Interpretation: The above chart shows that 72.2% consider their graduation background for the selection of MBA specialization.

Do you feel college placement is most influencing factor for selection of MBA Specialization?

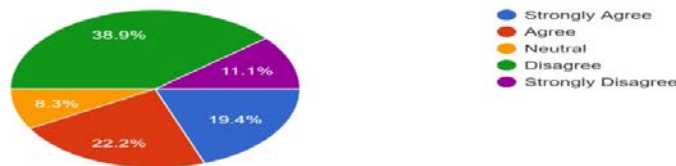
36 responses



Interpretation: The above chart shows that 36.1% respondents strongly feel college placement is most influencing factor for selection of MBA Specialization.

I selected the MBA specialization on my CGPA scores?

36 responses

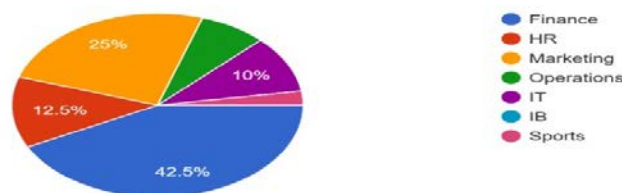


Interpretation: The above chart shows that 38.9% selection of MBA specialization is some extent based on CGPA scores.

SURVEY OF SELECTION OF MBA SPECIALIZATION FOR PASS OUT STUDENT

What is the specialization of MBA you have selected?

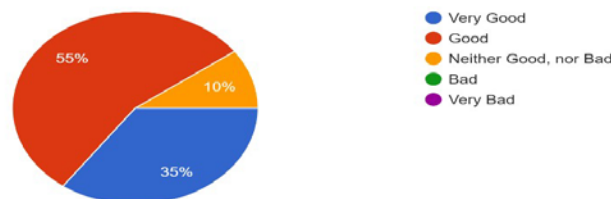
40 responses



Interpretation: The above chart shows that most MBA students 25% respondents selected Marketing ,42.5% selected finance and 12.5% selected HR.

What impact did your choice have on your placement?

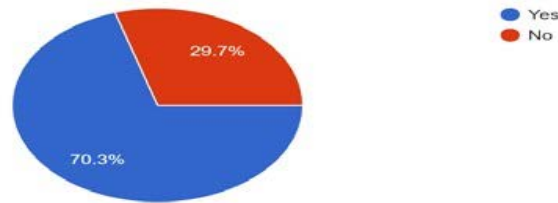
40 responses



Interpretation: The above chart shows that the 55% of pass out MBA respondents are happy with their choice.

Will you opt for dual MBA?

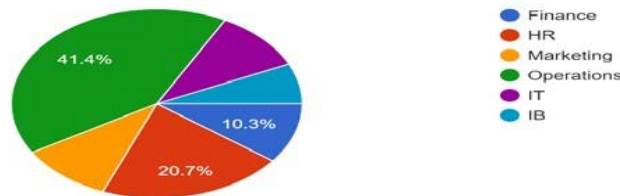
37 responses



Interpretation: The above chart shows that 70.3% MBA pass out will opt for dual MBA.

If yes, which specialization would you choose for dual MBA?

29 responses



Interpretation: The above chart shows that the 41.4% give more priority to operations, if they opt for Dual MBA ,10.3% for Finance and 20.7% will go for HR.

Reason behind choosing a dual MBA?

36 responses



Interpretation: The above chart shows that the 41.7% respondents feel that dual MBA gives better career growth. 22.2% feels that dual MBA gives better package as well as same percentage of respondents are not opt for dual MBA.

CONCLUSION

The purpose of this study was to determine some of the underlying factors that affects the selection of specialization by business graduates. Student specialization choice are influenced by numerous factors including carrier development, social factors like family and group, personal factors include Age and life cycle, occupation and economic situation, personality and self-concept, Cultural factors like culture, sub cultural and social class, Psychological factors like perception, learning, beliefs and attitude and motivation.

A quantitative and exploratory research was conducted. Primary Data was gathered through questionnaires. Study revealed that all factors collectively have the same impact on MBA specialization selection. CGPA scores and MBA specialization selection are directly proportional but not that significantly. There is significant relationship between influence

of relatives and MBA Specialization. There is a significant relationship graduation and selection of MBA specialization. It can also be concluded that the above stated factors also influence for the selection of MBA specialization.

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Survey Questions

Survey of selection of MBA specialization for 2nd year students.

* Required

1. Name (optional)

2. What is the graduation (Background)? *

Mark only one oval.

- Commerce
- Science
- Arts
- Other: _____

3. Influencing factors for selection of MBA Specialization? (Give Ranking for most influencing factor as Rank 1 & for least influencing factor as Rank 6) *

Mark only one oval per row.

	1	2	3	4	5	6
Friends & Relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Package/ Placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Interest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market Condition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Force	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Did you consider your background for the selection of MBA specialization? *

Mark only one oval.

- Yes
- No

5. Do you feel college placement is most influencing factor for selection of MBA Specialization? *

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

6. I selected the MBA specialization on my CGPA scores? *

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Survey Questions

Survey of selection of MBA specialization for Pass out students

* Required

1. Name(optional)

2. What is the specialization of MBA you have selected? *

Mark only one oval.

- Finance
- HR
- Marketing
- Operations
- IT
- IB
- Other: _____

3. What impact did your choice have on your placement? *

Mark only one oval.

- Very Good
- Good
- Neither Good, nor Bad
- Bad
- Very Bad

4. Will you opt for dual MBA?

Mark only one oval.

- Yes
- No

5. If yes, which specialization would you choose for dual MBA?

Mark only one oval.

- Finance
- HR
- Marketing
- Operations
- IT
- IB
- Other: _____

6. Reason behind choosing a dual MBA?

Mark only one oval.

- Not opt for dual MBA
- Not satisfied with present MBA specialization
- Better career growth
- Market Requirement
- Other Personal Interest
- Better Package
- Other: _____

**A STUDY OF PERFORMANCE MANAGEMENT PRACTICES
FOLLOWED FOR FACULTY IN MANAGEMENT INSTITUTES AND
POSSIBILITY OF INTRODUCTION OF ARTIFICIAL INTELLIGENCE
IN PMS**

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ABSTRACT:

Technology today is experiencing another transition from the age of internet, we are onto the internet of things, artificial intelligence has multiple applications and is instrumental in the enhancement of performance.

The article looks at the study done by Accenture for it's employees and also explores the impact artificial intelligence can have on the way it's employees performance, it also tries to explore the potential of application of artificial intelligence in academics and would like to inculcate the performance potential matrix and with the help of artificial intelligence have a real time monitoring system which will help us devise a better recognition system of talent and help in retention, growth and finally promotion of the high potentials

Keywords: *Artificial Intelligence, performance management, performance potential matrix, management education*

1. Introduction

In today's world, education in all its forms and manifestations has penetrated into our social, personal life. Due to globalization, lots of Multi-National Companies (MNCs) like IBM, Microsoft, Fiat, Renault, Mercedes Benz, Bavarian Motor Works (BMW) etc. are setting up their business in India. Youth across the country in their early twenties are fancied and attracted towards a lucrative and rewarding career as Managers in these esteemed companies.

As a result, they are increasingly getting attracted to the prospects of pursuing Masters in Business Administration degree or M.B.A. as it is better known. In this endeavor they apply to various Management Institutes spread across the country. The Indian Institute of Management (IIMs) take the cake in getting the crème-de-la-crème of the students. In fact, the reputation of IIMs is enhanced by the staggering statistics that only one in seventy-two students actually manage to make it to IIM-Ahmedabad.

The popularity of MBA institutes are on the rise with the government mulling setting of five new IIMs. At the moment, India has twelve IIMs they are IIM-Ahmedabad, IIM-Bangalore, IIM-Calcutta, IIM-Kozhikode, IIM-Lucknow, IIM-Shillong, IIM-Indore, IIM-Ranchi, IIM-Rohtak, IIM-Raipur, IIM-Tiruchirapalli, IIM-Udaipur, IIM-Kashipur.

Maharashtra has hundreds of management institutes and Pune is a leading centre for it. These include those who offer MBA programme from Savitribai Phule Pune

University, some of the deemed universities also offer MBA like FLAME University, Symbiosis University, Bharti Vidyapeeth, MIT World Peace University, Tilak Maharashtra University and then there also those institutes which offer AICTE approved management programmes these programmes are called Post Graduate Diploma in Management (PGDM) or Post Graduate Certificate in Management (PGCM).

Pune being the Oxford of East offers an assortment of management programmes to the Indian and foreign students alike, students from rural areas of Maharashtra like Kolhapur. Nanded, Latur, Jalna, Amravati, Jalgaon, etc. and also from across India like Bihar, U.P., Jharkhand, Punjab, Delhi etc. migrate to Pune for pursuing their MBA degrees. To cater to the ever-growing demand, a number of management institutes both, autonomous as well as ones affiliated to University of Pune are coming up.

Today one hundred and fifty one management institutes are present in Pune district alone. The big question arises over the quality of students who pass out from various institutes and start their careers with a high salary and good job profile. Companies are getting increasingly concerned and choosy about the students to whom they make the placement offer.

This is primarily due to a perceived gap between their actual knowledge and the knowledge required to be 'industry ready' not to mention the severe toll that recession has taken on the placement activities. They tend to use criteria like past academic performance, performance during the MBA years, aptitude tests and fluency of communication skills.

So there is a need to ensure that the candidates who are chosen are capable and real "performers". In fact in **the quote made famous by Robert J. Kibbee, he said, "The quality of a University is measured more by the kind of students it turns out than the kind it takes in."** For this to become true, the management institutes themselves need to be first up to the mark to produce quality performers. The key role to achieve this is performed by the faculty members who teach in these management institutes. But, there are constraints on the part of the students too, the students tend to come from various streams like Arts, Commerce, Engineering and so on. They often find it difficult to adjust to all the courses being taught, for example: People from technical background find it difficult to appreciate courses in humanities like Organizational Behavior, Organization Development, Human Resources Management etc. And those from Arts might struggle with Accounting concepts and so on.

A major challenge for the faculty is to try and bring the entire class on a similar level of understanding because not only are their original streams different, there are issues related to learning methodologies, study pattern, linguistic skills etc. The Government also tries to help this by having certain norms for the faculty members who are responsible for imparting education and training to the students.

1.1 However, there are problems of assessing the suitability of a faculty to teach a course. There can be number of issues which need to be explored:

- a. Requirement of a real pre-defined yard stick or a bench mark to measure their performance
- b. Mapping the performance of a teacher.
- c. Taking corrective measures, if any.

This is because even if course may be the same but the students have different backgrounds and education when they take admission to management institute.

Performance management:

Performance Management: Michael Armstrong defines it as a systematic process for improving organizational performance by developing the performance of individuals and teams.

The process of performance management follows the below given process:

It involves four steps viz Plan, Act, Monitor, Review



- i. In the process of performance management, Performance has to be planned first that is benchmark the standards, plan the targets to be achieved and decide a duration for the same.
- ii. After planning the action has to start as per schedule and tasks allotted should be completed in a timely manner.
- iii. There has to be constant monitoring of the work so as to keep a tab of the happenings
- iv. There has to be periodic/constant review of the progress of the performance of the individuals/team involved. It may involve course correction, if required.

Many institutes in pune do have performance appraisals but the results of appraisal are often not considered satisfactory by most of the faculty members,hence there is a need to have an objective,bias-free management system which will help the appraisee in understanding areas of development and give realtime feedback of scope for improvement.

To counter the bias in performance management, artificial intelligence can be introduced in performance management,let us have a look at what it means.

1.2 What is Artificial Intelligence?

According to the father of Artificial Intelligence, John McCarthy, it is “The science and engineering of making intelligent machines, especially intelligent computer programs”. Artificial Intelligence is a way of making a computer, a computer-controlled robot, or a software think intelligently, in the similar manner the intelligent humans think.

AI is accomplished by studying how human brain thinks, and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of this study as a basis of developing intelligent software and systems.

1.2.1 Goals of AI

- a. To Create Expert Systems – The systems which exhibit intelligent behaviour, learn, demonstrate, explain, and advice its users.
- b. To Implement Human Intelligence in Machines – Creating systems that understand, think, learn, and behave like humans.

What Contributes to AI?

Artificial intelligence is a science and technology based on disciplines such as Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. A major thrust of AI is in the development of computer functions associated with human intelligence, such as reasoning, learning, and problem solving. Out of the following areas, one or multiple areas can contribute to build an intelligent system. **Application of Artificial Intelligence in Human Resource Management**

Human Resource Management

Human Resources (HR) have been experiencing significant changes thanks to the evolution of information technologies in the last two decades. Today (AI) is reshaping the way that companies manage their workforce and make HR plans, which increases productivity and employee engagement in general. It is clear that you should accept AI solutions to strengthen your team and gain some long-term benefits uses of AI in human resources management.

AI in Recruitment / Talent Sourcing

Talent assessment and employee onboarding is at the top, aided by unbiased intelligent assistants cum chatbots. The conversational user interface (CUI) supplemented by high efficiency of the hiring process.

From pre-screening applicants, scheduling interviews to pre-joining engagement, onboarding them, AI has a fair share everywhere. AI tools can filter eligible candidates based on gender, eligibility, performance, reliability & honesty too. Not only this, AI tools are pretty good at scheduling interviews for these handpicked applicants. A big load off the back for HR managers. Using AI makes these flawless, reliable & efficient as well.

AI in Employee Engagement, Health & Wellness

The AI tools analyse each employee’s behaviour, cognitive ability, and other criteria to predict his learning capacity and performance. Now, it optimises learning content accordingly to create a very engaging employee experience. Learning as well as engagement clicks when your HR intersects with AI tools for engagement. Try Infeed to make your employees’ opinions heard using Artificial Intelligence

AI is already doing the rounds with fitness apps and trackers in the workplace. Taking a leaf out of Amazon’s AI personal assistant Alexa, many forward-thinking companies target at

employee health and wellness with AI. AI in health and wellness understands employee's habits over time, knows what's hitting their healthy lifestyle and offers personalized health solutions & stress management too.

AI in Attrition Mitigation

- AI-based talent management solutions don't pause with just recruiting and engaging employees. The scarcity of talent and skill gap problem can emerge at the least expected times. To brace for this, AI plays a proactive role in identifying employee blues and does its best in addressing employee concerns and reducing attrition rates
- AI may not be able to prevent attrition completely but will proactively identify such Individuals or teams who are at the risk of attrition. Awareness is the first step towards betterment.

AI in Performance Management:

Performance management is coming to life through advanced digital technologies that are revolutionizing workforce management as we know it. Through analytics and machine learning, a new generation of workforce technologies is helping leaders guide workers in a timelier way—and helping people take a more active role in managing their own performance and careers. New tools and apps help people readily find learning sources and mentors, supporting just-in-time skill building, collaboration and real-time feedback.

Technology-enabled performance management is far more comprehensive and holistic. It's focused on maximizing people development, improving the performance of individuals and the entire organization. It is the future of work.

Digital tools, technologies and intelligent machines can transform people development, enabling supervisors to trace contributions from individuals and teams with more accuracy and solid data. They can also help supervisors measure outcomes with better transparency and impact because evaluations can be more closely linked in time to the performance being evaluated.

A more fact-based, data-driven approach to performance management helps enable at least two important developments. First, it makes the evaluation process more open, fair and transparent, based on clear and understandable data. Second, high- quality data can be used to steer people's performance in a more powerful way.

According to an article titled *The Future Of Performance Management: How AI And Big Data Combat Workplace Bias* published on Forbes.com, recent research showed that only 6% of organizations think their performance management processes are worthwhile.

The article further emphasized that, there are various biases at workplace, some of them related to gender and race. Other one is known as contrast bias, meaning an assessor is inclined to compare an individual's performance to his peers, rather than to defined standards of achievement. Another is recency bias – where actions in the recent past are given more weight, perhaps unfairly, than actions which happened further back in time. Kris Duggan, founder and CEO of BetterWorks shared his thoughts saying “We think that if

you can make collecting feedback much more frequent and agile, and more lightweight ... and it's open and collaborative ... those things really do drive performance.

“What we found when meeting our customers was that a lot of pain of doing the process [annual performance reviews] – the reason why it's not lightweight and it takes a lot of effort – is you have to come up with a list of people you're going to ask ... and there's some gaming going on ... maybe someone is only going to ask people who will say good things. The spirit of it makes sense, but the execution is really not that great.” Technology giant Accenture conducted a survey recently regarding performance management recently and the findings were a revelation in itself

According to Accenture's survey, 63 percent of leaders and employees said that relying on just one supervisor's employee evaluation is not an accurate way to assess someone. The objectivity enabled by richer data can improve transparency and fairness in evaluations, rewards, promotions and job rotations

It further states that, providing employees with real-time performance data is ranked among the top-three changes that would most improve workforce performance.

The human touch when it comes to coaching and evaluation will always be important. But in an age in which smart devices like wearable badges and remote sensors can track people's work—and when machine intelligence can even predict our future behaviour's—coaching and feedback will often come real-time via artificial intelligence to improve performance and the employee experience. Your coach is no longer just another human being who offers advice, but also an artificial intelligence-enhanced app that works alongside you. It helps mentor and guide you to actions—maybe to connect with a new group of colleagues or new knowledge sources, or even a lifestyle change. Some of this real-time feedback is delivered through software that helps enable co-workers to guide you. Both Twitter and Intel, for example, now use crowdsourced goal-setting technology that lets co-workers collaborate frequently to set each other's customized objectives throughout the year and provide real-time visibility into each other's progress. It's the workplace equivalent of the Fitbit a way to share the journey toward your goals with colleagues who can support you along the way. This can help networked teams fluidly form and work together, irrespective of where individuals are in the organizational hierarchy.

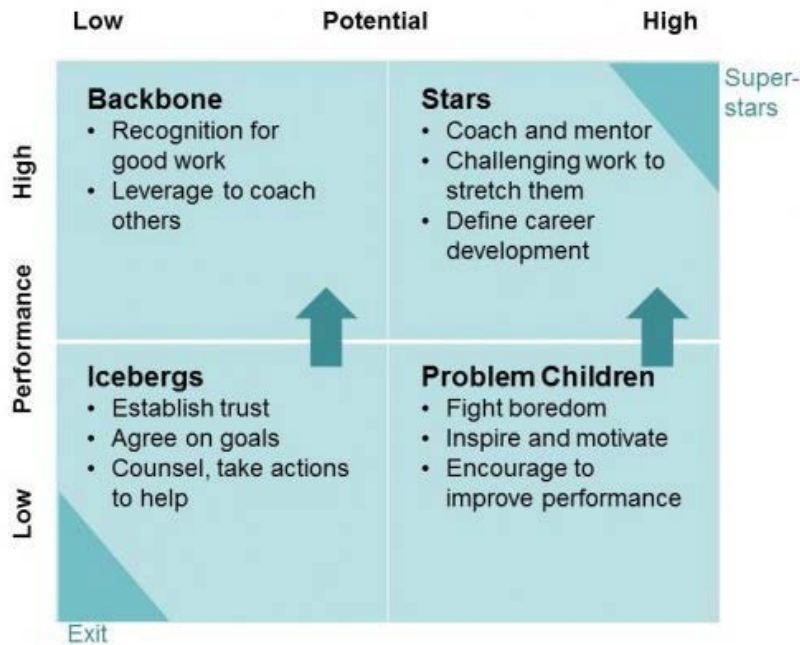
Will this kind of technology-enabled approach be met with resistance? Accenture Strategy found that 67 percent of employees and leaders view employee performance tracking technologies as a positive change only 13 percent view them negatively and 71 percent of employees and leaders say technology that tracks performance at work would improve performance management.

The survey concluded with findings that, companies need to:

1. Reorient performance management towards shared outcomes
2. Make performance management more transparent
3. Use technology to enhance performance
4. Incorporate digital knowledge to senior HR
5. Give employees access to technology to monitor their own performance.

Similarly, artificial intelligence can be used for enhancing the performance of the faculty,

It has been observed that, there has always been a struggle to suitably reward better performing faculty members in academics, usually seniority takes precedence when promotions are due and it's difficult to promote better performing juniors, however, if the performance potential matrix is followed and artificial intelligence is used to identify future high -potentials ,Artificial Intelligence works in real time and is not dependent on time bound appraisals and hence the monitoring of performance and mentoring can be done easily.



An illustration of the performance potential matrix

If the performance potential model is implemented there are chances that the faculty will feel motivated and a fair system of appraisal and management of the performance will be established.

The performance potential model is based on the idea to promote merit and take suitable action to boost performance and reward/punish the employees according to their performance.

It is basically divided into four quadrants, and the parameters for judging are potential and performance itself.

- a. The first quadrant called as Back bone talks of employees with high performance but low potential for growth, in academic terms, it could refer to senior faculty members who are well versed in concepts and classroom delivery but have little intent to constantly upgrade knowledge and they prefer to handle administration and extracurricular activities more, they can also hand-hold new faculty members and guide them in class-room teaching. For these faculty members, regular increments and occasional bonuses should be given.
- b. The second quadrant known as stars represents high potential and high level of performance, in academics they are the star faculty who not only are good teachers in class-room but are also involved in industrial consultancy and research, they should be the ones who are groomed to take up important functions in the organization and they

should be mentored for succession planning, they should be regularly given bonuses and due promotions

- c. The third quadrant known as problem child represents the ones who have potential but are not performing upto the potential, they should be counseled and made to work with the stars for some time so that they feel a boost in their morale and they aspire to become like the stars, the more time they work on honing their skills the better are the chances to become good faculty in all aspects, they should be sent for more faculty development programmes, seminars etc. they can be shown a career path for growth if they show improvement.
- d. The last quadrant i.e. iceberg represents the ones who have very less potential for growth and are low on performance also. They should be counseled immediately and put on a Performance Improvement Plan (PIP), the senior faculty members can help preparing them for secondary roles like administration, extracurricular activities first and encourage them to perform better, however if there is no improvement observed or if there is reluctance to make amends then such faculty should be let go.

Benefits:

The possible benefits to be accrued from this are:

1. the faculty members get a sense of fairness in assessment, secondly regardless of designation, those who are talented and willing to improve will get opportunities
2. it will also keep the low performers on their toes and will push them to perform or perish.
3. It also assigns work taking into consideration the characteristics and requirements of each faculty member.

Conclusion:

1. Artificial Intelligence is a thing whose time has come, it is already in the corporate and is mainly concentrated in IT sector currently.
2. It has huge potential to be used in human resources and can offer us real time performance analysis.
3. It is unbiased and has great potential for expansion
4. In academics, there is a lot of scope to identify, develop and reward the hi-pots. the performance potential matrix can be used for doing so.
5. It may require the management be trained in use of Artificial Intelligence as it's relatively new technology.

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CONSUMER BUYING BEHAVIOUR TOWARDS ORGANIC FOOD PRODUCTS: A STUDY IN PUNE**Aastha Shrivastava**Student, Sinhgad Institute of Management, Pune
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ABSTRACT

The demand for organic food products in India has been growing over a decade due to the increase in health consciousness. Consumers are willing to pay more for organic products as they are comparatively nutritious and safer than chemically produced goods. Moreover, they are sustainably produced. Organic food market in Pune is quite dynamic with many organic farming communities, ventures and sellers providing a variety of options for consumers. This paper presents the result of the consumer behaviour study conducted to determine awareness level of organic food products amongst the people in Pune city and further explains the factors that influence their buying behaviour. It also provides suggestions for marketers to enhance the purchase of such products among the consumers in Pune. This study follows a qualitative research approach. Further, this study uses convenience sampling method with primary data collected from respondents using questionnaires.

Keywords: *Organic Food Products, Pune Organic Food Market, Consumer Behaviour, Health Consciousness, Market Research*

1. Introduction:**Background**

The word “organic” refers to the way farmers grow and process all agricultural products like fruits, vegetables, grains, dairy products and meat. Organic farming encourages soil and water conservation and helps in reducing pollution. Animals on organic farms are not given growth hormones or antibiotics. Since they are raised on organic farms they do not receive chemicals from the soil or in food they eat. This kind of farming is ecologically balanced. Organic foods are grown without the use of synthetic pesticides, insecticides and herbicides and no genetically modified products are used. In simple terms organic products are grown without the use of any chemicals and are processed without additives.

Over the last decade, there has been a significant increase in interest in organic foods. New food technology, growing health awareness, busier lifestyle and global environmental issues have triggered an awareness of organic foods in many developed countries. Consumers have started to question what they eat and the food production processes, as well as question whether food is safe (IFOAM 2012). Organic food has developed as one of the fastest growing areas of the world food market. From being a niche market, organics have evolved as mainstream products.

In Pune people can buy organic food products from local suppliers like Gorus, Pride of Cows etc or from departmental stores like Nature's Basket or other sources. Nowadays, best option for buying organic food products is Big Basket and other E commerce sites.

Objectives of the study

- To analyse the awareness level of organic food products amongst the people in Pune.
- To examine the factors that affect consumer buying behaviour for organic food products.
- To provide suggestions for marketers to enhance the purchase of organic products amongst the consumers in Pune.

2. Literature Review

According to **Rushdi Ahmed (2015)**, product placement plays a big part in the success of organic products, and the survey reveals that consumers would be more interested to buy organic products if it was placed better in the stores. The range of products also plays a big role, if there is less choice in the organic food products, and then consumers will definitely go for conventionally produced foods. **J.Padmathy (2016)** says that there is a significant association between Income and factors determining consumer behaviour towards organic food products. As per **S.Sarumathi (2015)**, the major reasons for not buying the organic food were non availability, less variety and the prices were felt very expensive by the customers. Therefore if the prices becomes little reasonable and cheap they said they will buy more and also regularly. **Sathyendra Kumar (2012)** reveals that advertisement of organic products is very low when comparing to non-organic products.

So factors that affect buying behaviour towards organic products can be:

- Price
- Availability
- Advertisements
- Income Level
- Product Placement (Source)

3. Methodology

The study is based on primary data. The primary data is collected from 100 respondents of Pune using convenience sampling technique, where respondents are chosen on the basis of availability and convenience. Data is collected using structured questionnaire.

4. Limitation of the Study

The scope of the study is not wide as it is confined only to the Pune city. Also, the study is only limited to organic food products. There is no coverage beyond it. Further, the inference is drawn purely on the basis of respondents' responses in the study area.

5. Results and Discussions

a) Consumer's Awareness and Buying Behaviour Level

It's observed that out of 100 respondents 98% people has awareness about organic products with only 2% people not having awareness. But the buying nature varies across the genders as:

Table 1 : Consumer Buying Nature as per Gender

Gender	No	Sometimes	Yes	Grand Total
Female	28.13%	51.72%	46.15%	42.00%
Male	71.88%	48.28%	53.85%	58.00%
Grand Total	100.00%	100.00%	100.00%	100.00%

In the respondents it's observed that 58% were male and 42% were female.

Table 2 : Buying Behaviour of Respondents

Behaviour	Number of People
Yes	39
No	32
Sometimes	29
Total	100

Here, out of the total respondents, 39% of people prefer buying organic products in which 53.5% and 46.15% are male and female respondents respectively. 32% of people don't buy organic products with 71.88% of male and 28.13% of female in it. Further, 29% of people buy organic products sometimes with almost equal male and female population in it (48.28% and 51.72%)

b) Factors behind not buying organic products

Table 3 : Factors for Not Buying Organic Products

Factors	No. of Respondents	Percentage
High Pricing	32	41.0%
No Availability	33	42.3%
Low Shelf Life	3	3.8%
Other	10	12.8%
Total	78	100.0%

Here out of the total respondent, majority of people said that high pricing and no availability of organic food products are the factors because of which people don't prefer buying these products. 42.3% of people blamed no availability as a reason behind their avoidance in buying organic products, while 41% of people said high pricing. Further, 12.8% of people mentioned other factors and just 3.8% of people blamed the low shelf life of organic products as a reason. Thus, high pricing and availability are the main deciding factors for consumer buying behaviour towards organic products. So, Marketer should try to decrease the price in order to get more customers. They can do so by focussing on the demand of customers.

c) Local Producers Awareness Level in Pune

There are many local organic food producers in Pune like the following suppliers:

Table 4: Awareness of local producers by consumers

Producer Name	Number of Respondents	Percentage
Gorus	19	13.01%
Sendriya Setu	25	17.12%
Earth Alliance Corporation	14	9.59%
Pride of Cows	18	12.33%
Provilac	5	3.42%
None of the Above	65	44.52%
Total	146	100.00%

Out of the total 146 people responded for the awareness its observed that majority of people didn't heard the name of the top 5 organic food producers of Pune. Around 44.52% of people didn't heard about any local producers with 17.12% of people being aware about Sendriya Setu followed by 13.01% for Gorus, 12.33% for Pride of Cows, 9.59% for Earth Alliance Corporation and 3.42% for Provilac. So, it's very important for local producers to properly advertise their products, in order to gain good customer market in Pune.

d) Organic food product placement and buying behaviour of consumers

Table 5 : Preference of Organic Food Product Placements (Source)

Product Placement (Source)	No. of Respondents
Big Basket	29
Godrej Nature Basket	7
Local suppliers	37
Other	21
Other e-commerce sites (Amazon, etc)	6
Grand Total	100

Out of the total respondents response it's observed that most of the people (almost 37%) buy organic products from local suppliers, followed by 29% from Big Basket, 7% from Godrej Nature's Basket, 6% from Amazon etc and rest 21% from other sources. This observation is quite significant as Big Basket alone is a major player in the organic food markets. This might be due to the strong marketing and advertising of this elite firm. So, even other marketers should try to market their product in similar way.

e) Organic Food Products Buying Behaviour and Income Level

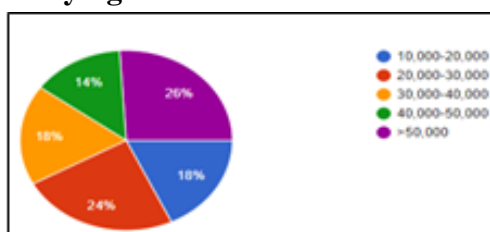
**Figure 1: Income Level Of Respondents**

Table 6 : Buying Behaviour and Income Level Relation

Income Level	No	Sometime	Yes	Grand Total
10,000-20,000	12	5	1	18
20,000-30,000	14	6	4	24
30,000-40,000	5	7	6	18
40,000-50,000	3	2	9	14
>50,000	3	6	17	26
Grand Total	32	29	39	100

It's observed that out of the total 100 respondents, most of the people around 58% of people have good income level of above 30000 and more. This might be the reason why 39% and 29% of people prefer buying always or sometimes. Also, 23 out of 26 high income people with income of more than 50000 pm prefer buying organic products. Even, income level of 40000-50000 category people shows that 11 out of 14 respondents are buyer of organic products. Further, even for 30000-40000 income group of people 13 out of 18 respondents are buyer of organic products. This proportion is on the decrease for the low income level group with 12 out of 18 and 14 out of 24 in 10000-20000 and 20000-30000 not buying organic products. Thus, income level plays a major role as can be seen from this interpretation, and is directly related to consumer buying behaviour.

f) Consumer Buying Preference for Different Variety of Organic Products

Table 7 : Consumer Preference for different Products

Product	No. of Respondents	Percentage
Fruits	56	33.14%
Vegetables	61	36.09%
Milk	29	17.16%
Eggs	12	7.10%
Other	11	6.51%
Total	169	100

There are varieties of organic products that are usually bought by the consumers. The response of the consumer shows that out of the total 169 responses most of the consumers prefer buying fruits and vegetables with maximum 36.09% for vegetables, followed by 33.14% for fruits, 17.16% for Milk, 7.10% for eggs and rest 6.51% for other products. So, generally consumers of Pune prefer buying fruits and vegetables as organic products. Thus, marketer should focus on marketing other products too so as to gain market in those products.

g) Consumer buying behaviour and advertisement of organic products

Table 8: Consumer Behaviour towards advertisements of organic products

Advertisement	No. of Respondents
Yes	45
No	55
Total	100

It can be observed that 55% of people are unaware of any type of advertisement related to organic food products. In contrast, 45% of consumers have seen advertisements of organic food products. Thus, marketers should try to increase advertising of organic products that can definitely increase the buyers.

h) Consumer Buying Behaviour for Organic products if pricing is decreased

Table 9 : Consumer Behaviour towards Low Pricing Of Organic Products

Consumer Response	Number of Respondents
No	0
Maybe	14
Yes	86
Grand Total	100

It shows that if the price of organic products is decreased, 86% of people will prefer buying organic products and 14% may prefer buying it then. Thus, price is also a strong factor deciding the consumer buying behaviour for organic food products.

6. Conclusion

The study concludes that the organic products awareness is good in Pune city but buying nature of consumers varies because of different factors playing a major role in it. It's observed that pricing of the organic product affects the most, when it comes to buying behaviour of people. Moreover, availability of organic products also affects the buying behaviour along with the factors like income level, product placement also playing a major role. Also, study reveals that advertising and promotion are very important for increasing market base for organic food products as is a case of Big Basket. In fact, even local suppliers should promote their products for better customer base. So, Consumer buying behaviour towards organic food products can be manipulated towards positive side by proper strategies related to marketing products, pricing policy, availability etc.

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THE STUDY OF USING CROWD-SOURCING FOR RECRUITMENT**Ms. Heena Mushtak Shaikh**

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ABSTRACT:

The aim of this study is to highlight the different way of recruitment called as crowd sourcing in which recruitment can be done by using social media instead of traditional ways of giving advertisement in newspapers. Here efforts are taken to make people aware of crowd sourcing so that only the traditional methods of recruitments cannot be followed.

Keywords: *Crowd Sourcing, Traditional Methods, Models etc.*

Objectives of the Study:

1. To overview the traditional methods of recruitment.
2. To study the crowd sourcing method and overview its advantages and disadvantages.

Scope of the Study:

Using social media as a part of crowd sourcing for recruitment is covered here.

Review of Literature:

Christopher G. Harris in his research examined the use of crowdsourcing in resume review and examined the effects of incentives on participant's accuracy in rating resumes.

Anhai Doan, Raghu Ramakrishnan, and Alon Y. Halevy have discussed crowd sourcing systems on the World-Wide Web. They have stated that crowdsourcing can be applied to a wide variety of problems, and that it raises numerous interesting technical and social challenges. Given the success of current crowdsourcing systems, they expect that this emerging field will grow rapidly.

Introduction:

Crowdsourcing is the practice of engaging a 'crowd' or group for a common goal. Crowdsourcing can take place on many different levels and across various industries. Because of our growing connectivity, it is now easier than ever for individuals to collectively contribute with ideas, time, expertise, or funds. This collective mobilization is crowdsourcing. [1]

As per James Surowiecki & Jeff Howe(2006) It is the act of company or institution taking a function once performed by employees and outsourcing it to an undefined network of people in the form of an open call.

In layman's language, A company post a problem online, a vast number of individuals offers their opinion and ideas as to how to solve it, the winning idea is rewarded in some form and at the end company adapting idea for its own benefit. For example, PEPSI launched his marketing campaign in 2007,which allowed consumer to design look of Pepsi can and winner has received \$10,000.By this way both the company and the customer gets benefit. Company has got its design and winner has earn his money. this is other aspect of crowd sourcing.

Players In The Market For Crowd Sourcing:[2]

These are some of the top companies that offer crowdsourcing.

□ **Talent Crowd:**

Their software platform manages the output from a global crowd of professional sources. They have a marketplace with contributors from around the world, and the technology takes care to manage the task (sourcing assignment) and always focuses on the optimization of time, quality and budget. They have learned over time which contributors work well for different assignments.

□ **Visage:**

They help in-house recruiters fill their pipeline with diverse talent. The San Francisco-based startup combines crowdsourcing and artificial intelligence to source talent for 12 Fortune 500 companies including Tesla, Virgin, and Boston Scientific. They use Visage as an alternative to job boards (low quality and time-consuming) and staffing agencies (too expensive). Recruiters post a job on Visage and receive 10 qualified job applicants within five days without the hassle of sourcing.

□ **Recruitifi:**

It's a two-sided marketplace that enables companies to leverage a community of expert recruiters, in a highly targeted and confidential manner, to fill open positions more quickly and efficiently at about half a traditional agency fee.

□ **RecruitLoop:**

They launched in Australia in 2011, moved to the Bay Area in 2013, and today support over 1,500 clients globally ranging from startups to Fortune 100s. RecruitLoop provides employers with a true modular or elastic recruitment solution, giving them a smarter way to hire due to their innovative hourly rate pricing model. Just like an attorney or an accountant, RecruitLoop recruiters can help organizations with as much or as little of the recruitment process as needed (usually at around 70% savings compared to a traditional staffing agency).

□ **Reflik:**

Reflik finds top candidates in half the time and for half the cost through its extensive network of recruiters and industry professionals. Canon, CarMax, Saint Gobain, John Hancock, Interactive Brokers, General Dynamics Mission Systems, and more companies uses Reflik.

□ **IndeedCrowd:**

Employers contract Indeed to bring them quality candidates from Indeed or other sources until they get a hire. Indeed Hire will create and modify the job content,

source/phone screen candidates, and present those candidates directly to the employer. The employer pays only if they make a hire! It is the most competitive full-service recruiting solution.

Models of recruitments which give rise to crowd Sourcing:[7]

- Recruitment 1.0 and 2.0:- It is a traditional ways of recruitment based on active job seekers. Recruitment 1.0 encompasses traditional recruiting over a huge timeline, including good old-fashioned fax machines, print advertising, (post, spray ,and pray). Recruitment 2.0 saw the move onto online and using technology for recruitment purposes, including the advent of online job boards & online CV searches. While the technology moved forward, the traditional methodology of 1.0 was prevalent, including online post, spray, and pray candidate attraction. Both Recruitment 1.0 and 2.0 were/are fundamentally focused on the active job seekers.
- Recruitment 3.0:- It is based on passive job seeks. It is used for the search of best talent. It is done by using social Networking sites.Eg.Facebook, YouTube, LinkedIn. Recruitment 3.0 is a huge leap as it moves recruitment out of its comfort zone. The beating heart of 3.0 is the non-active/passive individual and a focus on “best talent” and building predictable talent pipelines. In addition, the philosophy of “everyone is a potential candidate so engage them” is central. 3.0 takes us into building engaged, two-way, free-conversation based, transparent communities. This is anchored by things like employment branding, marketing.
- Recruitment 4.0:-It is done by using network opportunities available. Recruitment 3.0 is all consumed and focused on building communities. 4.0 is all about the value of those communities, both real and perceived. It includes Recruitment transitions from being a “cost center” into a “profit center”!

Recruitment 4.0 model work because of,

- a) The collapse and insolvency of many recruitment agencies.
- b) Job boards stuttering and collapsing ... and repurposing themselves
- c) Companies hiring “through the sky” through external referrals and crowdsourcing

Concept of Crowd Sourcing in Recruitment:

Crowd sourcing means using social media for recruiting. Eg.Linkdin, Facebook, Twitter. Instead of traditional methods of recruitments like job portal, recruiters, third parties simply the requirement will be posted on social networking site and that will be open call to all to reply.This posting and searching can be done by employees of company by their references and known people in their social networking accounts. The fact is that no one knows someone better professionally than those who have already worked with them. It’s why employers ask for references. On top of this, the use of peer-to-peer recruitment can notably aid diversity levels. By tapping in to professional networks, HR teams can access a vast audience that is more reflective of society itself. And with the removal of an intermediary, unconscious bias can be significantly reduced, if not removed altogether.[9]

Crowdsourcing is part of the new age recruitment model, popularly known as Recruitment 4.0. It enables a company to post an issue to an assorted group, who then contribute

suggestions and ideas on the concerned matter. Crowd sourcing is which emphasizes on technology and networking advancements. Tracing back the developments in recruitment during in the past few years, industry experts articulated agree that it's has the method of finding and seeking jobs has evolved by leaps and bounds.[10]

Advantages of using Crowd Sourcing:

1. Efficient in terms of cost and time.
2. No need of spending time and co-coordinating with recruiters and advertisers.
3. It is used to build borderless workforce.Eg.on Facebook the people are from all regions.
4. Attracts large pool of talent.
5. As our prime minister keep on stressing on digitization, paper less work, so it is a important step towards it.

Disadvantages of using Crowd Sourcing:

1. Sometimes analyzing the best fit from all the respondents is tedious job.
2. Lesser quality control.

Difference between Outsourcing and Crowdsourcing:**□ Outsourcing:**

In this we have fixed or known third party to whom we outsource. Its not done on social media openly. Eg.Healthcare work, Pension Work.

□ Crowdsourcing:

In this we have undefined public, online social media on which we can post our requirement. The open platform to reply is available to all. In the portals like LinkedIn it can be done with the help of personal contacts and recommendations. Definitely this gives known, trustworthy candidate as it comes from our contacts only. Eg.Recruitment, Talent Assesment.But Sometimes confidentiality is the major issue in this.

Conclusion:

Crowd sourcing is the efficient method to be used for recruitment. It is good in terms of saving both money and time. It is handy than giving adds in the newspapers. Via linkdln and Facebook, WhatsApp group recruitment can be done easily and a good candidate can be found out by using references. It reaches huge number of audience as almost all use phones and have daily access for Facebook, WhatsApp apps.

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ANALYSIS OF FIIS ON INDIAN STOCK MARKET**Prof. Pradip S. Thombare**

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ABSTRACT

Capital is considered to be very important growth in any economy. In case of developing country like India Domestic capital is not sufficient to fulfil the requirement of economy. In that case foreign capital plays a very important role. Foreign Capital comes in two forms- FDI and FII. FDI is considered as a more stable form of foreign capital as compared to FII. But, FII inflows and outflows directly create impact on stock market. Hence FIIs have emerged as movers and shakers of Indian Stock Market. This paper examines the trend and pattern of FII flow in India and also examines the relationship between FII and Nifty.

Introduction:

The Foreign Institutional Investors (FIIs) have emerged as remarkable players in the Indian stock market and their growing contribution adds as an important feature of the development of stock markets in India. As a result, the Indian Stock Markets have reached new heights and became more volatile making the researches work in this dimension of establishing the link between FIIs and Stock Market volatility. Hence, it's an interesting topic to ascertain the role of FIIs in Indian Stock Market.

After the launch of the reforms, foreign institutional investors (FIIs) from September 14, 1992, with suitable restrictions, were permitted to invest in all securities traded on the primary and secondary markets, including shares, debentures and warrants issued by companies which were listed or were to be listed on the Stock Exchanges in India and in schemes floated by domestic mutual funds. A positive contribution of the FIIs has been their role in improving the stock market infrastructure and the SEBI assured its contribution towards its development.

Hence, in this age of transnational capitalism, a significant amount of capital is flowing from developed world to emerging economies. Positive fundamentals combined with fast growing markets have made India an attractive destination for foreign institutional investors (FIIs). Although the Foreign institutional investors (FIIs), whose investments are often called 'hot money' because they can be pulled out at anytime, have been blamed for large and concerted withdrawals of capital from the country at the time of recent financial crisis, they have emerged as important players in the Indian capital market.

Review of Literature

Douma, Kabir and Rejie (2006) investigated the impact of foreign institutional investment on the performance of emerging market firms and found that there is positive effect of foreign ownership on firm performance. They also found impact of foreign investment on the business group affiliation of firms. (Aggarwal, Klapper and Wysocki, 2005) observed that foreign investors preferred the companies with better corporate governance.

Mukherjee (2002) examined the various probable determinants of FII and concluded (1) Foreign investment flows to the Indian markets tend to be caused by return in the domestic equity market; (2) returns in the Indian equity market is an important factor that has an impact on FII flows; (3) whereas FII sale and FII net inflow are significantly affected by the performance of the Indian equity market, FII purchase show no such affect to this market performance; (4) FII investors do not probably use Indian equity market for the purpose of diversification of their investment; (5) returns from the exchange rate variation and the fundamentals of the economy may have an impact on FII decisions, but such influence do not prove to be strong enough.

Gordon and Gupta, (2003) found causation running from FII inflows to return in BSE. They observed that FIIs act as market makers and book profits by investing when prices are low and selling when they are high. Hence, there are contradictory findings by various researchers regarding the causal relationship between FII net inflows and stock market capitalization and returns of BSE/ NSE. Therefore, there is a need to investigate whether FIIs are the cause or effect of stock market fluctuations in India.

Rajesh Chakraborty(2001) in his research paper titled „FII Flows to India: Nature and Causes‘ concluded that since the beginning of liberalization FII flows to India have steadily grown in importance. The author analysed these flows and their relationship with other variables Pal, P. (2004) found that FIIs are the major players in the Indian stock market and their impact on the domestic market is increasing. Trading activities of FIIs and the domestic stock market turnover indicates that FII’s are becoming more important at the margin as an increasingly higher share of stock market turnover is accounted for by FII trading in India.

Objectives of Study:

- a) To study the trends and patterns of foreign capital flow into India in the form of FII
- b) To study the relation and impact of Foreign Institutional Investment (FII) on Indian stock market (Nifty).

Scope of Study:

The study takes 13 years data into consideration. To study the impact of FII on Indian stock market, Nifty was selected in the study, as it is the most systematic stock market indices and widely used by market participants for benchmarking.

Research Methodology:**Data Collection:**

This study is based on secondary data. The required data related to FII have been collected from various sources i.e. Bulletins of Reserve Bank of India, publications from Ministry of Commerce, SEBI Handbook of Statistics, Govt. of India. CNX Nifty data is down loaded from the websites of NSE. Daily closing index value are taken and averaged to get the index value for each year, which is considered as more representative figure of index for the entire year.. The current study considers 13years data starting from 2001 to 2013.

Analytical tools and technique:

In order to analyze the collected data the statistical tools such as correlation and egression is used. Correlation coefficient is a statistical measure that determines the degree to which

two variable's movements are associated. Correlation coefficient value ranges from -1 to 1. Negative value of correlation indicates: if one variable increases in its values, the other variable decreases in its value and positive value indicates: if one variable increases in its values the other variable also increases in its value. In the current study to study the linear relationship between variables such as FII and Nifty correlation is applied. The regression analysis is a statistical technique used to evaluate the effects of independent variables on a single dependent variable. In the current paper attempt is made to study the impact of FII on Nifty.

Hypothesis:

- (1) H₀: There is no significant relation between FII and CNX Nifty
- (2) H₀: There is no Significant impact of FII on CNX Nifty

Data Analysis:

The following table gives the Net purchases by FII in Indian stock market from year 2001 to 2013. It also gives Average value of closing value of Nifty from 2001 to 2013. It shows that Net flow of FII has considerably increased from year 2001 to year 2013 with certain declining values in certain years. CNX nifty has also increased from the 2001 to 2013.

Flow of FII and CNX Nifty data

Year	Net .FII(CR)	CNX NIFTY
2001	13128.2	1117.5
2002	3629.6	1045.5
2003	30549	1264
2004	38695.8	1750.25
2005	47181.9	2297.1
2006	36540.2	3420.48
2007	71486.3	4680.6
2008	-52987	4198.8
2009	83424.2	4183
2010	133267	5462
2011	-2714.2	5319.93
2012	128361	5410.5
2013	112969	5908
Source: SEBI Handbook of Statistics		

Correlation analysis between FII and Nifty:

Correlation has been used to determine the statistical relationship between variables under study FII and CNX nifty. Based on the results it can be concluded that there is a moderate positive correlation of 0.510 between FII and Nifty. Since the significance

value is 0.038 which is less than 0.05, we should reject the null hypothesis. There is a relation between FII and Nifty.

Correlations

		Nifty	FII
Pearson Correlation	Nifty	1.000	.510
	FII	.510	1.000
Sig. (1-tailed)	Nifty	.	.038
	FII	.038	.
N	Nifty	13	13
	FII	13	13

Regression analysis between FII and Nifty:

Regression has been used to determine the strength of relationship between FII and Nifty. R-square value is 26% which means model explains the 26% variation. In other words independent variable FII is able to explain 26% variation of the dependent variable Nifty. p value is 0.075 which is more than 0.05 which means null hypothesis is accepted and there is no significant impact of FII on Nifty.

ANOVA:

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10426905.668	1	10426905.668	3.859	.075(a)
	Residual	29723353.316	11	2702123.029		
	Total	40150258.984	12			

Model Summary:

			Adjusted R Square	Std. Error of the Estimate
1	.510(a)	.260	.192	1643.813563

Coefficients:

		Un-standardized coefficients		standardized coefficients	t	Sig.
		B	Std. error	Mean square		
1	(Constant)					
	FII	.017	.009	.510	1.964	.075

Findings of the study:

- FII flows in terms of net purchases have shown increasing trend from the year 2001 to year 2013.
- CNX nifty has increased over a period of 13 years from year 2001 to year 2013.
- There is a moderate positive correlation between FII and CNX nifty stock market index. There is a relation between FII and Nifty.
- FII is able to explain 26% variation of the dependent variable Nifty
- There is no significant impact of FII on market index nifty.

Conclusion:

The Flow of FII has advanced significantly in last 13 years from the year 2001 to year 2013 and there is a correlation between such FII flows and changes in stock market indices like

nifty. -square is also found to be very low means other factors might be contributing towards volatility of Indian stock market. As the correlation is not found to be strong some other factors can have impact and relations with stock market which requires further investigation and application of other statistical models to look into this research.

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E ROLE OF SOCIAL NETWORKS ON ACADEMIC PROCRASTINATION AND EXAM ANXIETY

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ABSTRACT

The aim of this study was to investigate the relationship between the use of social networks and academic procrastination and exam anxiety. For this purpose, a sample of 341 students of Allameh Tabataba'i university dormitory was selected, the method of classified random sampling was used in this research. The instruments of this research were academic procrastination of Solomon, Rasblum and Sarason test anxiety questionnaires. The data were analyzed by multiple regression, Pearson correlation, Anova and the independent t-test. The results showed that there is a significant and positive correlation among the use of social networks, academic procrastination and anxiety of test. Also there are no significant differences between male and female students in addition the levels of education in the academic procrastination and anxiety. Furthermore the girls's usage of social networks is more than boyes.

Keywords: *Social networks, academic procrastination, academic anxiety*

Introduction

One of the factors that is closely associated with the student s' learning function in training centers is exam anxiety which is experienced at the time of exam preparation and doing exams and is accompanied with physical, cognitive and behavioral symptoms (Latas, Pontic *et al*, 2010). Researchers consider exam anxiety as a form of situational anxiety and define it as a relatively stable trait associated with threatening situations. Sarason points out the nature of anxiety as the causative agent of cognitive interactions in the process of attention and distorted and irrelevant thoughts to the task which causes

difficulties in the learning process, poor academic performance and abandoning the school (Larson et al, 2010). Lack of adequate preparation is a very important factor in the creation of exam anxiety and it may have several reasons such as: cramming on the night of the exam, lack of information about what is to be learned, feeling that there is no need to study, or postponing the study until the last hours before the exam (academic procrastination), each of these can prevent exam preparation and ultimately cause anxiety (Abolqasemi2003; Ocur, 2010; Putwain et al., 2010).

Academic procrastination is one of the behavioral problems of students which has a high prevalence and is associated with their educational status. Although academic procrastination is not always problematic, in most cases can have adverse and irreparable consequences through inhibition of progress and achieving the goals (Jokar and Delavar Pour, 2007). Some researchers consider exam anxiety as reduction factor of academic success and predictor of academic procrastination (Dobson, 2012; Tan et al., 2008). Study of Ybarra et al (2005) showed that the more the reported anxiety of young people, the more their internet usage (Jalali, Agha Babaei and Bagheri, 2008; Kennedy and Souza, 1998). Improper use of the Internet and curious, aimless and unplanned searches of students, not only takes them away from the main mission of internet at the University, but also by creating an excessive dependence to internet in an addictive or pathological form have negative impact on students' academic performance, including: academic failure, dropping out, lack of motivation to continue studying, reduction in the time and amount of reading, delaying activities, loss of sleep due to being online at night, feeling frustrated by virtual life (Kirschner

&karpinski,2010). The creation of companies and industries of computer manufacture and its accessories and the production of newer and cheaper products every year, expands the penetration rate and usage of internet among the families and in particular the students. The easy access and increased use of information and communication technologies such as social networks, in case of excessive use in an addictive or pathological form can cause problems such as delaying activities, loss of sleep due to being online at night and feeling frustrated by virtual life(Anand AP andNalwa k,2003).Among the important negative effects of such sites and virtual social networks, particularly among students, increasing of anxiety and stress can be pointed out(Farahani et al 2011). Considering what has been stated above, this study aims to determine the relationship between the usage rate of social networks and academic procrastination and exam anxiety. So general and secondary hypotheses of this study are:

1. There is relationship between the usage rate of virtual social networks and academic procrastination and exam anxiety of students of Allameh Tabatabai University who live in dormitory
2. There is relationship between the usage rate of virtual social networks and gender and academic procrastination and exam anxiety of students of Allameh Tabataba'i University who live in dormitory.

Methodology

This is a descriptive correlational survey study. The research population is all students at Allameh Tabataba'i University who live in dormitory from which 1320 are female and

1600 are male and all of them have been admitted to university in 94-1393.338 students were chosen as sample of the study according to a random stratified sample by gender and krejcie –Morgan table.

Research Tools

In order to measure the dependent variable in this study, Sarason exam anxiety questionnaire and Solomon and Rothblum procrastination questionnaire were used and in demographic section social networks were employed.

Exam anxiety questionnaire consisted of 25 items, and participants had to respond via Likert scale. Minimum and maximum scores obtained on this questionnaire were between 0 and 75. The authors have reported test-retest reliability coefficients, internal consistency, and split half reliability to be 77%, 94%, 82%, respectively. Cronbach's alpha for the total sample was 94% and for assessing the validity of the questionnaire, this scale was simultaneously validated with general anxiety scale (Najarian, Attari and Makvandi, 1996). Also, Solomon and Rothblum procrastination questionnaire has been used to measure the academic procrastination. The questionnaire consisted of 27 items. It should be noted that in this study, as items 7-8-17-18-26-27 were not indicative of academic procrastination they were not calculated in the total score. Calculation of reliability and validity of this questionnaire has been translated into Farsi by Jokar and Delavar Pour (2007) and its reliability and validity were 0.61 and 0.88, respectively. Furthermore, this scale was first used by Dehghani (2008) in Iran. In this study, reliability of the test using Cronbach alpha method was 0.79. The validity of the scale also (Solomon 1998, cited in Dehghani, 1999) using internal consistency reliability coefficient was reported to be 0.84. Dehghani (1999) reported the internal consistency reliability of the scale, 0.47 in terms of exam preparation, 0.88 after preparation for assignments and 0.78 after preparation for paper.

Findings

Table 1: Table 1 shows the distribution of the sample in demographic variables

	frequent	levels	variable
45/5	186	Man	gender
54/5	155	Female	
47/5	162	Bachelor	grade
44/3	151	Master	
8/2	28	PhD	
38/1	130	18-23	age
47/8	163	24-28	
10/6	36	29-33	
2/9	10	34-38	
0/3	1	9 و بزرگتر	
10/3	35	Facebook	The type of
11/4	39	viber	social networks
1/2	7	line	

8/5	29	Whatsapp
0/6	2	Tango
52/8	180	More than one
14/4	49	none

Table 2: Mean and standard deviation of variables

Standard deviation	Mean	Max	Min	variable
1/83	3/30	7	0	The use of virtual social networks
9/94	55/38	93	36	Academic procrastination
16/41	50/68	100	25	Exam anxiety

According to Table (2): mean and standard deviation of use of social networks variable were 3.30 and 1.83, respectively, mean and standard deviation of academic procrastination variable were 55.38 and 9.94, respectively and mean and standard deviation of exam anxiety variable were 50.68 and 16.41, respectively.

The aim of this study was to investigate the relationship between the use of social network with academic procrastination and exam anxiety variables. Pearson correlation coefficient was used to investigate this relationship. Before the tests, the normality assumption was examined in all three variables of the study.

Table 3: Examination of normality assumption of the research sample variables

The statistical indicators	Variables		
The significance level	Degrees of freedom	of Circumstantial evidence	
0/059	341	0/166	The use of virtual social networks
0/105	341	0/139	Academic procrastination
0/084	341	0/154	Exam anxiety

According to Table (3): Kolmogorov–Smirnov test was confirmed for examination of normality assumption variables with a significance level of greater than 0.05 ($p > 0.05$). Table 4: Results of Pearson correlation test between the use of social networks and academic procrastination

Table (4): The results of Pearson correlation coefficient between the two variables

The r	r^2	The Variable statistical index significance level	correlation
0/001	0/386	0/622	The use of social media and academic procrastination

According to Table (4): The results of Pearson correlation coefficient between the two variables, the use of virtual social networks and academic procrastination with correlation coefficient of 0.62 and significance level of 0.01 shows a significant and positive relationship between two variables with a confidence level of 99%.($p < 0.01$). This means that as the usage rate of virtual social networks increases among university students, level of academic procrastination increases, too. Use of virtual social networks variable with coefficient of determination 0.386, defines 38.68% of academic procrastination variable variance.

Table 5: Results of Pearson correlation between the use of social networks and exam anxiety

The significance level	r^2	The correlation coefficient	Statistical variable	indicator
0/001	0/24	0/49	The use of social networks and test anxiety	

According to Table (5): The results of Pearson correlation coefficient between the two variables, the use of virtual social networks and exam anxiety with correlation coefficient of 0.49 and significance level of 0.002 shows a significant and positive relationship between two variables with a confidence level of 99% ($p < 0.01$). This means that as the usage rate of virtual social networks increases among university students, level of exam anxiety increases, too. Use of virtual social networks variable with coefficient of determination 0.24, defines 24% of exam anxiety variable variance.

Table (6): Results of regression-enter analysis to examine the prediction of academic procrastination through the usage rate of social networks and gender

The presumption of linearity	The significance level	T	Standardized coefficients	R	Test of Variance	Model
Vif	Tolerance				Sig	F
		27/90		0/62	0/001	107/53
1/003	0/99	0/001	14/56	0/62		fixed
1/003	0/99	0/33	0/96	0/041		The use of virtual social networks sex

As shown in Table (6): ANOVA test with significance level of 0.001 and alpha level of 0.01 confirms the significance of prediction of academic procrastination through two predictor variables ($p < 0.01$). Between the two predictor variables, only usage rate of social network variable with $B = 0.62$ and alpha level of 0.01 can significantly predict academic procrastination variable ($p > 0.05$). Gender variable's not being significant indicates that there was no significant difference in academic procrastination variable between male and female students ($p > 0.05$). Linear combination of two variables with multivariate correlation coefficient of 0.629, defines 38.09% of academic procrastination variable variance.

Table (7): Results of regression-enter analysis to examine the prediction of exam anxiety through the usage rate of social networks and gender

The presumption of linearity Vif	The significance level	T	Standardized coefficients	R	Test Variance	of Model
	0/001	13/42		0/49	Sig 0/008	F 53/78
1/003	0/99	0/002	10/36	0/49		Fix
1/003	0/99	0/43	-0/78	-0/037		The use of virtual social networks sex

As shown in Table (7): ANOVA test with significance level of 0.001 and alpha level of 0.01 confirms the significance of prediction of exam anxiety through two predictor variables ($p < 0.01$). Between the two predictor variables, only usage rate of social network variable with $B = 0.49$ and alpha level of 0.01 can significantly predict exam anxiety variable ($p > 0.05$). Gender variable's not being significant indicates that there was no significant difference in exam anxiety variable between male and female students ($p > 0.05$). Linear combination of two variables with multivariate correlation coefficient of 0.49, defines 24.1% of exam anxiety variable variance.

Table (8): Results of one-way ANOVA analysis to examine the differences between students with different educational levels in the use of virtual social networks

The significance level	F	Mean Square	Degrees of freedom	Sum of squares	of
0/46	0/76	2/57	2	5/15	Inter group
		3/36	338	1137/93	Within group
			340	1143/08	Total

Inter group Within group Total

As shown in Table (8), it indicates Results of one-way ANOVA analysis to examine the differences between students with different educational levels in the use of virtual social networks, ANOVA test with $F(2,338) = 0.76$ and a significance level of 0.46 doesn't show a significant difference between students with different academic levels in this variable. So research hypothesis is rejected and null hypothesis is accepted. ($p > 0.05$)

Table (8): Independent t-test to examine differences between male and female students in the use of virtual social networks

SIG	T	DF	Man SD	Female SD	variable
0/34	-0/94		1/86	3/38	1/79
				3/19	The use of virtual social networks

As shown in Table (8), it indicates results of independent t-test analysis to examine the differences between male and female students in the use of virtual social networks with $T = -0.94$ and 339 degrees of freedom and with significance level 0.34 doesn't show a

significant difference between male and female students in the use of virtual social networks. ($p > 0.05$)

Discussion and conclusion

Due to changes and developments in technology and procedure of its use in the world and the advent of information and communication technology, spending time process has also changed among people with different age groups. The young people are among the first strata that have shown interest and enthusiasm toward new technologies and have absorbed them. According to researches which have been done, the use of the Internet and especially social networks has been strongly welcomed by many users recently.

Also, great attention of young people and teenagers to virtual social networks, for which the evidence is provided above, necessitates special attention to measure the usage rate of virtual social networks. Moreover, young people increasingly spend most of the leisure time to participate in these networks which according to research findings affects exam anxiety and academic procrastination. The following are suggestions for future research and future researchers in the form of functional options based on the lack of conducted investigations. According to Table 3 findings of this study are in line with Yung (1998), Javadi Nia et al (2012), Shahbazi Rad and Mirdarkivand (2012), Mingel and Adams (2015), Rashmy and Khosravi (2016). According to Table 4 findings of this study are in line with Akini and Eskandar (2011), Ybarra et al (2005), Sheikhi et al (2012), Shahbazi Rad and Mirdarkivand (2012). According to Table 5 findings of this study are not in line with the study of Vali Zadeh et al (2014) in case of procrastination among males and females. In their findings, academic procrastination of males has been reported to be more than females. About this non-conformity, it can be pointed out that their study was only on

B.A students while in this study, three levels of B.A, M.A and PhD were studied. The research population of this study was the students who lived in the dormitory but their research population was students of Tehran. The findings of the present research are not in line with study of Namian and Hosseinchari (2011). Their research which examined the differences in males and female's academic procrastination and its dimensions showed that in two dimensions of procrastination, preparing a paper and preparing for the exam, there was no significant difference between the two groups. But in the total scores of academic procrastination, and procrastination in preparing homework males scored more than females. About this non-conformity, it can be pointed out that in the study of Namian and Hosseinchari sampling was purposeful and this could affect research findings. And also their study explained academic procrastination based on religious beliefs while in this study the use of virtual social networks is taken into account and also their research population was different from this research. The findings of the present research are not in line with study of Vali Zadeh et al (2014) in case of procrastination among males and females. In their findings, academic procrastination of males has been reported to be more than females. About this non-conformity, it can be pointed out that their study was only on B.A students while in this study, three levels of B.A, M.A and PhD were studied. The findings of this study are in line with the study of Sepehrian (2011) which was not significant about the procrastination of male and female students. According to Table 6, in the study of Khosrojerdi and Mirzai (2009) internet addiction average score of females was more than

males but there was no significant difference between average of male and female groups. However, in this study, there is difference between male and female students in the use of virtual social networks. According to Table 7, the findings of the present research are not in line with study of Khosrojerdi and Mirzai (2009). About this non-conformity, it can be pointed out that their research about internet addiction was on guidance and secondary school students while in the present study the usage rate of virtual social networks was examined on students of Allameh Tabatabai University who lived in dormitory. In the study of Chih-Hung et al (2005) males suffer from internet addiction more than females and their major addiction was computer games which showed significant correlation with their education level. The results of this research weren't in line with the findings of present research. About this non-conformity, it can be pointed out that their research studied the use of computer games while this research investigated the use of social networks. Moreover, Study of Chih-Hung et al (2005) has been done on a different cultural context and stratum whereas this study has been done on students of Allameh Tabatabai University who lived in dormitory. In the study of Chih-Hung et al (2005) entitled gender differences and related factors affecting online gaming addiction among Taiwanese adolescents, the conclusion was that males suffer more than females from Internet addiction and mostly online gaming addiction. The present study showed that (Table 8) the use of virtual social networks in females is more than males. The findings of the study of Javadi Nia et al (2013) showed that the average number of hours that male students use internet is twice as much as female students and this difference was statistically significant. In explaining the findings of the present study, it can be pointed out that due to intellectual growth and changing attitudes toward gender, nowadays females and males equally use available resources in the community. On one hand, by increasing of admission of females to university, the possibility of their familiarity with science and technology has increased and this can be the cause of females more use of social networks compared to males. On the other hand, females may meet their spiritual and emotional needs through virtual social networks and also females have more free time and are less busy than males and this can affect the usage rate of virtual networks. According to the results of research hypotheses, it is suggested that to increase the culture for proper use of social networks as well as improving the media literacy of users, the budget for media literacy education services increases and considering that academic procrastination is one of the major obstacles to students' academic progress and causes time consuming and additional costs for a variety of matters, therefore it is recommended that consultants and other professionals teach coping skills with academic procrastination to learners. Due to the increase in the use of exotic social networks such as Viber, WhatsApp, Tango and Facebook, it is recommended that indigenous social networks be designed and implemented which can in the long run be used for other Iranian universities. For linking this study with further research, it is suggested that the role of social and cultural factors be considered as moderator variables. Given that the present study has examined the relationships between variables, it is suggested that future research be based on interventional procedures to reduce exam anxiety and academic procrastination. Also, the relationship between the use of social networking with other variables such as personality styles, suicidal thoughts, feelings of loneliness, psychological

security, the quality of social relationships, social support, communication skills, frustration, and social isolation can be investigated as there are so few studies in this subject.

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ENCRYPTION SECURITY ISSUES IN CLOUD COMPUTING

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1. Introduction

Cloud computing is a technology that uses the internet and central remote servers to maintain data and applications. This technology allows for much more efficient computing by centralizing storage, memory, processing and bandwidth.

Cloud Computing is a technology which is used store the application software and databases to the large data centers, where the management of the data and services may not be fully reliable. Even though today many new security challenges which have not been well understood in that very important aspect of the quality of service is the data storage and security.

Cloud computing enables us to access the data anytime, from anywhere around the world. To ensure the protection of user data, companies are implementing strong security practices. One of the most effective and secure ways of protecting data in the cloud is encryption. Different organizations use different methodologies when it comes to encrypting data in the cloud.

This paper focuses chiefly in the area of security in Cloud Computing here in the first section explains Cloud Computing concepts and practices and the succeeding section discusses state of the art infrastructure and security issues.

2. Origin of Research Problem

The idea of an "interplanetary computer network" was introduced J.C.R. Licklider, who have developed ARPANET (Advanced Research Projects Agency Network) in 1969. Since the sixties, cloud computing has developed along a number of lines, with Web 2.0 being the most recent evolution.

The first milestones for cloud computing was the arrival of Salesforce.com in 1999, which established the concept of delivering enterprise applications via a simple website.

Then in 2006, Amazon launched its Elastic Compute cloud (EC2) as a commercial web service that allows small companies and individuals to rent computers on which to run their own computer applications.

In 2009, the beginning of Microsoft into the cloud computing game with its product Windows Azure. The Microsoft wants customers to run their Windows-based applications over the Internet using Microsoft's data centers, with Azure being the system that organizes resources.

Cloud computing infrastructures use new technologies and services, some of which haven't been fully evaluated with respect to security but it provide services to more and more customers now a day.

Cloud computing has evolved through a number of phases which include grid and utility computing, application service provision (ASP), and Software as a Service (SaaS). There are three kinds of cloud computing models:

Cloud computing allow on-demand network access to shared computing resources. It is a model for managing, storing and processing data online via the internet.

On demand service – Use it when you need it.

Network access – Uses Internet as a medium

Shared Resources - Resources are pooled together and used by multiple clients.

Delivery Models of cloud computing

SaaS (Software as a service)- It is a service that offers on demand paper use of application software to users which pay per use of application software to users. Application is not require to install on client machine (PC) and it is platform independent. The clouds run a single instance of the software and makes available for multiple end users leading to low cost this makes it Cheap. All the computing resources responsible for delivering SAAS are entirely managed by the vendors. These services are accessible via web browser or lightweight Client Applications. The time and money spent on installing, managing, and upgrading software is reduce which makes the technical staff free to work with organization other issues. It allows users to work from any place. Internet performance and browser issues may lead to overall performance

PaaS (Platform as a Service) - This service is mainly in the development environment and it made up of a programming language execution environment , an operating system , a web server and a database.

Developers have freedom to concentrate on build, compile and run their programs without worrying of the underlying infrastructure. In this model you can manage data and the application resources, all other resources are managed by the vendor. Without the pain of maintaining software, it gives the ability to developers to create customized apps. It reduces the code and automates the business policy. Some issues will take place for rapidly developing and deploying an app.

IaaS(Infrastructure as a Service)

This services offers the computing architecture and infrastructure i.e. it offers all computing resources but in a virtual environment so that multiple users can access them. These resources include data storage, virtualization servers and networking. Most vendors are responsible for managing the above resources. Users will be responsible for handling other resources such as applications , data, runtime and middleware. This is flexible with support for dynamic workloads. Cost depends on the consumption and resources can be purchased as needed.

Cloud services cover a wide range of resources that a service provider delivers to customers via the Internet.

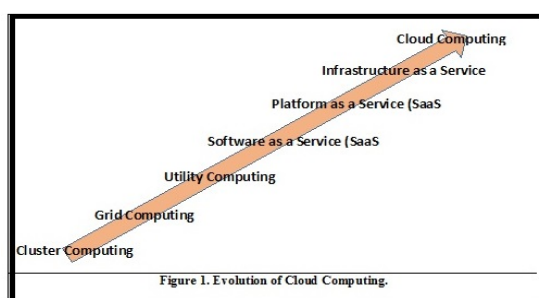


Figure 1. Evolution of Cloud Computing

The Cloud Computing has several major issues and concerns, such as data security, trust, expectations, regulations, and performance issues. Data Security is a crucial element that warrants analysis.

The Cloud computing concept offers dynamically scalable resources provisioned as service over the Internet. Security is to save data from danger and susceptibility. Various security issues and some of their solution are explained and our paper concentrates mainly on public cloud security issues and their solutions.

In cloud environments and for cloud service providers, encryption is a critical requirement for securing data. Encryption easily and simply provides the protection, key management, fine-grained access controls and advanced security intelligence data to protect sensitive data within public, private or hybrid cloud environments. There are lots of data encryption techniques presents such as Cipher Cloud, Vormetric encryption, Holomorphic Key Encryption.

Encryption Security in Cloud Computing

Encryption is one method cloud service providers use to protect cloud data from any unauthorized access. Cloud Data Encryption mathematically transforms data so that it is obscure without the “key” that can be used to change the data back to its original form. Encryption will be done by converting data from normal plaintext to cipher text and for conversions very complex mathematical computational techniques are used, but these techniques are very helpful only if the data is small. The objective of encryption is to ensure that data stored in the cloud is protected against unauthorized access. Encryption is a process used to protect information in transit and storage. It involves conversion of clear text data into cipher text, which cannot be read by unauthorized people. Cloud encryption is used to safeguard sensitive information stored and processed through networks, the internet, and mobile and wireless devices.

3. Literature Review

In cloud computing model, there are set of important polices, which include issues of security, privacy, secrecy and reliability. The most important issue is the data security and in that data protection is very important aspects. In cloud computing cloud providers assures that

Encryption will be done by converting data from normal plaintext to cipher text and for conversions very complex mathematical computational techniques are used, but these techniques are very helpful only if your data is small. But today continuously large amount of data are stored on cloud. So, for we need a mechanism that provides protected data encryption as well as safeguard for data hack. This is very important issue in cloud computing. Literature review mentions different mechanisms and an algorithm for data security in cloud computing but the complexity of the algorithm directly affects the speed of data access.

4. Proposed Framework

The framework proposed incorporates an encryption technique or protocol that provides secure data encryption mechanism that will provide solution on speed of data access on cloud server as shown in given figure.

The implementation of the proposed framework ill attempt to:

- strike balance between security, efficiency and functionality in cloud computing.
- provide confidentiality by hiding all useful information about the plaintext.

- provide confidentiality, integrity and verifiability of client data against an entrusted cloud provider.

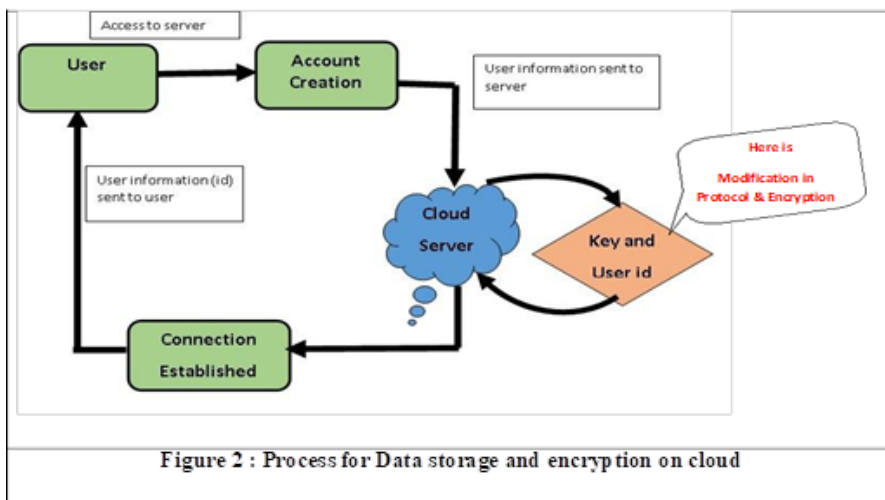


Figure 2 : Process for Data storage and encryption on cloud

5. Survey of Encryption Techniques

Surveys of the encryption techniques given below have helped the researchers to define a framework which is scalability compliant rendering moderate trade-off between time and cost.

Sr. No	Paper Title	Year	Methodology used	Advantages	Disadvantages
[1]	Ensuring Data Storage Security in Cloud Computing	2009 IEEE.	Porticor Virtual Key Management	Simple form	Master key is common in application
[2]	Understanding the Many Flavors of Cloud Computing and PaaS	2009 IEEE	AES 256-bit cloud encryption	Symmetric-key algorithm	Less Secure
[3]	On Technical Security Issues in Cloud Computing	2006 ACM	Security using SOAP header		
[4]	XML signature element wrapping attacks and counter measures	2005 ACM	XML Encryption	Faster encryption technique	
[5]	RSSS system for data security	2012 IEEE	Data security using RSSS	More secure technique	Complex method is used
[6]	Security in Cloud Network	2012 IEEE	Security in Cloud Network		
[7]	Fuzzy Keyword Search	2009 IEEE	Fuzzy Keyword Search	System usability	

	over Encrypted Data in Cloud Computing		Technique	improve	
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Table 1 Evolution of Encryption techniques6. Methodology

The goal of this approach is to obtain maximum use of a single design through software reconfiguration of hardware assets and dynamic configuration.

Phase 1: Understanding literature of Cloud computing and background survey on cloud computing. Studying and defining the functional requirements of Encryption algorithms for data security.

Phase 2 Understanding literature of efficient Data security methods. Developing algorithm for data security, implementation of encryption techniques and testing of these algorithms.

Phase 3 is about developing standard protocols and implementation of it in the application which understands from encryption techniques and algorithms.

Phase 4 is about designing of algorithm and encryption methods for cooperation. Formulating techniques and methods for building framework for data security in cloud computing.

Phase 5 deals with software development to validate methods using system level simulation and test bed developments, and try to combine all the previous work.

Conclusion and Future Work

Develop encryption technique that will implement security mechanism by maintaining speed of data access on cloud server which provides confidentiality, integrity and verifiability of an entrusted user or hacker. At the same time take care for the confidentiality of the useful information. We can also make a trade-off between the available encryption technique with its security level or measures of data transmission. Computing is the most popular notion in IT today; even an academic report from UC Berkeley says “Cloud Computing is likely to have the same impact on software that foundries have had on the hardware industry.” They go on to recommend that “developers would be wise to design their next generation of systems to be deployed into Cloud Computing”. While many of the predictions may be cloud hype, we believe the new IT procurement model offered by cloud computing is here to stay. Whether adoption becomes as prevalent and deep as some forecast will depend largely on overcoming fears of the cloud.

Moving to a cloud computing model can help the organization to survive in a tough economic climate, equipping the people with the latest business tools and giving access to advanced technologies at a fraction of the cost of purchasing and running the same systems in-house. Waste (of both time and resources) is reduced, allowing the user to effectively do more with less. This provides a leaner, more efficient IT model, available on demand.

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EMERGING STRATEGIES OF THERMAL POWER PLANT DUE TO INCREASE IN DEMAND OF ENERGY

Vikram Singh, Prof Sanmath Shetty
Sinhgad Institute of Management

1.1) Introduction:

Energy is the major source for the economic development of any country. In recent years, India energy consumption has been increasing at a relatively fast rate due to population growth and economic development. Energy plays a substantial role in economic, hence the relationship between energy consumption and economic growth is an important issue for economists. Renewable Energy (RE) has been identified as a key tool to counter climate change and enhance energy security. In India growth of the economy places heavy demand for electric power, presently Coal-based power generation is characterized by local and regional environmental degradation as well as greenhouse gas emissions, leading to climate change. Thus, there is a need for enhancing energy security along with reducing greenhouse gas emissions. Renewable energy is one of the environmentally friendly sources of energy and effectiveness of growing economic, in this article will show that the effects of RE for the economy in India.

Thermal Power dominates the field of electricity generation in India. It will continue to do so in future also. A proper understanding of the plant involves the complex process of converting thermal energy to electric energy. Electricity is the only form of energy which is easy to produce, easy to transport, easy to use and easy to control. So, it is mostly the terminal of energy for transmission and distribution. Electricity consumption per capita is the index of the living standard of people of place or country. India is facing energy shortages of an estimated 11 % of total energy demand and even higher peak shortages of 15% Demand-supply gap.

Capacity additions of 180,000 MW are required in the next 10 years to meet India's power demand and the new capacity needs to be added using a combination of coal, hydro, gas, nuclear and wind projects.

About:

In the earlier days coal might have been used for providing heat for making food or in the blacksmith's furnace but as technology made strides, so did the level and importance of coal in the energy production arena went upwards. Currently, thermal power plants produce hundreds of megawatts of electricity by burning coal. Despite the hue and cry of environmental concerns, which are of course true to a certain extent, various other parameters have still kept coal as one of the most important sources of power generation in thermal power plants.

The very first parameter is the ample abundance of coal in most parts of the world including the United States. Apart from the reserves found on land, there is also the presence of coal layers beneath the sea although it is difficult to commercially extract it from there, there might be a technology for this in the future.

The next factor is directly related to the above factor and is that of cost. As you know cost is closely associated with the availability and more abundant any commodity is, the lesser will be its price and vice versa which is a law of economics. Hence producing electricity the use of

coal is much cheaper than other non-conventional forms of energy such as say wind, nuclear and so forth.

Energy is the need of the future developing world and without it, many things are not possible as we all know that India is continually growing and the need for power is always seen. To meet the developing demand and having a sustainable development is was needed to go with green energy that would fulfill the gap of demand and supply.

1.2) Objectives:-

- 1) To find the new methods adopted by the power plant to meet the growing needs of the power.
- 2) To find the financial impact by adopting Green Energy by Thermal Power Plants.
- 3) To find the share of power being supplied by the different sources and cost of power generation by them.

1.3) Scope:-

The scope of the project is limited to the extent of Thermal Power Plants in India, from which the secondary data has been extracted and the study was done.

1.4) Limitation:-

- 1) It was not possible to get the data of each Thermal Power Plant all over India.
- 2) Sources of secondary data collection may lack authenticity.
- 3) Due to the data being confidential, some important information which is vital for the project could not be disclosed.
- 4) Secondary data may have not included the exact figures that are there according to the Power plants.

2.1) Research Design:-

The research design consisted of past and the current reviews and plans made by the Power Industry to fulfill the continuous increase in demand of the power in the country and the ways that are adopted by them to cope up with the same. Coal is a non-renewable source of energy and cannot be extracted in huge quantity at once as it will affect future needs and requirement. Power Plants have formed other methods of power generation that would help the country as a whole like-

- Solar Power Plant
- Hydro Electricity
- Wind Energy
- Renewable Sources

S.no.	Renewable Sources of energy	Installation Capacity (MW)	% of Share
1	Wind	21136,40	66.7
2	Solar	2631,93	8.3
3	Small Hydro power	3803,68	12
4	Biomass power	4120,13	13
5	Total	31692,14	100

Table No. 1

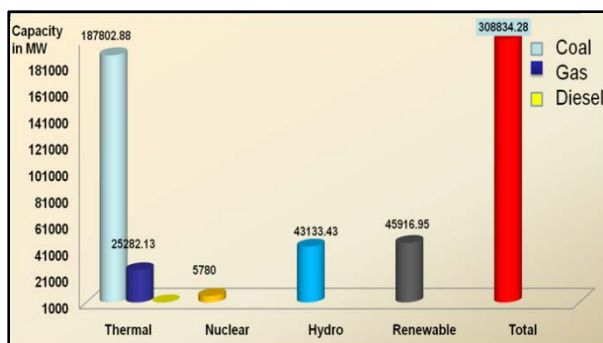
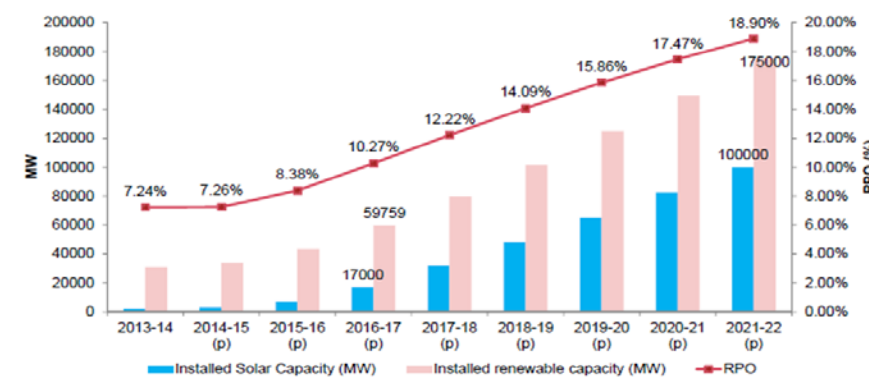


Table No. 2

The table number 2, gives us the clear picture that what was the total power output during the year and the share of contribution by different sources of power generation. Instead of just focusing on the Thermal Power generation, the companies are slowly shifting towards nonrenewable sources that not only saves and reduces the operational cost but it also gives the environment support towards the low emission of various kinds of gases in the environment.

Table No. 3

175 GW RE will contribute to 18.9% of the entire power consumption in India in 2022



2.2) Methods Adopted to promote green energy:-

- Grant/subsidy
- Accelerated depreciation
- Tax concessions/exemptions
- Preferential tariff
- Renewable purchase obligations

The initial capital cost of installation is higher in most of the renewable sources except hydro. But the cost of operation and maintenance is comparatively cheaper than thermal or nuclear power plants. Also since the cost of fuel is none for renewable energy sources. With the increase in prices of coal, gas and other fossil fuels renewable sources will become comparable or cheaper than conventional power sources and will thus become economically viable. Levelized cost of electricity production (LCOE) of renewable energy technologies varies by technology, country and project, based on the renewable energy resource, capital and operating costs and the efficiency/performance of the technology.

3.1) Research Methodology:-

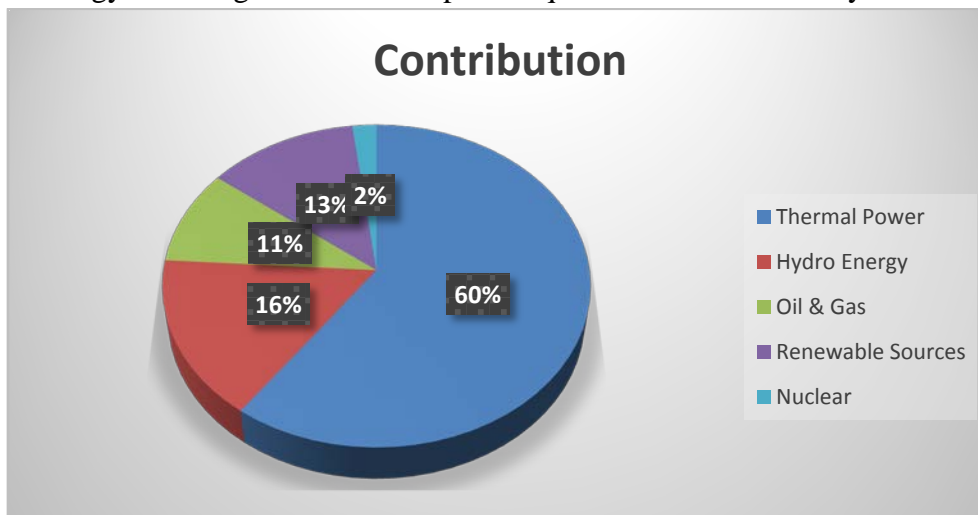
Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying research done systematically. The present study is based on secondary data sources, procured and extracted from the financial statements of the selected companies. The published annual reports of the selected companies are taken from related websites, magazines and journals on Economic and Finance have also been used as a source of data.

Data which are not originally collected but rather obtained from the published or unpublished sources are known as secondary data. The data which we get directly from the company's intranet, companies website, books, magazines, etc. are the sources.

- **Websites**
- **Magazine**
- **Company's financial statement**
- **Research Papers**

3.2) Contribution:-

In this study we have gone through various data of Government & Private Power Generating Sector that shows and give us a clear picture that to increase the power generation the company are not only focusing only on the Non- renewable sources but along that various renewable sources of energy are being used to meet up the requirement of the Country.



The initial capital cost of installation is higher in most of the renewable sources except hydro, but the cost of operation and maintenance is comparatively cheaper than thermal or nuclear power plants. Also since the cost of fuel is none for renewable energy sources. With the increase in prices of coal, gas and other fossil fuels renewable sources will become comparable or cheaper than conventional power sources and will thus become economically viable. Levelized cost of electricity production (LCOE) of renewable energy technologies varies by technology, country and project, based on the renewable energy resource, capital and operating costs and the efficiency/performance of the technology.

Energy source	Levelized cost of electricity production (Rs./kWh)
Coal/natural gas	2.2-2.6
Wind	2.75-3.5
Biomass	3.5-5.0
Solar PV	10-12
Solar CSP	8-10
Small hydro	2.2-3
Large hydro	2.3-3.2
Diesel generator sets	13-15

Since the cost of the development and maintenance is high in renewable sources of energy, it is a difficult task for the Thermal Power Station to switch the production to another source directly.

A lot of investment results in a block of funds and slow return as the money would not return to the company directly within few years, so the collection of money plays an important task in the contribution and funding the project.

Why green Energy-

- Cheaper operating cost
- Less harmful to nature
- Low emission
- To meet the increasing demand

4) Conclusion:

Developing economies have set ambitious Renewable Energy capacity addition targets to reduce energy exportation on an estimate of their growing and developing the economy.

It was estimated that the emissions of greenhouse gas can be reduced from 4% to 45% in the upcoming years of 2020. These include up to 14% by replacing coal with renewable energy.

India has sufficient potential for renewable energy but a combination of the right technology and correct human behaviour is needed because every technology has its own limitation, then having people's readiness to accept of Renewable Energy.

India will be using many of these tools innovatively to achieve impressive growth in its Renewable Energy sector with a high impact on the ground (green power generation) and a low dependency upon financial support.

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POPULARITY OF THE NETFLIX AMONG MBA STUDENTS”**Krutika Waghmare, Saumya Agrawal, Sidharth Gham**

(Students SIOM Pune)

ABSTRACT

Netflix enjoy mass popularity in India. It was introduced to the world in 1997 & in India it started rolling out shows in 2016. Netflix allows user to stream the videos online and binge watch. Here, in this research we have made an attempt to know the reason behind its popularity based on factor like content, regional shows, payment and awareness. With this analysis we would be able to capture reason for its popularity.

Introduction:-

Netflix is one of the most successful dotcom venture established in 1997, California. It was founded by Reed Hastings and Marc Randalph. Initially it was needed to grant DVD's by mail. Later it shifted its focus to video on demand thus maximizing internet usage in 2007. Even though DVD sales dropped networks grew exponentially. After capturing American market it expanded into Canada in 2010 then to Latin America (2011), Europe (2012) and finally entered in India in 2016. However Netflix is not available worldwide it cannot be streamed in cities in North Korea, Syria, Crimea etc. Netflix's user interface support to eighteen languages. As of 2016, it has approximately 86.74 million subscribers. The major reason as why it is more popular as cited in other research is its original content.

- Content and category :-

Since ages people in India have been loyal with viewers of stars, colors, typically Bollywood movies where many a times the content of the show has been repeated. India has witnessed very few phenomenal movies or TV shows. Also daily soaps in India have been running for like seven years. So certainly the youths have lost interest in typical shows. On the other hand Netflix offers a very refreshing content which has captured the Indian hearts.

- Pricing Issues:-

Netflix monthly cost in developed nations like US is 10.99 \$ per month (Rs 660PM) & UK is 7.99Euro pm (665 pm). The per capita income of US is \$60200 & that of UK is 43160\$ which is almost 17 times more as compared to India. Hence, people here do not want to spend such a huge amount on entertainment as people in developing countries trend to save more.

- Awareness:-

With the launch of Jio telecom Industry has captured the market to a wider extent. However as of December 2017 only 64.84% in urban & 20.26% in rural area of India are using internet hence, the market penetration of Netflix can be considered to be very less. People coming from tier 1 and tier 2 cities also may lack knowledge in trending things. Netflix's awareness goes hand in hand with internet usage.

- Local & Regional shows:-

India being a second demographic country has many languages and dialects. People in states watch shows of mother tongue .While Netflix offers shows in Hindi only. If the user's language interface is designed to more and more language it will penetrate a great mass.

Literature review:-

- **Dr. Virendra khanna**

Date:-18December,2016

“A study of factor affecting subscription rate of Netflix in India- An Empirical Approach”

The researcher had observed that when the Netflix entered in India in 2016, there were services such as Hotstar, Ditto TV, VOOT etc which operates at freemium model because of that the subscription of Netflix over past 11 months article in the form of criticism and also pondering over the future of Netflix in India and South Asia have been published in many newspapers like The Wall Street journal, The Indian Express etc. The author has majorly focused on future strategies that Netflix or any other online content services Amazon prime video should opt in India for being successful.

- **Sidneyeve Matrix(2014)**

“The Netflix Effect: Teens Binge Watching and on Demand Digital Media Trends“

The researcher has observed that Netflix has vast inventory of TV shows and movies commercial free viewing experience and past play seamless episode delivering. Netflix over the year has changed viewers' expectation concerning that how and when to watch TV. The researcher says that the technology shift has a widespread impact on television program, production decision and distribution deals of promotional strategies.

- **Diraj Goel & Dherub Batra (2016)**

“Predicting User Performance for Movies Using Netflix Database”

Netflix is an American over the top media service provider. The company's primary business is its subscription based streaming service offering online streaming of library of films and television shows. The researcher has observed that with of innumerable web-based content and service providers the problem of providing relevant content of interest has become rivals. To identify content of interest among various streaming shows, the author has suggested “Memory based collaborative filtering approach algorithm” that we first learn of the personality traits of user in the featured space. The main idea behind learning user personalities is to that the movie rating given by the user trained to reflect personality traits, specifically their liking for certain themes strong inclination towards certain directors, actors also influence the choice of their user preference.

Objective:-

- To determine the reason behind the popularity of Netflix among them MBA students.
- To determine what type of shows are more popular on Netflix.

Problem of the statement:-

Netflix is slowly capturing the Indian market. As per report, Netflix has claimed a major win over the cable providers. This win can be accounted on the basis of internet user as majority household still does not have internet connection. Netflix's rivals like Amazon prime video and Google's Youtube are major challenges to the Netflix supremacy .This research has made

an attempt to explore the reasons behind its popularity when compared with other video streaming services.

Research Design:-

This is an explorative and quantitative study method, to accomplish this primary as well as secondary data is used. Quantitative study will use the questionnaire and survey method and this would constitute our primary data. Our secondary data is collected from previous research paper on Netflix and related topic of Netflix. This study is limited to university of Pune “Sinhgad Institute of Management MBA students”.

Variable:-

Dependent variable:-popularity and subscription

Independent variable:- Content of shows, category of shows, regional and local shows, payment option ,awareness.

Sampling Technique:-

This research will use Quota Sampling technique to collect the primary data for fulfillment of mentioned hypothesis. The research “Popularity of Netflix among PG Students” itself is dependent upon various factors like preferences & choice of content of shows. The Quota Sampling method will conveniently reduce the competitors by divide the content of the basis of categories like animation, thriller, comedy and romcoms.

Sampling Error:-

The Margin of Error:

$$n = N/1+Ne^2$$

Where, n = sample size
 N = population size
 e = Margin of error
 I is constant

Therefore, n = N/1+Ne²

i.e. 60 = 600/1+600*e²

Therefore 1+600e² = 600/200

$$1+600e^2 = 10$$

$$600.e^2 = 9$$

$$e^2 = 9/600$$

And e = 0.1224

The study will use structured questionnaires technique to collect the primary data for fulfillment of mentioned hypothesis.

Hypothesis:-

- There is a significant relationship between content of shows and the popularity of Netflix.
- There is a significant relationship between subscription and level of awareness among MBA students coming from tier one and tier two cities about Netflix.
- There is significant relationship between subscription of Netflix and non-availability of regional and local shows and movies.

Scope:-

The scope of this research is limited to the student of Pune University. The scope covers only the student from Sinhgad Institute of Management particularly .The scope is also limited for MBA students. The scope of this research cover various factor that determine the “Popularity of Netflix among MBA Students”. It does not include any other factor but only the factors like awareness among students for Netflix, regional language etc.

Survey of Popularity of Netflix among MBA Student

Question -1

Are you aware about Netflix, which is an online video streaming service?

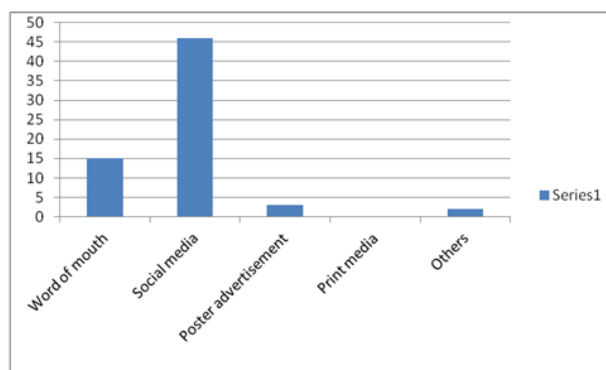
Yes	50
No	06
Cant say	00



Question -2

From where did you first heard of Netflix?

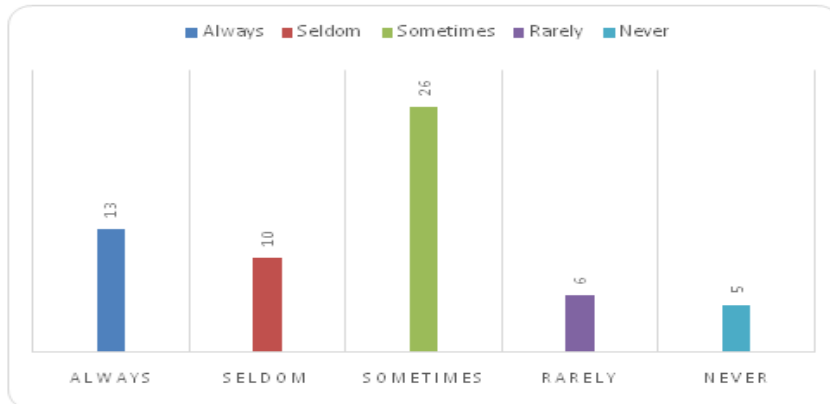
Word of mouth	15
Social media	46
Poster advertisement	03
Print media	00
Others	02



Question -3

Do you find content of Netflix is original?

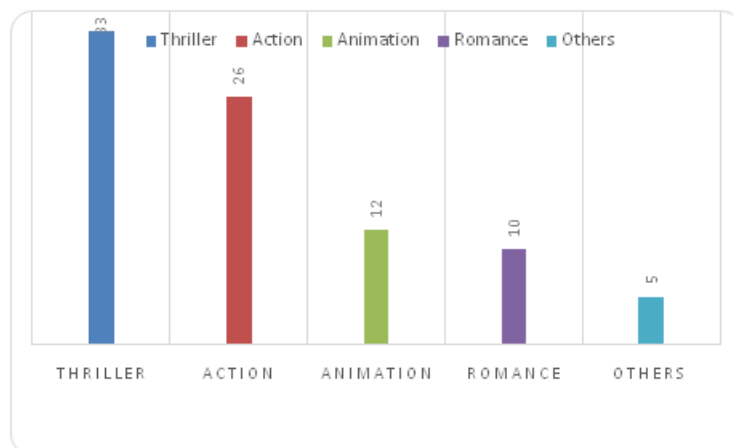
Always	13
Seldom	10
Sometimes	26
Rarely	06
Never	05



Question -4

Which is your favorite category of show?

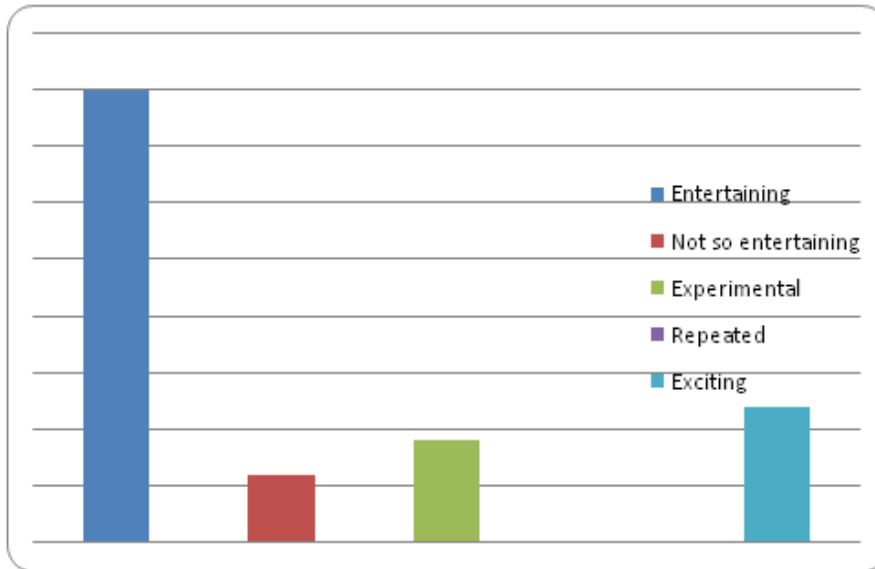
Thriller	33
Action	26
Animation	12
Romance	10
Others	5



Question- 5

Rate your opinion about the content of show on Netflix?

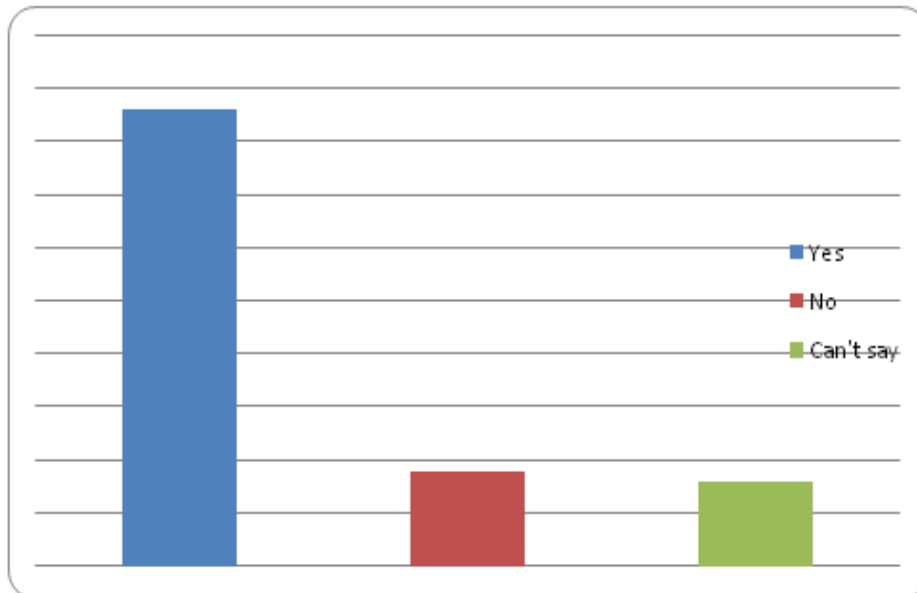
Entertaining	40
Not so entertaining	6
Experimental	9
Repeated	0
Exciting	12



Question -6

If regional shows are included would you like subscribe to Netflix?

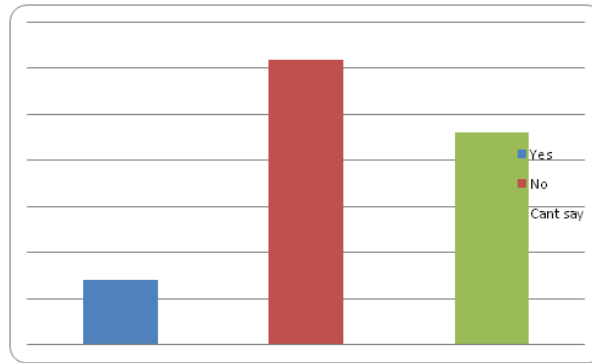
Yes	43
No	9
Can't say	8



Question -7

If the charges per month were increased, would you continue your subscription for Netflix?

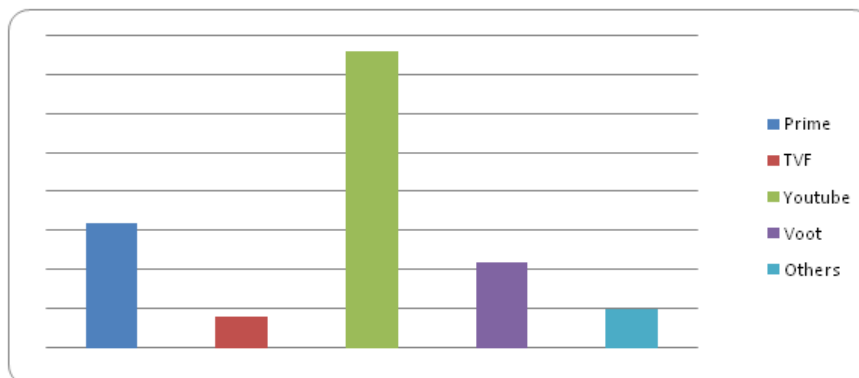
Yes	7
No	31
Cant say	23



Question 8-

Which online streaming would you prefer in comparison to Netflix ?

Prime	16
TVF	4
Youtube	38
Voot	11
Others	5



HYPOTHESIS RESULTS:-

From the responses it is pretty evident that the original content of the shows offered on Netflix makes it popular among MBA students. As evident from the responses it is clear that if regional language shows are included then the subscription rate would increase. This makes our hypothesis true.

- Almost 90% of the Respondents are aware about Netflix.
- Social Media is the most contributing factor spreading name of fame.
- Mix responses about content originality.
- Thriller & Action Categories preferred by majority.
- Positive opinion about content of shows
- Limitations due to unavailability of Regional Languages, & Higher Subscription prices.
- Mixed responses over Netflix Subscription, with overall satisfaction

Conclusion:-

From the hypothesis testing it is evident that Netflix is widely popular, but its popularity is majorly affected by YouTube. The generation has accepted and welcomed it. If regional languages are interfaced, Netflix would be able to draw more people. Also, if the Netflix’s

charges per month are dropped as per the income and PPP in India, it would enjoy a dominating position in the India markets.

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A STUDY OF E-COMMERCE BUSINESS IN INDIA

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ABSTRACT

My research is aimed at studying the E-Commerce market in India. The central focus of the research revolves around the analysis of E-Commerce sector and challenges faced by them in the current market scenario. An e-commerce firm would be any business that derives a substantial part of its total revenue from internet transactions. E-Commerce in India is now characterized by low pricing, fast shipping and a multitude of options to choose from. India is home to over 5000 E-Commerce hubs dedicated exclusively to exploiting the burgeoning growth rate of this sector.

Keywords: E-Commerce, Fast shipping, Growth, Internet transactions.

INTRODUCTION

E-commerce is a transaction of buying and selling online. Electronic commerce draws on technologies such as Mobile commerce, Electronic funds transfer, Supply chain management, Internet marketing, Online transaction processing, Electronic Data Interchange (EDI), Inventory management systems and Automated data collection systems.

Contemporary electronic commerce involves everything from ordering "digital" content for immediate online consumption, to ordering conventional goods and services, to "meta" services to facilitate other types of electronic commerce. Data integrity and security are pressing issues for electronic commerce. Aside from traditional e-Commerce, the terms M-Commerce (mobile commerce) as well (around 2013) t-Commerce have also been used.

E-COMMERCE IN INDIA

India had an internet user base of about 354 million as of June 2016 and is expected to cross 500 million in 2017. Despite being the second-largest user base in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 million, 84%), or France (54 million, 81%), but is growing at an unprecedented rate, adding around 6 million new entrants every month. The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorized distributors and e-commerce offerings. In 2016, the largest e-commerce companies in India were Flipkart, Snapdeal, Amazon India, and Paytm.

TYPES OF E-COMMERCE:

Based on the type of relationship between different sides of a transaction, a transaction can be categorized in different types. Some of the more popular ones have been given below:

1. **Business-to-Business (B2B):** B2B e-commerce is simply defined as e-commerce between companies. This is the type of e-commerce that deals with relationships between and among businesses. About 80% of e-commerce is of this type, and most experts predict that B2B ecommerce will continue to grow faster than the B2C segment. E.g., Snapdeal.
2. **Business-to-Consumer (B2C):** Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods or information goods and, for information goods, receiving products over an electronic network. B2C e-commerce reduces transactions costs (particularly search costs) by increasing consumer access to information and allowing consumers to find the most competitive price for a product or service. E.g., Makemytrip, Paytm.
3. **Consumer-to-Consumer (C2C):** Consumer-to-consumer e-commerce or C2C is simply commerce between private individuals or consumers. This type of e-commerce is characterized by the growth of electronic marketplaces and online auctions, particularly in vertical industries where firms/businesses can bid for what they want from among multiple suppliers. Consumer - to - consume electronic commerce involves electronically facilitated transactions between consumers usually through some third party. E.g., eBay
4. **Consumer-to-Business (C2B):** Consumer-to-business (C2B) is an electronic commerce business model in which consumers (individuals) offer products and services to companies and the companies pay them

MAIN FUNCTIONARIES OF E-COMMERCE INDUSTRY:

1. **Online Travel:** Customers buy tickets, book hotels and purchase tour packages online. The ticketing services can be for airlines, railways or buses. E.g., Makemytrip, Yatra.
2. **E-Retailing:** Online sale of products such as clothing, mobile handsets, electronics and home and kitchen appliances among others, Booking movie tickets. E.g., Amazon, Myntra, Bookmyshow.
3. **Classified:** Portals connecting buyers and sellers by providing classifieds space where the sellers can advertise their product. E.g., OLX, Sulekha.
4. **Digital Media:** Paid music, videos and games download. E.g., Flipkart, AVS (AmazonVideo Services).
5. **Financial:** Mobile Wallets, Online sale of insurance, loans and mutual funds. E.g., Paytm, SBI.

AFFECT OF DEMONITISATION ON E-COMMERCE INDUSTRY:

- Indian E-Commerce growth projection cut to 55.5% from 75% for 2016: Like many other sectors, the ongoing cash crunch has impacted online shopping. To tackle growing cancellations, leading e-commerce companies had to limit or suspend payments through cash-on-delivery, the most preferred choice of payment. E-commerce companies are already dealing with a decline in growth.
- Flipkart: Flipkart and Snapdeal limited cash on delivery orders to below Rs 1,000. The demonetization move has hurt the E-Commerce conversions of various companies from Flipkart to Zomato, which is a food discovery and delivery portal with other companies that mainly generate revenues through hard cash that accounts for around 60-70% of total orders.
- Amazon: Amazon India stopped accepting cash-on-delivery, asking customers to instead use electronic payments or keep valid currency at hand.
- OLA & Uber: While cab hailing applications Ola and Uber were accepting cash payments. Ola said it saw a 15-fold increase in number of wallet recharges, with small towns with high cash usage seeing a 30 times jump.

OBJECTIVE

- To understand the working of E-Commerce Business in India.
- To analyze the E-Commerce Business in India.
- To study the factors affecting E-Commerce Business in India.
- To evaluate the market conditions of E-Commerce business.

RESEARCH METHODOLOGY

Research is a careful, patient, systematic, diligent enquiry or examination in some field of knowledge undertaken to establish facts or principles. The search for knowledge through objective and systematic method of finding solution to a problem is research.

My type of research is Descriptive research.

Sources and Method of Data Collection

Secondary Data: Secondary data is the data that have been already collected and available from other sources. Secondary data is information that is already available somewhere, whether it be in journals, on the internet, in a company's records or, on a larger scale, in corporate or governmental archives. In this research, all the information is collected through secondary data. The secondary data has been collected by information from various websites, various research papers, library, journals, books and magazines

REVIEW OF LITERATURE

A Review of Literature is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic.

Anjali Gupta, Assistant Professor, E-COMMERCE: ROLE OF E-COMMERCE IN TODAY'S BUSINESS, With developments in the Internet and Web-based technologies, distinctions between traditional markets and the global electronic marketplace-such as business capital size, among others-are gradually being narrowed down. India is showing tremendous growth in the Ecommerce. The low cost of the PC and the growing use of the

Internet is one of reasons for that. There is a growing awareness among the business community in India about the opportunities offered by ecommerce. Successful ecommerce will become a notion absolutely inseparable from the web, because e-shopping is becoming more and more popular and natural. To attract more customers e-store-owners will have not only to increase the number of available services, but to pay more attention to such elements like attractive design, user-friendliness, appealing goods presentation, they will have to opportunely employ modern technologies for their businesses to become parts of ecommerce future.

Nisha Chanana, FUTURE OF E-COMMERCE IN INDIA, The E-commerce Industry in India has come a long way since its early days. The market has matured and new players have entered the market space. E commerce includes not only buying and selling goods over Internet, but also various business processes within individual organizations that support the goal. The future of E- Commerce is difficult to predict. There are various segments that would grow in the future like: Travel and Tourism, electronic appliances, hardware products and apparel. There are also some essential factors which will significantly contribute to the boom of the E-Commerce industry in India i.e. replacement guarantee, M-Commerce services, location based services, multiple payment option, right content, shipment option, legal requirement of generating invoices for online transactions, quick Service, T & C should be clear

& realistic, the product quality should be same as shown on the portal, dedicated 24/7 customer care centre should be there.

DATA ANALYSIS AND INTERPRETATION

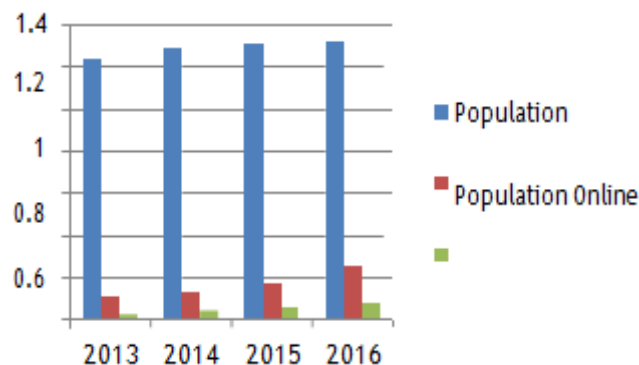
Case 1: Internet Penetration: Following is the data of India’s population and number of e-shoppers in India:

Particulars	2013	2014	2015	2016
Population	1,24,33,40,00	1,29,52,91,543	1,31,10,50,527	1,32,68,01,576
Population Online	11,11,76,051	13,49,88,180	16,76,36,631	25,45,14,239
Number of e-	2,50,00,000	4,00,00,000	5,41,00,000	8,23,00,000

Interpretation:

As per the statistical data, India has a very low Internet penetration i.e. 27%.

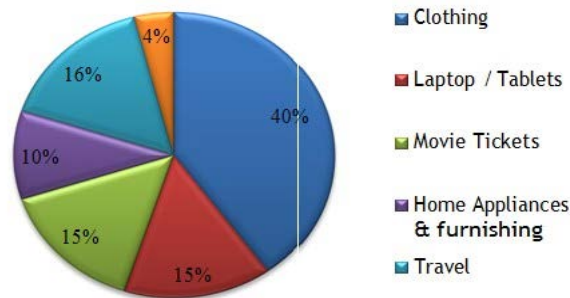
This figures might change because there is increasing awareness among the people about the digital media and their facilities.



Case 2: Market share of most popular products: As per the records, following information is obtained about the preferences of people for the online products:

Popular products	Percentage
Clothing	40%
Laptop / Tablets	15%
Movie Tickets	15%
Home Appliances & furnishing	10%
Travel	16%
Others	4%

Popular Products



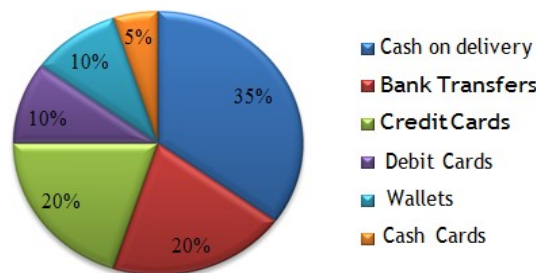
Interpretation:

The statistical data shows that most of the people prefer clothing and Electrical products to be purchased online. It provides with wide rang

Case 3: Top Online Payments Method: Following data is retrieved about the payment methods of the customer to E-Commerce Companies in the year 2012 to 2016:

Mode of Payment	Percentage
Cash on delivery	35%
Bank Transfers	20%
Credit Cards	20%
Debit Cards	10%
Wallets	10%
Cash Cards	5%

Top Online Payment Method



Interpretation:

Most of the people prefer cash on delivery method for payment. This secures their money from getting affected from the unsecured websites. With the increasing awareness of this percentage will get reduced in future and credit cards and debit cards will be more preferable.

Case 4: E-tail Industry: Following is the details of e-tail industry and their market value:

Particulars	Flipkart	Amazon	Snapdeal
Net Revenue (In Crores)	179	169	154
Year Founded	2007	2013	2010
Latest Market Value (In)	11bn	NA	2bn
Model	Inventory	Marketplace	Marketplace
Head Office	Banglore	Hyderabad	New Delhi
Funding so far (In Dollars)	1.76bn	2bn	866mn
Employee Strength	15000+	8000+	2000+

Search generated over the Internet

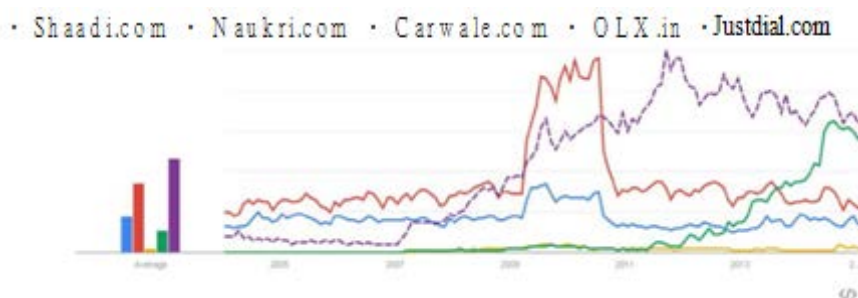


Interpretation:

It can be analyzed that Flipkart has a huge market share than Amazon and Snapdeal. People are accessing Flipkart website more as compared to other two, but in the recent years Amazon has given a huge competition to Flipkart and it has become its one of the competitor. Snapdeal is also progressing to give competition to these two giant companies.

Case 5: Classified Industry

Search generated over the Internet



Interpretation:

Shaadi.com has had a steady search interest over the years due to regular advertising. Carwale.com also has a steady but low interest due to lesser advertising. Naukri.com has had a steady search interest, which had a spike during 2009' 11

when the unemployment rate had risen from 6% to 11% due to the economic scenario. Olx.in has been steadily rising and becoming a preferred choice for advertisement of used goods as they have been aggressively marketing recently. Justdial.com has too been steadily capturing user interest as it aggressively began campaigning using Amitabh Bachchan as its brand ambassador and after it went public in 2012.

FINDINGS

India has a very low Internet penetration i.e. 27%. Most of the people prefer clothing and Electrical products to be purchased online. It provides with wide range of products at one place. Most of the people prefer cash on delivery method for payment. This secures their money from getting affected from the unsecured websites. The progress of Amazon was fallen down in the last quarter of 2016 and it was because of the demonitisation which took place. The company has to cancel its many orders due to shortage of availability of cash in the market. Flipkart has a huge market share than Amazon and Snapdeal. People are accessing Flipkart website more as compared to other two. Makemytrip has made a tremendous growth in the Online travel agency sector. Yatra and Cleartrip has to take huge efforts to compete with Makemytrip. Shaadi.com has had a steady search interest over the years due to regular advertising. Carwale.com also has a steady but low interest due to lesser advertising. Naukri.com has had a steady search interest, which had a spike during 2009-11 when the unemployment rate had risen from 6% to 11% due to the economic scenario. Olx.in has been steadily rising and becoming a preferred choice for advertisement of used goods as they have been aggressively marketing recently. Justdial.com has too been steadily capturing user interest as it aggressively began campaigning using Amitabh Bachchan as its brand ambassador and after it went public in 2012. There was almost 27% drop in user sessions 8PM onwards i.e. after the announcement of demonitisation. Demonitisation has a great short term impact on the E-Commerce sites.

CONCLUSION

The E-Commerce industry in India may currently be behind its counterparts in a number of developed countries and even some emerging markets. However, with India's GDP growth pegged at 6.4% by the International Monetary Fund and the World Bank, it is expected to grow rapidly. Moreover, the Indian E-Commerce industry has access to funds from within the country and international investors. Overall, the E-Commerce sector is maturing and a number of serious players are entering the market. The future of E-Commerce is difficult to predict. There are various segments that would grow in the future like: Travel and Tourism, electronic appliances, hardware products and apparel. There are also some essential factors which will significantly contribute to the boom of the E-Commerce industry in India

i.e. replacement guarantee, M-Commerce services, location based services, multiple payment option, right content, shipment option, legal requirement of generating invoices for online transactions, quick Service, T & C should be clear & realistic, the product quality should be same as shown on the portal, dedicated 24/7 customer care centre should be there.

We found various types of opportunities for retailers, wholesalers/distributors, producers and also for people.

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INNOVATION IN MANAGEMENT THROUGH INDUSTRY 4.0: HR PERSPECTIVE

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ABSTRACT:

The Fourth Industrial Revolution is a phrase that explains our present technological age. It is defined as the fourth industrial era since the preliminary Industrial Revolution of the 18th century. The Fourth Industrial Revolution in diminutive describes the huge changes brought about by smart technologies.

Omnipresent mobile, super-computing, Artificially-intelligent robots, self-driving cars, Neuro-technological brain enhancements, Genetic editing and numerous the evidence of dramatic change is all around us and it is happening at exponential speed. Previous industrial revolutions liberated humankind from animal power, made mass production possible and brought digital capabilities of billions of people.

This Fourth Industrial Revolution is, however, essentially different. It is identified by a range of new technologies that are synthesizing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human.

Keywords: *Industrial Revolution, Artificial Intelligent, Smart technology, Neuro Technology, Genetic editing, Human resource.*

Introduction:

Industry has made human life very easy today. The lifestyle we are living today was such a time when we could not even imagine it. But as the needs increased, the person changed yesterday's face of factories too.

We know this gradual development of entrepreneurship as industrial revolution. India has not been so fortunate enough in the English rule to become a partner in the initial benefits of the Industrial Revolution.

When the first and second industrial revolution took place then the country was not free. At the time of the Third Industrial Revolution, India was struggling with the challenges of independence, which was new. But in the last 7 decades, India presented a model of development in front of the world, which is also inclusive as well as durable.

Now India has the power house of such youth power and innovation, which is why it is ready to lead the fourth industrial revolution.

The fourth industrial revolution will definitely bring a big change in India; this will change the nature of jobs and create more opportunities. With the development of artificial intelligence, healthcare will improve, employment will increase, and enhancing efficiency will increase as well as transparency. Although there may be some negative effects, they will be called a big NO in front of these benefits.

Some things that should be taken care of

- Skills Development will be focused on.

- Last education levels will be strengthened in the backward areas
- It will increase awareness
- We have to pay special attention to the industries
- It should also be noted that robot or artificial intelligence will not displace human role.

Research methodology

Research can be defined as “The systematic and objective analysis and recoding of controlled observations that may lead to development of generalizations, principles, or theories resulting in prediction and perhaps ultimate control of events”.

Research methodology is simply the framework or plan for the study that guides the collection and analysis of data. It is an important stage in the process of conducting research as facilitates systematic and smooth conduct of the research project. It acts as guide for the researcher to work step by step.

Source of data collection: What is Primary Data?

Primary data are those which are collected for the first time by the researcher himself and thus happen to be original in character. Primary data collection begins when the researcher is not able to find the data required for his research from secondary sources or the nature of the problem demands that primary data can be used.

Primary Data:

The data was collected for the study through discussion with the manager, personal observation and by preparing questionnaire. Questionnaires were used for collecting information from employees and workers working in the company.

What is Secondary data?

Secondary data is data taken by the researcher from secondary sources, internal or external. There is a large amount of data that has been already collected by others, although it may not necessarily has been analyzed or published.

Secondary Data:

Library Research: The organization books, Magazines and internet etc.

Challenges of Human Resource Management:

Characteristically, the main challenges of HR manager include totaling worth to an organisation both the labour force and the business itself, manage talent within your organisation – try to draw and keep talented and hard-working people in the organisation; managing globalization, Information Technology, business control, Information-workers and info-management.

The modern business cannot effectively maneuver in the business world if the human force is not well equipped with the latest technology and techniques. This is the accountability of the human force manager to properly train the work force and to see the basic things the human force needs to achieve the competitive advantages of business in 21st century.

To cope with this situation the today’s HR manager is also facing a variety of issues and challenges on how they can best manage and solve all these issues and challenges with splendid ways.

Economy Changes:

- **Reduced Time – to – Market:** In business, time to market (TTM) is the length of time it takes from a product being conceived until its being obtainable for sale. TTM is important in industries where products become obsolete quickly.
- **Improved Innovation Process:** Business best positioned to endure and flourish in the highs and lows of economic cycles are those that continue to innovate, despite the consequences of the economic cycle. During tough economic times, innovation can help the business make real gains in competence and efficiency.
- **Higher Level of Customization and flexibility:** Flexibility and rigidity in customization and build-to-order production is the new status quo for the business and industry 4.0 is fostering this.
- **Increased Collaboration required:** A few other imperative aspects that group effort brings to the table include: Equal contribution- alliance gives team members equal opportunities to participate and communicate their ideas.

Social Changes:

- **Lesser younger workforce entering market to replace those retiring:** Since the average retirement age of a baby boomer lies somewhere between 61 and 65, it's not hard to see that this so-called silver tsunami is going to create some serious challenges for HR; the main one being, how are they going to fill the talent gap that's left between the number of baby boomers that retires and the number of younger workers with the right skills to replace them?
- **Younger generation demands contrary social values:** The hum around ethical or socially-minded business has gradually decreased and, so as consumers' demands for values-driven companies reach a fever. Generations X has the highest expectations for brands to take a stand on values.
- **Improved work life balance:** Work-life balance is indispensable to shun suffer exhaustion in your career.
- **Convergence physical world with virtual world:** Artificial Intelligence validates key rudiments of the virtual world to commence, and between the virtual entities and the physical participants of the newly-created world.
- **Complex processes require higher qualification:** course of action rationale is defined as the collection and evaluation of data, from the process intend stage throughout production, which establishes methodical evidence that a process is capable of consistently delivering quality products.

Technical Changes:

- **Ability to deal large amount of data efficiently:** Organizations are careworn to supervise Big Data. According to the studies, the amount of information formed, captured or computer-generated has exceeded available storage for the first time

since 2007. The dimension of the digital universe this year will be tenfold what it was just five years earlier.

- **Standardized protocols and open architecture to deal with heterogeneous environment:** The Internet of Things (IOT) covers a enormous range of industries and

use cases that scale from a single constrained device up to massive cross- platform deployments of embedded technologies and cloud systems connecting in real-time. Tying it all together are numerous legacy and emerging communication protocols that allow devices and servers to talk to each other in new, more interconnected ways.

At the same time, dozens of alliances and coalitions are forming in hopes of unifying the fractured and organic IoT landscape.

- **Cyber-security having everything attached to everything:** Cyber-security demonstrates practically every characteristic of our network-based activity, because in the digital financial system, almost everything is connected. That means that everything is at risk for a cyber attack. Yet, the national agency charged with the oversight of the nation's electronic networks has walked away from its cyber responsibility.
- **Inter-connectivity of platforms and devices:** IoT helps to advance daily life in a number of ways. Interconnectivity between devices capacitates augmented efficiency at home or within industrial settings. This interconnectivity comes at a price, as the status increases and the number of devices and networks amplifies, the lack of interoperability between them becomes an issue.

Conclusions

Hardware and software won't touch the toughtware of human being, none the less industry 4.0 could be the benchmark pertaining to:

- Complex problem solving
- Critical thinking
- Creativity
- People management
- Coordinating with others
- Emotional intelligence
- Judgment and decision making
- Service orientation
- Negation
- Cognitive flexibility

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TO STUDY THE EVOLUTION OF HR POLICIES FROM GENERATION X TO Z

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ABSTRACT-

The world's workforce comprises of people belonging to different generations starting generation x being born in 1980s, hard -working and committed individuals to the current generation z which is the youngest, born in the age of technology, self-directed and free spirited individuals. We shall be considering generation x, y and z in this study since they make today's major portion of the workforce. This diverse workforce therefore becomes the determining factor for organizational performance therefore their perspective towards HR policies will decide their performance and commitment level towards organization. This research paper will explain the evolution of HR policies from generation x to z and how the three generations differ from each other.

Introduction-

Introduction-

The firm's performance is highly affected by the impact of HR policies in the field of human resources and industrial relations (Huselid, 2013). HR policies are a collective term for the responsibility towards the workforce of the organization keeping in mind the organizational goals. HR policies are used as guidelines to manage people in various aspects of which the core responsibilities are

- Procurement (recruitment, selection, talent acquisition, induction, orientation)
- Managing the workforce (compensation, performance management, wellbeing and safety, employee engagement, management information systems (MIS)).
- Exit management (employee layoff, retirement and downsizing).

The performance of an organization is highly affected by the HR policies and has been a hot topic for research by professionals in the field of human resources. It has been argued that an effective HR policy covering procurement, performance management, compensation management, high employee engagement, training can prove to be an important tool to increase workforce knowledge, capabilities, their motivation and skills. HR policies are used for retention of good quality employees and the removal of non- performers from the organization. Though the hr policies and practices intend to vary from one country to another and from one employee to another and are also influenced by the type of industry in which it is being used. An important relationship is shared between HR policies, organization and employees to cope with the changing environment and competition prevailing in outside world.

One of the most important characteristic of an organizational workforce is its diversity. The workforce is highly diversified in age comprising of different generations working together

with different needs and values. The generation x and y makes the major portion of the entire workforce while the youngest generation z is about to enter into labour work and will ultimately replace the previous generations for many decades. The ultimate sync amongst these generations is what keeping an organization running smoothly despite of different mind sets and personalities. Generation x is characterized by the people who were born between 1965 -1980. The workers of this generation were not as loyal as their predecessor. They were independent and self-directed. The successor to them were Generation Y also known as millennials characterized as independent and looking for continuous feedback and clear goals and objectives. Then the latest Generation Z arrived into the world between 1997 to 2010 being youngest, seeking freedom and full autonomy and is about to enter into the workforce. All these generations bear different kind of role and responsibility towards their families and society in such case it is difficult for the organization to devise hr policies that are friendly for all. In such a situation productivity measures, work structure, and organization culture needs intense study and change. The time has come that the organization realises that its workforce is aging and getting older and to acknowledge the fact that the variations in the workforce and their perception towards the HR policies can become a major concern in coming time. To curb these differences and make these generation work as team effective policies needs to be formulated in such a way that it is employee friendly for all generations.

Objectives-

- 1) To study the hr policies pertaining to organization
- 2) To study the evolution of hr policies
- 3) To study the paradigm shift occurring in hr policies from gen x to gen z

Literature Review-

HR policies are well versed statements that help the organization to manage their workforce. Today's organization consists of culturally and generationally diverse workforce who have their own interests, needs and values. HR policies cover almost all the aspects related with employees, right from procurement till their separation from the organization. These policies help organization to make maximum use of workforce to achieve goals while help employees (Ogedegbe, 2014) to secure a better life and career. The diversity in the employees can be viewed as a positive aspect of labour but can be conflicting since they differ in their personalities and thought process. In today's scenario the workforce majorly comprises of three generations – Generation x, generation y and generation z.

Characteristics of generations-

Generation x

The people were born between 1965 and 1980 and have a different attitude towards work from their ancestors. They had a difference in opinion and did not trusted in ways of working of their parents. Therefore they tried to mend their ways and explored other means than the traditional working styles. This generation was sceptical and questioned the traditional working styles and welcomed change unlike their previous generation which never questioned and went on working in the same pattern for years. They had a strong desire for work life balance and career growth opportunities.

Generation Y

Generation Y also known as millennials were born between 1981 and 1996. They form the major part of the workforce .They have been characterised as self-confident individuals, independent and goal oriented. Though the media created a negative image of this generation as self- centred and lazy kids. This generation is a tech savvy which have made more easy for them for adapting to the major technological change than the previous generation. They seek managers who respect their ideologies of freedom and give them regular feedback (Jeni and Karen, 2007).

Generation z

Generation z is the youngest of all being born during 1997 to 2010 in the age when technology entered into the lives of common man. Generation z differs from generation x and y by several factors entrepreneurial, autonomy, motivated, and in person communication. The evolution of previous generations from being traditional to practice autonomy has help in shaping the behavioural traits of this generation. This is the youngest blood who’s a very small percentage is in industry while the rest are about to enter. (Wiedmer,2016)

It is forecasted that they will become one of the most powerful generations of all times. They seek full autonomy in their work and cannot tolerate monotony .The current workforce is majorly generation x and y individuals with very less of generation z. Generation z being born in the era of technology they feel more attracted towards it. Technology is in their blood and they have grown to use the maximum of it, therefore the technology has also played a major role in developing these induvial and they are better able to cope with the complex environment.

It is very much evident that the people of all three generations differ in their needs, values and personalities. These generational differences are posing the challenges for human resource specialists and managers and they are exploring how to manage and work with people from different generations in the workplace and how hr policies can make an impact on these generations so that they can work as a team towards achieving organizational goals.

A comparative study of generation x y and z is as follows-

	Generation x	Generation y	Generation z
Birth year	1965-1980	1981-1996	1997-2010
Characteristics	Independent, disciplined, traditional	Confident, highly educated, goal oriented	Autonomy, freedom of work, enthusiastic, open mindedness
Importance	Highly experienced, good managers	Making major portion of workforce, technologically sound	Fresh blood, energetic, zeal to prove themselves

A study by Conway (2004) established a relationship between HR practices and commitment level and how it varies with age of the employees. He suggested that the older age group was more committed towards organization than the younger generation. It was an important finding since it can reveal the possible causes and solutions for retaining the younger employees. The old workers who were highly committed were more satisfied with job

security (Finegold et al. 2002). A theory was proposed by Higgins (1997) that there are majorly two types of focuses, one being promotion focus involving aspirations and accomplishments and other being prevention focus involving responsibility and safety. Later Freund (2006) concluded that the promotion focus was seen in young employees while the prevention focus was more prominent in old employees. Motives related to work and career change with the age of the employee so it can be said that the impact of HR policies can also vary with age (Kooij et al., 2011).

Research Methodology-

The research was done with the help of secondary data collected from various research papers and then extensively studied.

Analysis and Findings-

The time has arrived where the generation x has taken over the senior positions in organization. Though not born in the age of technology they seem to fit with the fast changing technological advances as they have witnessed the major ups and down in the technological field. This generation has been in industry for more than 25 years and has the ultimate pool of rich experience that can train young individuals. While the generation y forms the major part of the current workforce and is enthusiastic to become future leaders and have high aspirations for future. Then there is generation z which is highly energetic and a young blood filled with determination to prove themselves, though they have a different mind-set and thought process but with sincere attempt this generation can work well with their predecessor generation x. An experienced generation can carve a route towards organizational success with the young generations along with building their future as well.

As the difference lies within the core values of these generations so there is always a chance of conflict in opinion, then it is the time where strategists have to come up with a common solution that can be beneficial for the entire workforce. There can be many instances where employees of different generations can end up in conflicts. For example generation x people have traditional approach towards work policy while employees of generation y and z expect to work on their own terms and conditions at this point the policy makers are expected to devise such solution which can help in achieving the task completion which is the ultimate goal. Working conditions, work life balance, work location, time flexibility are some of the domains where HR policies can be formulated keeping in mind the workforce diversity. As in coming time the generation z will be in their prime phases so it is necessary for the organization to look after the procurement of generation z employees. Development of Human resources information system and HR analytics is gaining popularity with the evolution of technology, this advancement can prove to be a boon for generation z as they will be able to adapt better to this technology The generation z is marked as the intense technology users therefore this technology can be used for their recruitment by connecting to them through internet technology and social media for example LinkedIn, Facebook etc. Retention of generation z employees can be a hassle since they want full autonomy that is the reason they can be founded as freelancers and contract based employees. With the evolution of generations there has been a major change in HR trends. Health and safety were the prime benefits which were given to the employees but the current trend has tremendously changed giving more autonomy to the employees related work location and timings. The flexible work

time policy can be very helpful in retaining the current generation of employees. The primitive HR policies never considered curbing stress during working hours but stress management can become a new topic of research. Organization back then gave a hike of fixed percentage of salary with limited means of extra income. But with policies of perks and incentives they can motivate current employees to stay longer in the organization and thereby increasing their loyalty. Organizations have started to invest hefty amounts in recreational activities like adventure trips, cycling, yoga classes, celebration of women days etc. Learning organization is a concept where an organization and its employees are open to learning. This can help employees to sharpen their skills and enhance the level of knowledge. By introducing new techniques of learning such as on job training, rotational jobs, conferences and seminars can give an opportunity to both generation y and z to explore more of their inner skills and capabilities. With change in generation the training methods have also evolved since then, off the job training has gained popularity over traditional on job training. Case study analysis, lectures, role play are some of the off job training methods. Since the demand has changed in these years the consultancies have come to a big picture functioning into other aspects of HR rather than just in recruitment and staffing like earlier. These little changes in policy can actually make a big difference in coming future.

Conclusion

HR policies are meant not only for smooth functioning of the organization but also for the well-being of the employees as well. Policies are formulated in such a way that can cater the needs of the organization and can be moulded as and when required. The labour market is facing a transition phase where the focus is being shifted from generation x and y to generation z. The new talent is emerging and getting ready to step into the industry and will rule it for several decades. The organization must gear itself for this transition and make policies which are flexible enough to keep up with the pace of changing environment.

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**A STUDY OF PERFORMANCE MANAGEMENT PRACTICES
FOLLOWED FOR FACULTY IN MANAGEMENT INSTITUTES AND
POSSIBILITY OF INTRODUCTION OF ARTIFICIAL INTELLIGENCE
IN PMS**

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ABSTRACT:

Technology today is experiencing another transition from the age of internet, we are onto the internet of things, artificial intelligence has multiple applications and is instrumental in the enhancement of performance.

The article looks at the study done by Accenture for it's employees and also explores the impact artificial intelligence can have on the way it's employees performance, it also tries to explore the potential of application of artificial intelligence in academics and would like to inculcate the performance potential matrix and with the help of artificial intelligence have a real time monitoring system which will help us devise a better recognition system of talent and help in retention, growth and finally promotion of the high potentials

Keywords: *Artificial Intelligence, performance management, performance potential matrix, management education*

1. Introduction

In today's world, education in all its forms and manifestations has penetrated into our social, personal life. Due to globalization, lots of Multi-National Companies (MNCs) like IBM, Microsoft, Fiat, Renault, Mercedes Benz, Bavarian Motor Works (BMW) etc. are setting up their business in India. Youth across the country in their early twenties are fancied and attracted towards a lucrative and rewarding career as Managers in these esteemed companies.

As a result, they are increasingly getting attracted to the prospects of pursuing Masters in Business Administration degree or M.B.A. as it is better known. In this endeavor they apply to various Management Institutes spread across the country. The Indian Institute of Management (IIMs) take the cake in getting the crème-de-la-crème of the students. In fact, the reputation of IIMs is enhanced by the staggering statistics that only one in seventy-two students actually manage to make it to IIM-Ahmedabad.

The popularity of MBA institutes are on the rise with the government mulling setting of five new IIMs. At the moment, India has twelve IIMs they are IIM-Ahmedabad, IIM-Bangalore, IIM-Calcutta, IIM-Kozhikode, IIM-Lucknow, IIM-Shillong, IIM-Indore, IIM-Ranchi, IIM-Rohtak, IIM-Raipur, IIM-Tiruchirapalli, IIM-Udaipur, IIM-Kashipur.

Maharashtra has hundreds of management institutes and Pune is a leading centre for it. These include those who offer MBA programme from Savitribai Phule Pune

University, some of the deemed universities also offer MBA like FLAME University, Symbiosis University, Bharti Vidyapeeth, MIT World Peace University, Tilak Maharashtra University and then there also those institutes which offer AICTE approved management programmes these programmes are called Post Graduate Diploma in Management (PGDM) or Post Graduate Certificate in Management (PGCM).

Pune being the Oxford of East offers an assortment of management programmes to the Indian and foreign students alike, students from rural areas of Maharashtra like Kolhapur. Nanded, Latur, Jalna, Amravati, Jalgaon, etc. and also from across India like Bihar, U.P., Jharkhand, Punjab, Delhi etc. migrate to Pune for pursuing their MBA degrees. To cater to the ever-growing demand, a number of management institutes both, autonomous as well as ones affiliated to University of Pune are coming up.

Today one hundred and fifty one management institutes are present in Pune district alone. The big question arises over the quality of students who pass out from various institutes and start their careers with a high salary and good job profile. Companies are getting increasingly concerned and choosy about the students to whom they make the placement offer.

This is primarily due to a perceived gap between their actual knowledge and the knowledge required to be 'industry ready' not to mention the severe toll that recession has taken on the placement activities. They tend to use criteria like past academic performance, performance during the MBA years, aptitude tests and fluency of communication skills.

So there is a need to ensure that the candidates who are chosen are capable and real "performers". In fact in **the quote made famous by Robert J. Kibbee, he said, "The quality of a University is measured more by the kind of students it turns out than the kind it takes in."** For this to become true, the management institutes themselves need to be first up to the mark to produce quality performers. The key role to achieve this is performed by the faculty members who teach in these management institutes. But, there are constraints on the part of the students too, the students tend to come from various streams like Arts, Commerce, Engineering and so on. They often find it difficult to adjust to all the courses being taught, for example: People from technical background find it difficult to appreciate courses in humanities like Organizational Behavior, Organization Development, Human Resources Management etc. And those from Arts might struggle with Accounting concepts and so on.

A major challenge for the faculty is to try and bring the entire class on a similar level of understanding because not only are their original streams different, there are issues related to learning methodologies, study pattern, linguistic skills etc. The Government also tries to help this by having certain norms for the faculty members who are responsible for imparting education and training to the students.

1.1 However, there are problems of assessing the suitability of a faculty to teach a course. There can be number of issues which need to be explored:

- a. Requirement of a real pre-defined yard stick or a bench mark to measure their performance
- b. Mapping the performance of a teacher.
- c. Taking corrective measures, if any.

This is because even if course may be the same but the students have different backgrounds and education when they take admission to management institute.

Performance management:

Performance Management: Michael Armstrong defines it as a systematic process for improving organizational performance by developing the performance of individuals and teams.

The process of performance management follows the below given process:

It involves four steps viz Plan, Act, Monitor, Review



- i. In the process of performance management, Performance has to be planned first that is benchmark the standards, plan the targets to be achieved and decide a duration for the same.
- ii. After planning the action has to start as per schedule and tasks allotted should be completed in a timely manner.
- iii. There has to be constant monitoring of the work so as to keep a tab of the happenings
- iv. There has to be periodic/constant review of the progress of the performance of the individuals/team involved. It may involve course correction, if required.

Many institutes in pune do have performance appraisals but the results of appraisal are often not considered satisfactory by most of the faculty members,hence there is a need to have an objective,bias-free management system which will help the appraisee in understanding areas of development and give realtime feedback of scope for improvement.

To counter the bias in performance management, artificial intelligence can be introduced in performance management,let us have a look at what it means.

1.2 What is Artificial Intelligence?

According to the father of Artificial Intelligence, John McCarthy, it is “The science and engineering of making intelligent machines, especially intelligent computer programs”. Artificial Intelligence is a way of making a computer, a computer-controlled robot, or a software think intelligently, in the similar manner the intelligent humans think.

AI is accomplished by studying how human brain thinks, and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of this study as a basis of developing intelligent software and systems.

1.2.1 Goals of AI

- a. To Create Expert Systems – The systems which exhibit intelligent behaviour, learn, demonstrate, explain, and advice its users.
- b. To Implement Human Intelligence in Machines – Creating systems that understand, think, learn, and behave like humans.

What Contributes to AI?

Artificial intelligence is a science and technology based on disciplines such as Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. A major thrust of AI is in the development of computer functions associated with human intelligence, such as reasoning, learning, and problem solving. Out of the following areas, one or multiple areas can contribute to build an intelligent system. **Application of Artificial Intelligence in**

Human Resource Management

Human Resources (HR) have been experiencing significant changes thanks to the evolution of information technologies in the last two decades. Today (AI) is reshaping the way that companies manage their workforce and make HR plans, which increases productivity and employee engagement in general. It is clear that you should accept AI solutions to strengthen your team and gain some long-term benefits uses of AI in human resources management.

AI in Recruitment / Talent Sourcing

Talent assessment and employee onboarding is at the top, aided by unbiased intelligent assistants cum chatbots. The conversational user interface (CUI) supplemented by high efficiency of the hiring process.

From pre-screening applicants, scheduling interviews to pre-joining engagement, onboarding them, AI has a fair share everywhere. AI tools can filter eligible candidates based on gender, eligibility, performance, reliability & honesty too. Not only this, AI tools are pretty good at scheduling interviews for these handpicked applicants. A big load off the back for HR managers. Using AI makes these flawless, reliable & efficient as well.

AI in Employee Engagement, Health & Wellness

The AI tools analyse each employee’s behaviour, cognitive ability, and other criteria to predict his learning capacity and performance. Now, it optimises learning content accordingly to create a very engaging employee experience. Learning as well as engagement clicks when your HR intersects with AI tools for engagement. Try Infeed to make your employees’ opinions heard using Artificial Intelligence

AI is already doing the rounds with fitness apps and trackers in the workplace. Taking a leaf out of Amazon’s AI personal assistant Alexa, many forward-thinking companies target at

employee health and wellness with AI. AI in health and wellness understands employee's habits over time, knows what's hitting their healthy lifestyle and offers personalized health solutions & stress management too.

AI in Attrition Mitigation

- AI-based talent management solutions don't pause with just recruiting and engaging employees. The scarcity of talent and skill gap problem can emerge at the least expected times. To brace for this, AI plays a proactive role in identifying employee blues and does its best in addressing employee concerns and reducing attrition rates
- AI may not be able to prevent attrition completely but will proactively identify such Individuals or teams who are at the risk of attrition. Awareness is the first step towards betterment.

AI in Performance Management:

Performance management is coming to life through advanced digital technologies that are revolutionizing workforce management as we know it. Through analytics and machine learning, a new generation of workforce technologies is helping leaders guide workers in a timelier way—and helping people take a more active role in managing their own performance and careers. New tools and apps help people readily find learning sources and mentors, supporting just-in-time skill building, collaboration and real-time feedback.

Technology-enabled performance management is far more comprehensive and holistic. It's focused on maximizing people development, improving the performance of individuals and the entire organization. It is the future of work.

Digital tools, technologies and intelligent machines can transform people development, enabling supervisors to trace contributions from individuals and teams with more accuracy and solid data. They can also help supervisors measure outcomes with better transparency and impact because evaluations can be more closely linked in time to the performance being evaluated.

A more fact-based, data-driven approach to performance management helps enable at least two important developments. First, it makes the evaluation process more open, fair and transparent, based on clear and understandable data. Second, high- quality data can be used to steer people's performance in a more powerful way.

According to an article titled *The Future Of Performance Management: How AI And Big Data Combat Workplace Bias* published on Forbes.com, recent research showed that only 6% of organizations think their performance management processes are worthwhile.

The article further emphasized that, there are various biases at workplace, some of them related to gender and race. Other one is known as contrast bias, meaning an assessor is inclined to compare an individual's performance to his peers, rather than to defined standards of achievement. Another is recency bias – where actions in the recent past are given more weight, perhaps unfairly, than actions which happened further back in time. Kris Duggan, founder and CEO of BetterWorks shared his thoughts saying “We think that if

you can make collecting feedback much more frequent and agile, and more lightweight ... and it's open and collaborative ... those things really do drive performance.

“What we found when meeting our customers was that a lot of pain of doing the process [annual performance reviews] – the reason why it's not lightweight and it takes a lot of effort – is you have to come up with a list of people you're going to ask ... and there's some gaming going on ... maybe someone is only going to ask people who will say good things. The spirit of it makes sense, but the execution is really not that great.” Technology giant Accenture conducted a survey recently regarding performance management recently and the findings were a revelation in itself

According to Accenture's survey, 63 percent of leaders and employees said that relying on just one supervisor's employee evaluation is not an accurate way to assess someone. The objectivity enabled by richer data can improve transparency and fairness in evaluations, rewards, promotions and job rotations

It further states that, providing employees with real-time performance data is ranked among the top-three changes that would most improve workforce performance.

The human touch when it comes to coaching and evaluation will always be important. But in an age in which smart devices like wearable badges and remote sensors can track people's work—and when machine intelligence can even predict our future behaviour's—coaching and feedback will often come real-time via artificial intelligence to improve performance and the employee experience. Your coach is no longer just another human being who offers advice, but also an artificial intelligence-enhanced app that works alongside you. It helps mentor and guide you to actions—maybe to connect with a new group of colleagues or new knowledge sources, or even a lifestyle change. Some of this real-time feedback is delivered through software that helps enable co-workers to guide you. Both Twitter and Intel, for example, now use crowdsourced goal-setting technology that lets co-workers collaborate frequently to set each other's customized objectives throughout the year and provide real-time visibility into each other's progress. It's the workplace equivalent of the Fitbit a way to share the journey toward your goals with colleagues who can support you along the way. This can help networked teams fluidly form and work together, irrespective of where individuals are in the organizational hierarchy.

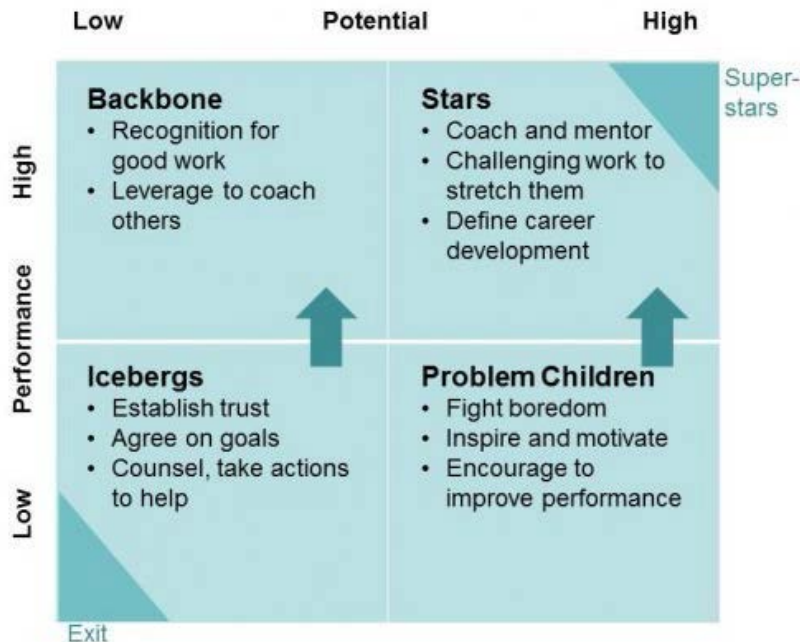
Will this kind of technology-enabled approach be met with resistance? Accenture Strategy found that 67 percent of employees and leaders view employee performance tracking technologies as a positive change only 13 percent view them negatively and 71 percent of employees and leaders say technology that tracks performance at work would improve performance management.

The survey concluded with findings that, companies need to:

1. Reorient performance management towards shared outcomes
2. Make performance management more transparent
3. Use technology to enhance performance
4. Incorporate digital knowledge to senior HR
5. Give employees access to technology to monitor their own performance.

Similarly, artificial intelligence can be used for enhancing the performance of the faculty,

It has been observed that, there has always been a struggle to suitably reward better performing faculty members in academics, usually seniority takes precedence when promotions are due and it's difficult to promote better performing juniors, however, if the performance potential matrix is followed and artificial intelligence is used to identify future high -potentials ,Artificial Intelligence works in real time and is not dependent on time bound appraisals and hence the monitoring of performance and mentoring can be done easily.



An illustration of the performance potential matrix

If the performance potential model is implemented there are chances that the faculty will feel motivated and a fair system of appraisal and management of the performance will be established.

The performance potential model is based on the idea to promote merit and take suitable action to boost performance and reward/punish the employees according to their performance.

It is basically divided into four quadrants, and the parameters for judging are potential and performance itself.

- The first quadrant called as Back bone talks of employees with high performance but low potential for growth, in academic terms, it could refer to senior faculty members who are well versed in concepts and classroom delivery but have little intent to constantly upgrade knowledge and they prefer to handle administration and extracurricular activities more, they can also hand-hold new faculty members and guide them in class-room teaching. For these faculty members, regular increments and occasional bonuses should be given.
- The second quadrant known as stars represents high potential and high level of performance, in academics they are the star faculty who not only are good teachers in class-room but are also involved in industrial consultancy and research, they should be the ones who are groomed to take up important functions in the organization and they

should be mentored for succession planning, they should be regularly given bonuses and due promotions

- c. The third quadrant known as problem child represents the ones who have potential but are not performing upto the potential, they should be counseled and made to work with the stars for some time so that they feel a boost in their morale and they aspire to become like the stars, the more time they work on honing their skills the better are the chances to become good faculty in all aspects, they should be sent for more faculty development programmes, seminars etc. they can be shown a career path for growth if they show improvement.
- d. The last quadrant i.e. iceberg represents the ones who have very less potential for growth and are low on performance also. They should be counseled immediately and put on a Performance Improvement Plan (PIP), the senior faculty members can help preparing them for secondary roles like administration, extracurricular activities first and encourage them to perform better, however if there is no improvement observed or if there is reluctance to make amends then such faculty should be let go.

Benefits:

The possible benefits to be accrued from this are:

1. the faculty members get a sense of fairness in assessment, secondly regardless of designation, those who are talented and willing to improve will get opportunities
2. it will also keep the low performers on their toes and will push them to perform or perish.
3. It also assigns work taking into consideration the characteristics and requirements of each faculty member.

Conclusion:

1. Artificial Intelligence is a thing whose time has come, it is already in the corporate and is mainly concentrated in IT sector currently.
2. It has huge potential to be used in human resources and can offer us real time performance analysis.
3. It is unbiased and has great potential for expansion
4. In academics, there is a lot of scope to identify, develop and reward the hi-pots. the performance potential matrix can be used for doing so.
5. It may require the management be trained in use of Artificial Intelligence as it's relatively new technology.

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ANALYSIS OF FIIS ON INDIAN STOCK MARKET**Prof. Pradip S. Thombare**

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ABSTRACT

Capital is considered to be very important growth in any economy. In case of developing country like India Domestic capital is not sufficient to fulfil the requirement of economy. In that case foreign capital plays a very important role. Foreign Capital comes in two forms- FDI and FII. FDI is considered as a more stable form of foreign capital as compared to FII. But, FII inflows and outflows directly create impact on stock market. Hence FIIs have emerged as movers and shakers of Indian Stock Market. This paper examines the trend and pattern of FII flow in India and also examines the relationship between FII and Nifty.

Introduction:

The Foreign Institutional Investors (FIIs) have emerged as remarkable players in the Indian stock market and their growing contribution adds as an important feature of the development of stock markets in India. As a result, the Indian Stock Markets have reached new heights and became more volatile making the researches work in this dimension of establishing the link between FIIs and Stock Market volatility. Hence, it's an interesting topic to ascertain the role of FIIs in Indian Stock Market.

After the launch of the reforms, foreign institutional investors (FIIs) from September 14, 1992, with suitable restrictions, were permitted to invest in all securities traded on the primary and secondary markets, including shares, debentures and warrants issued by companies which were listed or were to be listed on the Stock Exchanges in India and in schemes floated by domestic mutual funds. A positive contribution of the FIIs has been their role in improving the stock market infrastructure and the SEBI assured its contribution towards its development.

Hence, in this age of transnational capitalism, a significant amount of capital is flowing from developed world to emerging economies. Positive fundamentals combined with fast growing markets have made India an attractive destination for foreign institutional investors (FIIs). Although the Foreign institutional investors (FIIs), whose investments are often called 'hot money' because they can be pulled out at anytime, have been blamed for large and concerted withdrawals of capital from the country at the time of recent financial crisis, they have emerged as important players in the Indian capital market.

Review of Literature

Douma, Kabir and Rejie (2006) investigated the impact of foreign institutional investment on the performance of emerging market firms and found that there is positive effect of foreign ownership on firm performance. They also found impact of foreign investment on the business group affiliation of firms. (Aggarwal, Klapper and Wysocki, 2005) observed that foreign investors preferred the companies with better corporate governance.

Mukherjee (2002) examined the various probable determinants of FII and concluded (1) Foreign investment flows to the Indian markets tend to be caused by return in the domestic equity market; (2) returns in the Indian equity market is an important factor that has an impact on FII flows; (3) whereas FII sale and FII net inflow are significantly affected by the performance of the Indian equity market, FII purchase show no such affect to this market performance; (4) FII investors do not probably use Indian equity market for the purpose of diversification of their investment; (5) returns from the exchange rate variation and the fundamentals of the economy may have an impact on FII decisions, but such influence do not prove to be strong enough.

Gordon and Gupta, (2003) found causation running from FII inflows to return in BSE. They observed that FIIs act as market makers and book profits by investing when prices are low and selling when they are high. Hence, there are contradictory findings by various researchers regarding the causal relationship between FII net inflows and stock market capitalization and returns of BSE/ NSE. Therefore, there is a need to investigate whether FIIs are the cause or effect of stock market fluctuations in India.

Rajesh Chakraborty(2001) in his research paper titled „FII Flows to India: Nature and Causes‘ concluded that since the beginning of liberalization FII flows to India have steadily grown in importance. The author analysed these flows and their relationship with other variables Pal, P. (2004) found that FIIs are the major players in the Indian stock market and their impact on the domestic market is increasing. Trading activities of FIIs and the domestic stock market turnover indicates that FII’s are becoming more important at the margin as an increasingly higher share of stock market turnover is accounted for by FII trading in India.

Objectives of Study:

- a) To study the trends and patterns of foreign capital flow into India in the form of FII
- b) To study the relation and impact of Foreign Institutional Investment (FII) on Indian stock market (Nifty).

Scope of Study:

The study takes 13 years data into consideration. To study the impact of FII on Indian stock market, Nifty was selected in the study, as it is the most systematic stock market indices and widely used by market participants for benchmarking.

Research Methodology:**Data Collection:**

This study is based on secondary data. The required data related to FII have been collected from various sources i.e. Bulletins of Reserve Bank of India, publications from Ministry of Commerce, SEBI Handbook of Statistics, Govt. of India. CNX Nifty data is down loaded from the websites of NSE. Daily closing index value are taken and averaged to get the index value for each year, which is considered as more representative figure of index for the entire year.. The current study considers 13years data starting from 2001 to 2013.

Analytical tools and technique:

In order to analyze the collected data the statistical tools such as correlation and egression is used. Correlation coefficient is a statistical measure that determines the degree to which

two variable's movements are associated. Correlation coefficient value ranges from -1 to 1. Negative value of correlation indicates: if one variable increases in its values, the other variable decreases in its value and positive value indicates: if one variable increases in its values the other variable also increases in its value. In the current study to study the linear relationship between variables such as FII and Nifty correlation is applied. The regression analysis is a statistical technique used to evaluate the effects of independent variables on a single dependent variable. In the current paper attempt is made to study the impact of FII on Nifty.

Hypothesis:

- (1) H₀: There is no significant relation between FII and CNX Nifty
- (2) H₀: There is no Significant impact of FII on CNX Nifty

Data Analysis:

The following table gives the Net purchases by FII in Indian stock market from year 2001 to 2013. It also gives Average value of closing value of Nifty from 2001 to 2013. It shows that Net flow of FII has considerably increased from year 2001 to year 2013 with certain declining values in certain years. CNX nifty has also increased from the 2001 to 2013.

Flow of FII and CNX Nifty data

Year	Net .FII(CR)	CNX NIFTY
2001	13128.2	1117.5
2002	3629.6	1045.5
2003	30549	1264
2004	38695.8	1750.25
2005	47181.9	2297.1
2006	36540.2	3420.48
2007	71486.3	4680.6
2008	-52987	4198.8
2009	83424.2	4183
2010	133267	5462
2011	-2714.2	5319.93
2012	128361	5410.5
2013	112969	5908
Source: SEBI Handbook of Statistics		

Correlation analysis between FII and Nifty:

Correlation has been used to determine the statistical relationship between variables under study FII and CNX nifty. Based on the results it can be concluded that there is a moderate positive correlation of 0.510 between FII and Nifty. Since the significance

value is 0.038 which is less than 0.05, we should reject the null hypothesis. There is a relation between FII and Nifty.

Correlations

		Nifty	FII
Pearson Correlation	Nifty	1.000	.510
	FII	.510	1.000
Sig. (1-tailed)	Nifty	.	.038
	FII	.038	.
N	Nifty	13	13
	FII	13	13

Regression analysis between FII and Nifty:

Regression has been used to determine the strength of relationship between FII and Nifty. R-square value is 26% which means model explains the 26% variation. In other words independent variable FII is able to explain 26% variation of the dependent variable Nifty. p value is 0.075 which is more than 0.05 which means null hypothesis is accepted and there is no significant impact of FII on Nifty.

ANOVA:

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10426905.668	1	10426905.668	3.859	.075(a)
	Residual	29723353.316	11	2702123.029		
	Total	40150258.984	12			

Model Summary:

			Adjusted R Square	Std. Error of the Estimate
1	.510(a)	.260	.192	1643.813563

Coefficients:

		Un-standardized coefficients		standardized coefficients	t	Sig.
		B	Std. error	Mean square		
1	(Constant)					
	FII	.017	.009	.510	1.964	.075

Findings of the study:

- FII flows in terms of net purchases have shown increasing trend from the year 2001 to year 2013.
- CNX nifty has increased over a period of 13 years from year 2001 to year 2013.
- There is a moderate positive correlation between FII and CNX nifty stock market index. There is a relation between FII and Nifty.
- FII is able to explain 26% variation of the dependent variable Nifty
- There is no significant impact of FII on market index nifty.

Conclusion:

The Flow of FII has advanced significantly in last 13 years from the year 2001 to year 2013 and there is a correlation between such FII flows and changes in stock market indices like

nifty. -square is also found to be very low means other factors might be contributing towards volatility of Indian stock market. As the correlation is not found to be strong some other factors can have impact and relations with stock market which requires further investigation and application of other statistical models to look into this research.

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EMERGING STRATEGIES OF THERMAL POWER PLANT DUE TO INCREASE IN DEMAND OF ENERGY

Vikram Singh, Prof Sanmath Shetty
Sinhgad Institute of Management

1.1) Introduction:

Energy is the major source for the economic development of any country. In recent years, India energy consumption has been increasing at a relatively fast rate due to population growth and economic development. Energy plays a substantial role in economic, hence the relationship between energy consumption and economic growth is an important issue for economists. Renewable Energy (RE) has been identified as a key tool to counter climate change and enhance energy security. In India growth of the economy places heavy demand for electric power, presently Coal-based power generation is characterized by local and regional environmental degradation as well as greenhouse gas emissions, leading to climate change. Thus, there is a need for enhancing energy security along with reducing greenhouse gas emissions. Renewable energy is one of the environmentally friendly sources of energy and effectiveness of growing economic, in this article will show that the effects of RE for the economy in India.

Thermal Power dominates the field of electricity generation in India. It will continue to do so in future also. A proper understanding of the plant involves the complex process of converting thermal energy to electric energy. Electricity is the only form of energy which is easy to produce, easy to transport, easy to use and easy to control. So, it is mostly the terminal of energy for transmission and distribution. Electricity consumption per capita is the index of the living standard of people of place or country. India is facing energy shortages of an estimated 11 % of total energy demand and even higher peak shortages of 15% Demand-supply gap.

Capacity additions of 180,000 MW are required in the next 10 years to meet India's power demand and the new capacity needs to be added using a combination of coal, hydro, gas, nuclear and wind projects.

About:

In the earlier days coal might have been used for providing heat for making food or in the blacksmith's furnace but as technology made strides, so did the level and importance of coal in the energy production arena went upwards. Currently, thermal power plants produce hundreds of megawatts of electricity by burning coal. Despite the hue and cry of environmental concerns, which are of course true to a certain extent, various other parameters have still kept coal as one of the most important sources of power generation in thermal power plants.

The very first parameter is the ample abundance of coal in most parts of the world including the United States. Apart from the reserves found on land, there is also the presence of coal layers beneath the sea although it is difficult to commercially extract it from there, there might be a technology for this in the future.

The next factor is directly related to the above factor and is that of cost. As you know cost is closely associated with the availability and more abundant any commodity is, the lesser will be its price and vice versa which is a law of economics. Hence producing electricity the use of

coal is much cheaper than other non-conventional forms of energy such as say wind, nuclear and so forth.

Energy is the need of the future developing world and without it, many things are not possible as we all know that India is continually growing and the need for power is always seen. To meet the developing demand and having a sustainable development is was needed to go with green energy that would fulfill the gap of demand and supply.

1.2) Objectives:-

- 1) To find the new methods adopted by the power plant to meet the growing needs of the power.
- 2) To find the financial impact by adopting Green Energy by Thermal Power Plants.
- 3) To find the share of power being supplied by the different sources and cost of power generation by them.

1.3) Scope:-

The scope of the project is limited to the extent of Thermal Power Plants in India, from which the secondary data has been extracted and the study was done.

1.4) Limitation:-

- 1) It was not possible to get the data of each Thermal Power Plant all over India.
- 2) Sources of secondary data collection may lack authenticity.
- 3) Due to the data being confidential, some important information which is vital for the project could not be disclosed.
- 4) Secondary data may have not included the exact figures that are there according to the Power plants.

2.1) Research Design:-

The research design consisted of past and the current reviews and plans made by the Power Industry to fulfill the continuous increase in demand of the power in the country and the ways that are adopted by them to cope up with the same. Coal is a non-renewable source of energy and cannot be extracted in huge quantity at once as it will affect future needs and requirement. Power Plants have formed other methods of power generation that would help the country as a whole like-

- Solar Power Plant
- Hydro Electricity
- Wind Energy
- Renewable Sources

S.no.	Renewable Sources of energy	Installation Capacity (MW)	% of Share
1	Wind	21136,40	66.7
2	Solar	2631,93	8.3
3	Small Hydro power	3803,68	12
4	Biomass power	4120,13	13
5	Total	31692,14	100

Table No. 1

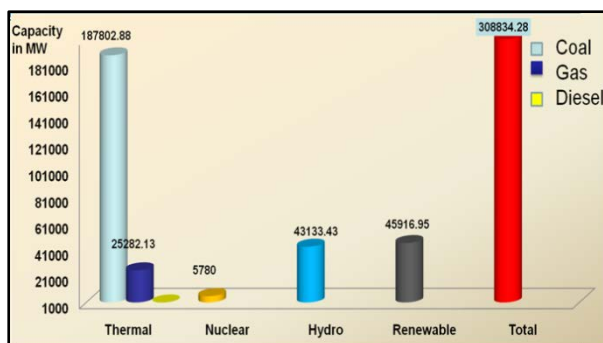
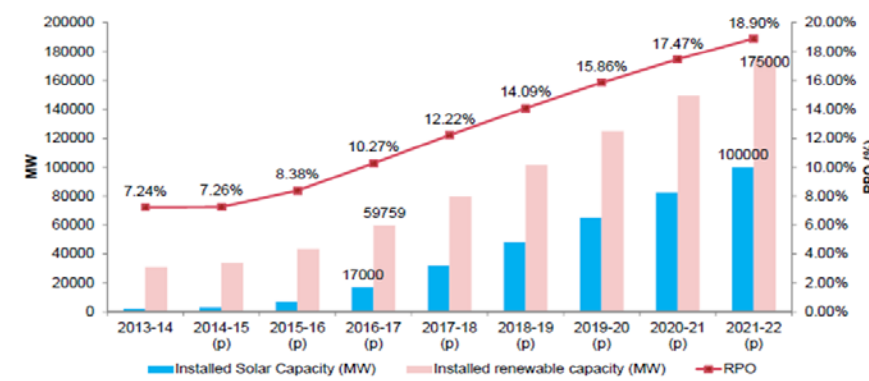


Table No. 2

The table number 2, gives us the clear picture that what was the total power output during the year and the share of contribution by different sources of power generation. Instead of just focusing on the Thermal Power generation, the companies are slowly shifting towards nonrenewable sources that not only saves and reduces the operational cost but it also gives the environment support towards the low emission of various kinds of gases in the environment.

Table No. 3

175 GW RE will contribute to 18.9% of the entire power consumption in India in 2022



2.2) Methods Adopted to promote green energy:-

- Grant/subsidy
- Accelerated depreciation
- Tax concessions/exemptions
- Preferential tariff
- Renewable purchase obligations

The initial capital cost of installation is higher in most of the renewable sources except hydro. But the cost of operation and maintenance is comparatively cheaper than thermal or nuclear power plants. Also since the cost of fuel is none for renewable energy sources. With the increase in prices of coal, gas and other fossil fuels renewable sources will become comparable or cheaper than conventional power sources and will thus become economically viable. Levelized cost of electricity production (LCOE) of renewable energy technologies varies by technology, country and project, based on the renewable energy resource, capital and operating costs and the efficiency/performance of the technology.

3.1) Research Methodology:-

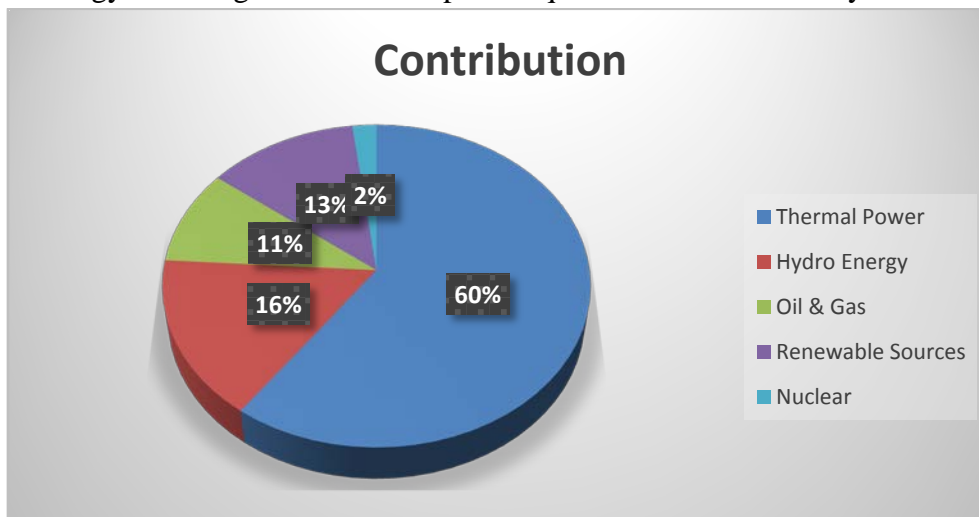
Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying research done systematically. The present study is based on secondary data sources, procured and extracted from the financial statements of the selected companies. The published annual reports of the selected companies are taken from related websites, magazines and journals on Economic and Finance have also been used as a source of data.

Data which are not originally collected but rather obtained from the published or unpublished sources are known as secondary data. The data which we get directly from the company's intranet, companies website, books, magazines, etc. are the sources.

- **Websites**
- **Magazine**
- **Company's financial statement**
- **Research Papers**

3.2) Contribution:-

In this study we have gone through various data of Government & Private Power Generating Sector that shows and give us a clear picture that to increase the power generation the company are not only focusing only on the Non- renewable sources but along that various renewable sources of energy are being used to meet up the requirement of the Country.



The initial capital cost of installation is higher in most of the renewable sources except hydro, but the cost of operation and maintenance is comparatively cheaper than thermal or nuclear power plants. Also since the cost of fuel is none for renewable energy sources. With the increase in prices of coal, gas and other fossil fuels renewable sources will become comparable or cheaper than conventional power sources and will thus become economically viable. Levelized cost of electricity production (LCOE) of renewable energy technologies varies by technology, country and project, based on the renewable energy resource, capital and operating costs and the efficiency/performance of the technology.

Energy source	Levelized cost of electricity production (Rs./kWh)
Coal/natural gas	2.2-2.6
Wind	2.75-3.5
Biomass	3.5-5.0
Solar PV	10-12
Solar CSP	8-10
Small hydro	2.2-3
Large hydro	2.3-3.2
Diesel generator sets	13-15

Since the cost of the development and maintenance is high in renewable sources of energy, it is a difficult task for the Thermal Power Station to switch the production to another source directly.

A lot of investment results in a block of funds and slow return as the money would not return to the company directly within few years, so the collection of money plays an important task in the contribution and funding the project.

Why green Energy-

- Cheaper operating cost
- Less harmful to nature
- Low emission
- To meet the increasing demand

4) Conclusion:

Developing economies have set ambitious Renewable Energy capacity addition targets to reduce energy exportation on an estimate of their growing and developing the economy.

It was estimated that the emissions of greenhouse gas can be reduced from 4% to 45% in the upcoming years of 2020. These include up to 14% by replacing coal with renewable energy.

India has sufficient potential for renewable energy but a combination of the right technology and correct human behaviour is needed because every technology has its own limitation, then having people's readiness to accept of Renewable Energy.

India will be using many of these tools innovatively to achieve impressive growth in its Renewable Energy sector with a high impact on the ground (green power generation) and a low dependency upon financial support.

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POPULARITY OF THE NETFLIX AMONG MBA STUDENTS”**Krutika Waghmare, Saumya Agrawal, Sidharth Gham**

(Students SIOM Pune)

ABSTRACT

Netflix enjoy mass popularity in India. It was introduced to the world in 1997 & in India it started rolling out shows in 2016. Netflix allows user to stream the videos online and binge watch. Here, in this research we have made an attempt to know the reason behind its popularity based on factor like content, regional shows, payment and awareness. With this analysis we would be able to capture reason for its popularity.

Introduction:-

Netflix is one of the most successful dotcom venture established in 1997, California. It was founded by Reed Hastings and Marc Randalph. Initially it was needed to grant DVD's by mail. Later it shifted its focus to video on demand thus maximizing internet usage in 2007. Even though DVD sales dropped networks grew exponentially. After capturing American market it expanded into Canada in 2010 then to Latin America (2011), Europe (2012) and finally entered in India in 2016. However Netflix is not available worldwide it cannot be streamed in cities in North Korea, Syria, Crimea etc. Netflix's user interface support to eighteen languages. As of 2016, it has approximately 86.74 million subscribers. The major reason as why it is more popular as cited in other research is its original content.

- Content and category :-

Since ages people in India have been loyal with viewers of stars, colors, typically Bollywood movies where many a times the content of the show has been repeated. India has witnessed very few phenomenal movies or TV shows. Also daily soaps in India have been running for like seven years. So certainly the youths have lost interest in typical shows. On the other hand Netflix offers a very refreshing content which has captured the Indian hearts.

- Pricing Issues:-

Netflix monthly cost in developed nations like US is 10.99 \$ per month (Rs 660PM) & UK is 7.99Euro pm (665 pm). The per capita income of US is \$60200 & that of UK is 43160\$ which is almost 17 times more as compared to India. Hence, people here do not want to spend such a huge amount on entertainment as people in developing countries trend to save more.

- Awareness:-

With the launch of Jio telecom Industry has captured the market to a wider extent. However as of December 2017 only 64.84% in urban & 20.26% in rural area of India are using internet hence, the market penetration of Netflix can be considered to be very less. People coming from tier 1 and tier 2 cities also may lack knowledge in trending things. Netflix's awareness goes hand in hand with internet usage.

- Local & Regional shows:-

India being a second demographic country has many languages and dialects. People in states watch shows of mother tongue .While Netflix offers shows in Hindi only. If the user's language interface is designed to more and more language it will penetrate a great mass.

Literature review:-

- **Dr. Virendra khanna**

Date:-18December,2016

“A study of factor affecting subscription rate of Netflix in India- An Empirical Approach”

The researcher had observed that when the Netflix entered in India in 2016, there were services such as Hotstar, Ditto TV, VOOT etc which operates at freemium model because of that the subscription of Netflix over past 11 months article in the form of criticism and also pondering over the future of Netflix in India and South Asia have been published in many newspapers like The Wall Street journal, The Indian Express etc. The author has majorly focused on future strategies that Netflix or any other online content services Amazon prime video should opt in India for being successful.

- **Sidneyeve Matrix(2014)**

“The Netflix Effect: Teens Binge Watching and on Demand Digital Media Trends“

The researcher has observed that Netflix has vast inventory of TV shows and movies commercial free viewing experience and past play seamless episode delivering. Netflix over the year has changed viewers' expectation concerning that how and when to watch TV. The researcher says that the technology shift has a widespread impact on television program, production decision and distribution deals of promotional strategies.

- **Diraj Goel & Dherub Batra (2016)**

“Predicting User Performance for Movies Using Netflix Database”

Netflix is an American over the top media service provider. The company's primary business is its subscription based streaming service offering online streaming of library of films and television shows. The researcher has observed that with of innumerable web-based content and service providers the problem of providing relevant content of interest has become rivals. To identify content of interest among various streaming shows, the author has suggested “Memory based collaborative filtering approach algorithm” that we first learn of the personality traits of user in the featured space. The main idea behind learning user personalities is to that the movie rating given by the user trained to reflect personality traits, specifically their liking for certain themes strong inclination towards certain directors, actors also influence the choice of their user preference.

Objective:-

- To determine the reason behind the popularity of Netflix among them MBA students.
- To determine what type of shows are more popular on Netflix.

Problem of the statement:-

Netflix is slowly capturing the Indian market. As per report, Netflix has claimed a major win over the cable providers. This win can be accounted on the basis of internet user as majority household still does not have internet connection. Netflix's rivals like Amazon prime video and Google's Youtube are major challenges to the Netflix supremacy .This research has made

an attempt to explore the reasons behind its popularity when compared with other video streaming services.

Research Design:-

This is an explorative and quantitative study method, to accomplish this primary as well as secondary data is used. Quantitative study will use the questionnaire and survey method and this would constitute our primary data. Our secondary data is collected from previous research paper on Netflix and related topic of Netflix. This study is limited to university of Pune “Sinhgad Institute of Management MBA students”.

Variable:-

Dependent variable:-popularity and subscription

Independent variable:- Content of shows, category of shows, regional and local shows, payment option ,awareness.

Sampling Technique:-

This research will use Quota Sampling technique to collect the primary data for fulfillment of mentioned hypothesis. The research “Popularity of Netflix among PG Students” itself is dependent upon various factors like preferences & choice of content of shows. The Quota Sampling method will conveniently reduce the competitors by divide the content of the basis of categories like animation, thriller, comedy and romcoms.

Sampling Error:-

The Margin of Error:

$$n = N/1+Ne^2$$

Where, n = sample size
 N = population size
 e = Margin of error
 I is constant

Therefore, n = N/1+Ne²

i.e. 60 = 600/1+600*e²

Therefore 1+600e² = 600/200

$$1+600e^2 = 10$$

$$600.e^2 = 9$$

$$e^2 = 9/600$$

And e = 0.1224

The study will use structured questionnaires technique to collect the primary data for fulfillment of mentioned hypothesis.

Hypothesis:-

- There is a significant relationship between content of shows and the popularity of Netflix.
- There is a significant relationship between subscription and level of awareness among MBA students coming from tier one and tier two cities about Netflix.
- There is significant relationship between subscription of Netflix and non-availability of regional and local shows and movies.

Scope:-

The scope of this research is limited to the student of Pune University. The scope covers only the student from Sinhgad Institute of Management particularly .The scope is also limited for MBA students. The scope of this research cover various factor that determine the “Popularity of Netflix among MBA Students”. It does not include any other factor but only the factors like awareness among students for Netflix, regional language etc.

Survey of Popularity of Netflix among MBA Student

Question -1

Are you aware about Netflix, which is an online video streaming service?

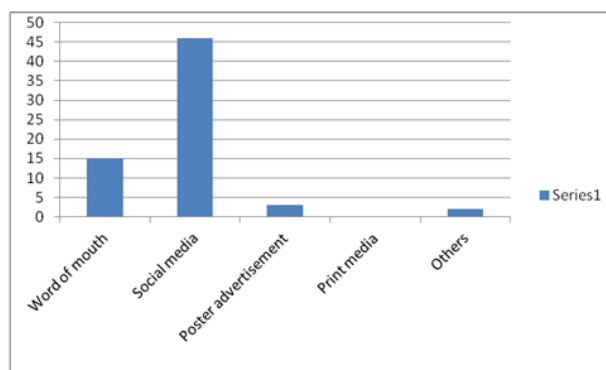
Yes	50
No	06
Cant say	00



Question -2

From where did you first heard of Netflix?

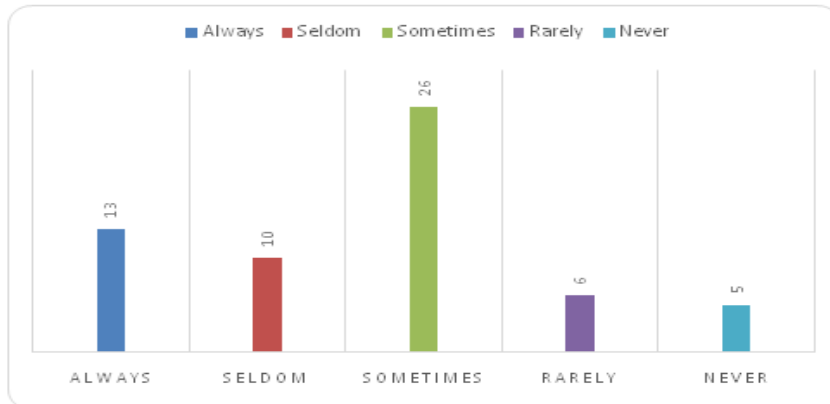
Word of mouth	15
Social media	46
Poster advertisement	03
Print media	00
Others	02



Question -3

Do you find content of Netflix is original?

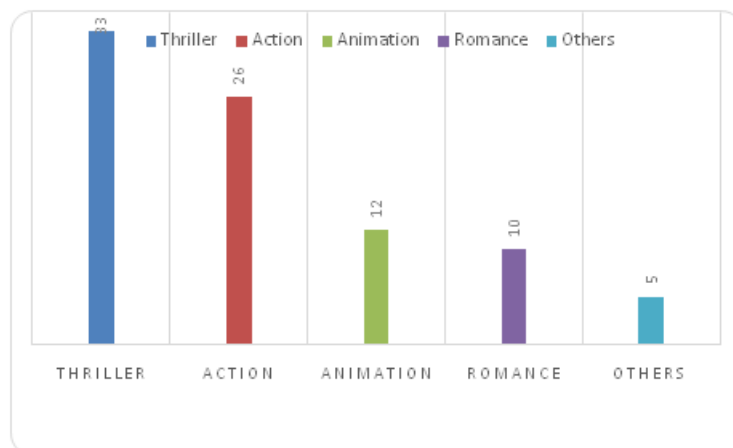
Always	13
Seldom	10
Sometimes	26
Rarely	06
Never	05



Question -4

Which is your favorite category of show?

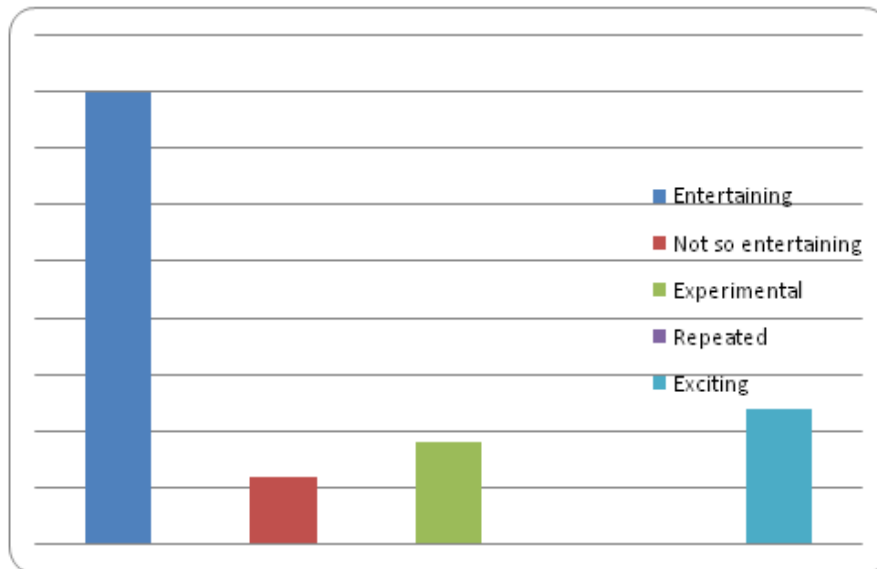
Thriller	33
Action	26
Animation	12
Romance	10
Others	5



Question- 5

Rate your opinion about the content of show on Netflix?

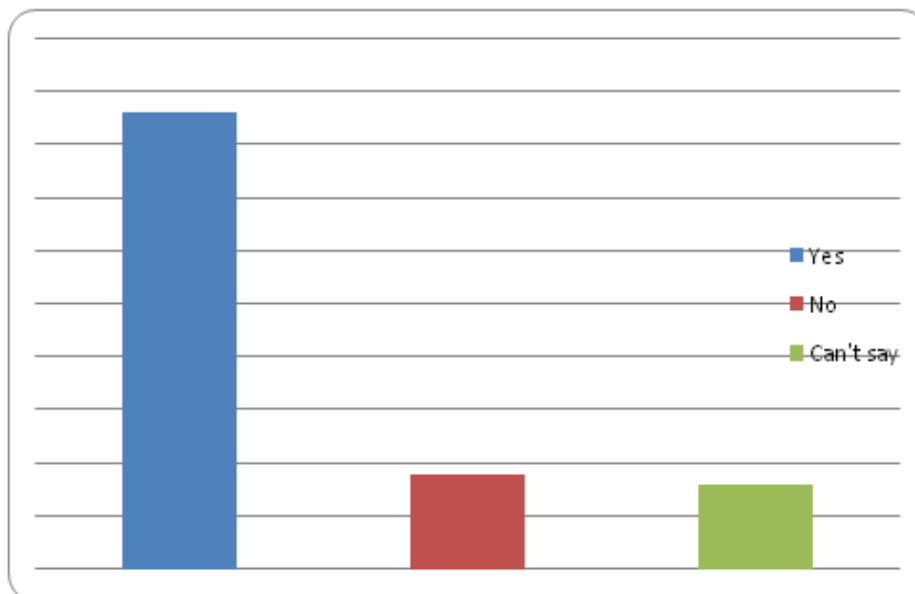
Entertaining	40
Not so entertaining	6
Experimental	9
Repeated	0
Exciting	12



Question -6

If regional shows are included would you like subscribe to Netflix?

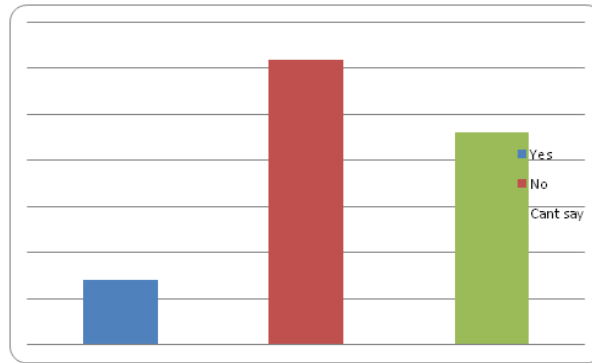
Yes	43
No	9
Can't say	8



Question -7

If the charges per month were increased, would you continue your subscription for Netflix?

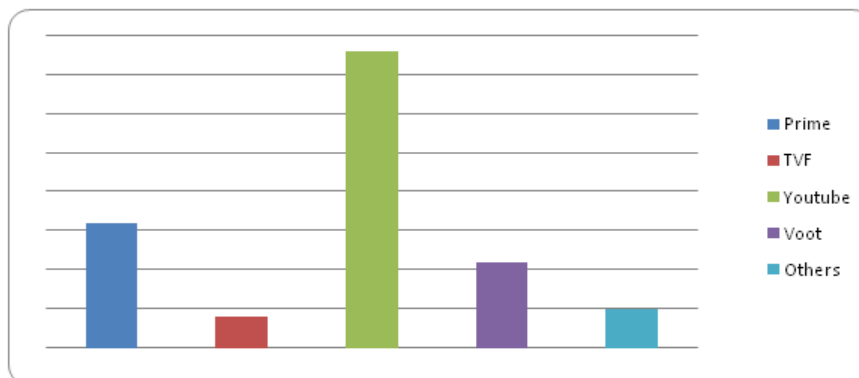
Yes	7
No	31
Cant say	23



Question 8-

Which online streaming would you prefer in comparison to Netflix ?

Prime	16
TVF	4
Youtube	38
Voot	11
Others	5



HYPOTHESIS RESULTS:-

From the responses it is pretty evident that the original content of the shows offered on Netflix makes it popular among MBA students. As evident from the responses it is clear that if regional language shows are included then the subscription rate would increase. This makes our hypothesis true.

- Almost 90% of the Respondents are aware about Netflix.
- Social Media is the most contributing factor spreading name of fame.
- Mix responses about content originality.
- Thriller & Action Categories preferred by majority.
- Positive opinion about content of shows
- Limitations due to unavailability of Regional Languages, & Higher Subscription prices.
- Mixed responses over Netflix Subscription, with overall satisfaction

Conclusion:-

From the hypothesis testing it is evident that Netflix is widely popular, but its popularity is majorly affected by YouTube. The generation has accepted and welcomed it. If regional languages are interfaced, Netflix would be able to draw more people. Also, if the Netflix’s

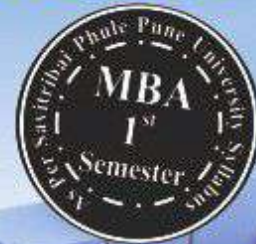
charges per month are dropped as per the income and PPP in India, it would enjoy a dominating position in the India markets.

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Read to Lead

Economic Analysis for Business Decisions




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Dr. Padmalochana Bisoyi
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About the Book

This book of “**Economic Analysis for Business Decisions**” essentially implies use of different concepts and methodology. This book not only thoroughly engages with the important aspects of economics, but also helps the students and academicians to survive and thrive in today’s competitive business world. It covers a wide range of topics such as Basic Concepts of Managerial Economics, Demand Analysis and Utility analysis and Market Structure, Cost Concept & Revenue Analysis and Pricing Policies and Consumption and Investment Function.

In addition to the useful sources of information related to economics’ perspectives, a variety of tools such as styles, figures, solved papers and index are used to provide more adapting view to students and make the subject easier for them. Key features of this book are:

- Coverage is quite comprehensive.
- Simplicity is its ethos and clarity of concepts leads to confidence.

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Dr. Padmalochana Bisoyi is an **Associate Professor** at S. B. Patil Institute of Management, Pune. He holds degrees like MA (Eco), MBA (Fin), M.Phil, Ph.D. He has **18 years** of teaching experience in the reputed institutes of Pune and outside. He has contributed more than **25 articles** to a range of academic journals of national and international repute. He has published **3 books** in the field of Economics, Research and Management. He is the associate editor of a series of edited books. His areas of interest in research are Economics, Commerce and Management and areas of interest in teaching are Economics, Financial Management, Statistical and Quantitative Techniques, Research Methodology. He has presented and published research papers in different reputed institutes like Indian Institute of Management, Shillong (IIMS), Indian Institute of Management, Calcutta (IIMC), Indian Institute of Management, Indore (IIMIDR), Indian Institute Technology, Roorkee (IITR) and Xavier University, Bhubaneswar.



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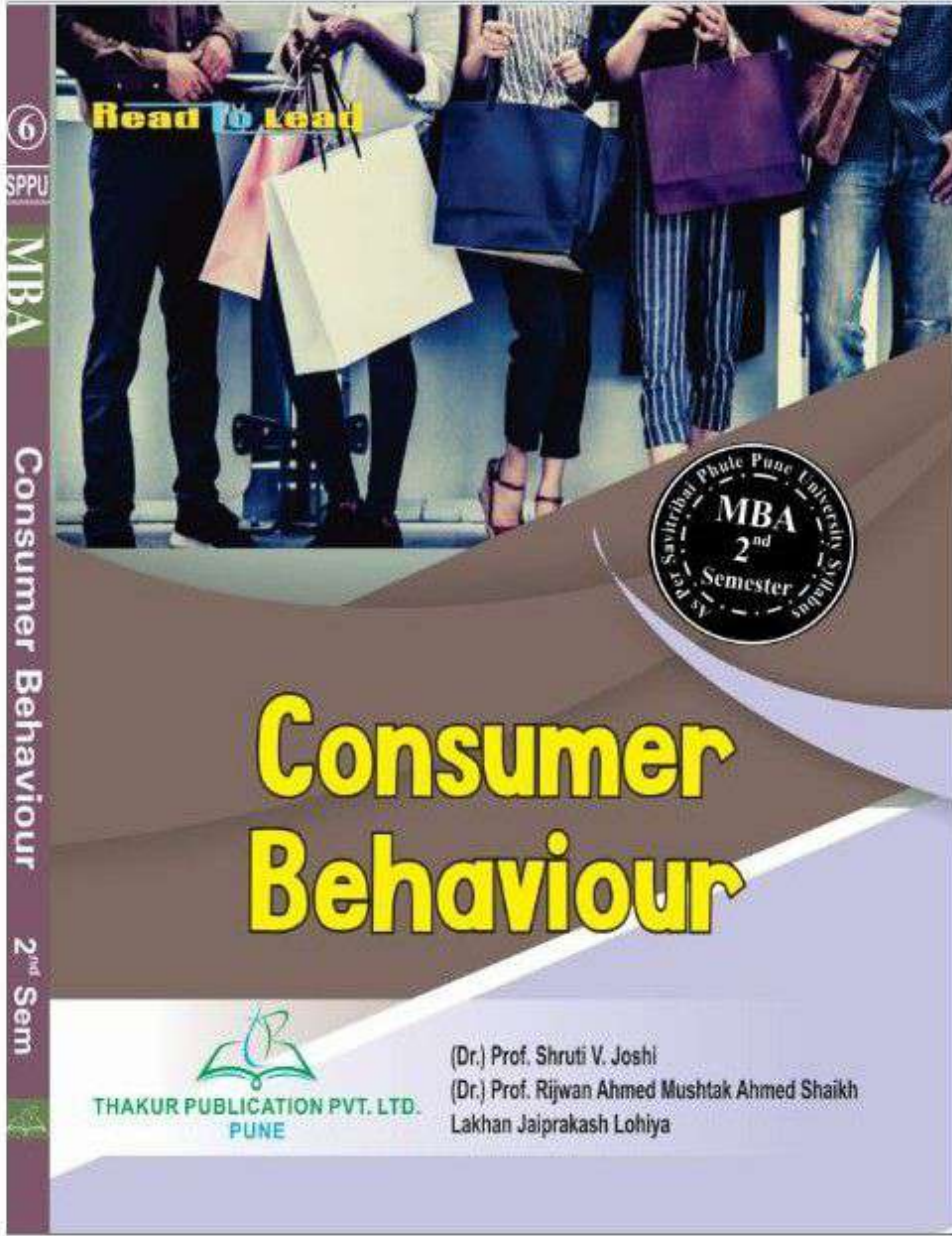
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Consumer Behaviour



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(Dr.) Prof. Shruti V. Joshi
(Dr.) Prof. Rijwan Ahmed Mushtak Ahmed Shaikh
Lakhan Jaiprakash Lohiya

About the Book

Understanding consumer behaviour is the starting point for all marketing planning. This makes it a really fascinating area of study. This book 'Consumer Behaviour' focuses on the dynamic behaviour of consumers and their decision-making, with necessary theoretical foundations and many practical insights from the Indian market. Variety of tools such as exercises, objective type questions and solved papers are also given to assist students in understanding the examination pattern.

About the Author



(Dr.) Prof. Shruti V. Joshi is an Associate Professor at **Srielgal Institute of Management and Computer Applications, Pune**. She holds **Doctorate in Marketing Management** and **Masters in Management Science** from **Savitribai Phule Pune University**. She has 15 years of industry experience in Sales and Marketing after which she has been associated with academics for the last 13 years. Her specialisation is **Consumer Behaviour** and **Services Marketing**. She also holds **Diploma in Vocal Music** from **Sangit Mahabharati (Mumbai)** under the guidance of **Pandit Nikhil Ghosh**. She is a creative person with a strong sense of aesthetics and a fondness for the **Liberal Arts**. She is associated with **SPPU, IMED** and **YCMU** as a paper setter and examiner. She has been awarded "**Best Teacher Award**" by **Lions Club** and **Ajinkya D.Y. Patel Institute** in 2015.



(Dr.) Prof. Rijwan Ahmed Mushtak Ahmed Shaikh obtained his **MBA in Marketing**. He is presently working as **Associate Professor at Srielgal Institute of Management, Pune**. He has over all **8 years** of teaching experience and approximately **5 years** of industry experience in Sales and Marketing. There are many **International research publications** to his credit. His areas of expertise are **Basics of Marketing, Marketing Management, Marketing Research, Business Research Methods, Research Methodology, Managerial Economics, Economic Analysis for Business Decisions, Marketing Strategy and Relationship Marketing, Consumer & Organisational Buying Behaviour**, etc.



Mr. Lakhan Jaiprakash Lohiya holds **MBA (HR & Marketing), DLL & LW, PGDF** degree from the **University of Pune, India**, in 2012. In 2012, he joined the **Global Institute of Management, Sangli** as an **Assistant Professor**. He has published & presented more than **20 research papers** in various **National, International Conferences**. He got **Best Teacher Award** from **Lions Sppu** in 2019. His current research interests include **Consumer Behaviour, Human Resource Management, Career Trends in Management, Current trends in HR, Employee Retention, Challenges in Front of Management Institute in India, E-Commerce, CRM, Entrepreneurship Development**.

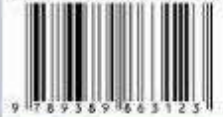
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Open Source Software's for Implementing Knowledge Management Framework in Computational Chemistry Domain

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Abstract: Recent chemistry laboratories function with a wide range of software applications under different operating systems, such as Windows, LINUX or Mac OS X. Instead of installing software on different computers it is possible to install those applications on a single computer using Virtual Machine software. Software platform virtualization allows a single guest operating system to execute multiple other operating systems on the same computer. This paper illustrates open source software's which are used for software virtualization in chemistry research, mass spectrometry and cheminformatics is needed for software testing and development of software for different operating systems used in Chemistry research. In scientific computational Chemistry modeling and simulation problems are major obstacles for researching advanced technology. Open Source ICT tools are playing a vital role for implementing knowledge management framework in all types of scientific chemical computations. This research gives insight on analysis and evaluate the use of open source ICT tools used in scientific chemical computation modeling by identify scientific computation modeling

problems and for its solution identifying knowledge management framework. The study also focuses to classify appropriate open source ICT tool for implementation of solution space.

Keywords: OpenSource, Information Communication Technology, Knowledge Management, Scientific Computation

1. Open Source Software

Open source software (OSS) is computer software with its source code made accessible and licensed with an open source license in which the copyright holder offers the rights to study change and distribute the software to anyone and for any purpose. Open source software is very often developed in a public, collaborative manner. Open source software is the most projecting example of open source development and often compared to user-generated content open content movements.

Following are the some open source software's and software tools used in various domains of scientific computations as-

1. Mathematics

An open source program is used in mathematics to general abstract mathematical purposes would likely use it for group theory,

number theory, algebraic geometry and perhaps polytopes.

- Calculator
- Computer Algebra System
- Scientific or Technical Computing
- Statistics
- Data Evaluation

2. Chemistry

- Molecule Viewer
- Molecule Drawing
- Periodic Table
- Biochemistry
- Molecular Modeling
- Image manipulation

3. Physics-Physion is a 2D Physics simulation software. It can be used to easily create a wide range of interactive physics simulations and educational experiments. Teachers may find it mainly useful since it can be used as a virtual Physics laboratory through which they can validate some basic physics Concepts in the classroom.

- Electronics
- Physics Simulation
- Unit Conversion

4. Biology

- Computational Biology and Bioinformatics
- Water Device Testing
- Water Purification System
- Measuring Human Horsepower

- Blood Pressure
- Family Fingerprints

5. Information Technology

- File managers
- Screensavers
- Games
- Graphical User Interface
- Media
- Healthcare Software
- Operating Software

2. Software Development and Open Source

Software development governance is a very significant factor that manages all the concerns during the entire software lifecycle. If governed efficiently software could be a successful one on contrary if ill managed may result into a tragedy with respect to development goal. The software governance involves some major concerns which include management at organizational level , risk management etc. other concerns include the flexibility in the software development , measure taken in order to minimize risks and to satisfy the providing interest in open source software (OSS) has grown meaningfully within the knowledge management framework during the last few more of years.

Choice for Software Users

Every (free) software user must have four choices forth choice to run the program for any purpose.

- i) The choice to study and modify the program.
- ii) The choice to copy the program so you can help your neighbor.
- iii) The choice to improve the program, and release your improvements to the public, so that the whole community benefits.

Characteristics

OSS has many characteristics. The important ones are:

- i) It is generally developed freely
- ii) Builder or developer has no right to claim royalties on the distribution or use
- iii) Source code is accessible to the user and distributed with the software
- iv) No denial to an individual or to a group to access source code of the software
- v) Licensed software cannot place limit on other software that is distributed with it
- vi) Distribution of License should not be specific to product and License should be technology impartial, etc.

Free Redeployment

The license shall not limit any party from selling or giving away the software. The license shall not require a royalty or other fee for such sale.

Source code

The program must comprise source code, and must allow distribution in source code as well as compiled form.

3. Open Source Software's used in Computational Chemistry Domain

Following are some open source software's and their usage in computational chemistry is as under-

Software Name	Usage in Computational Chemistry
CISPro	Naming a reliable chemical name conversion and mining engine
EMAX	The Substance Manager program is designed to aid in tracking the entire life cycle of potential drug candidates, while the Reagent Manager is directed at maintaining a chemical inventory.

4. Knowledge Management Framework for Computational Chemistry

The major events in computational chemistry can be classified as molecular electronic structure (quantum chemistry), reaction dynamics, and molecular dynamics. These are used to calculate, respectively, the properties of individual molecules or groups of molecules, kinetic information and reaction paths for chemical reactions, and the properties and dynamics of large molecules or bulky assemblies of molecules. All of these activities have been extremely successful over the past

decades and have firmly recognized computational chemistry as a third methodology together with experiment and theory. Computational chemists have also been among the foremost users of computer hardware, with substantial requirements for computer time, memory, and disk space, and with a history of abusing both early access to new architectures and novel solutions to reduce the cost of performing their research.

Developing a scientific computing programme three main phases:

- 1 Model development
- 2 Numerical methods/algorithms development
- 3 Software developments with wide validation

Based on a systematic logical analysis, four elements can be inferred from the frameworks.

They are:

- (1) Structure;
- (2) Knowledge types or resources;
- (3) KM processes or activities;
- (4) KM influences or factors.

These four elements have been identified because they appeared to be the more salient ones found in the framework. In terms of structure, the frameworks are compared on a Plan–Execute–Evaluate basis.

Framework development

In developing the Computational Chemistry knowledge framework, the results of the

design, manufacturing and service knowledge capture events were combined with the findings from the literature study. The review of the literature showed that Computational Chemistry -KM design requires an combined approach; this was a central consideration in the development of the integrated framework.

Ontology development

Using life cycle system as a central class, the structure was proposed for demonstrating a Computational Chemistry Framework in order to provide product- and service- design support. This has been developed with reference to a technical Computational Chemistry-KM, in which detailed descriptions of design, manufacturing and service are required. The technical system used in the development and validation of this model is a system of space pumps installed at a customer site operated according to an operations contract which indicates an overall level of availability. There are various pump, customer and process types to consider. Decisions on replacement stock levels and installation of slave systems with automatic switching are made by the vacuum service provider.

5. Implementation

The ontology was implemented using the Protégé knowledge base editor tool. The Charge tool allows the creation of classes,

properties and relationships; and the implementation of a knowledge base through the creation of instances of those classes.

Knowledge implemented in the system includes: requirements, design features, manufacturing features, machining processes, machining best performs, inspection processes, manufacturing resources, product descriptions, module descriptions, and component descriptions. Examples of the implemented knowledge will be provided through the description of manufacturing and service knowledge usage scenarios.

6. Conclusions

Open Source Software (OSS) products are increasingly being used in software development. In order to select the most suitable OSS product, various evaluation methods have been proposed. Following a systematic and difficult search of the literature, we identified 20 different creativities for OSS product evaluation. Furthermore, we have proposed a Framework for Linking Open Source software Evaluation Methods (FOCOSEM). We emphasize that the framework is not intended to make any judgments about the quality of the studied OSS evaluation methods. In future work, we will demonstrate the application of FOCOSEM by comparing these evaluation methods identified in our review. Additionally, we do not claim our framework is complete; rather, we consider it as a first step towards

systematically providing a comparative analysis of OSS evaluation methods. Supplementary elements can be added to our framework to compare other facets of the evaluation methods.

Whilst there are several superficial benefits for manufacturing companies to progress the utilization-Computational Chemistry-KM business models, there is not a clear migration approach. The changing nature of the design challenge is one such area which requires considerable further research, to examine the needs of NPI teams when faced with the challenge of developing new product-service systems. In mature engineering industries, there is a strong case for knowledge reuse. The proliferation of knowledge based systems and design process modeling is a good indicator of this.

The framework also adds value to supporting analytical, design, development and deployment activities by guiding the analysis of knowledge movements and building of a usefully comprehensive picture. The framework provides a mechanism for developing a balanced, high-level view that can be used to set the stage for deeper analysis, identifying the compelling and serious issues that warrant more careful examination. Once the picture is complete, the framework can be used to identify the specific needs that can be met with

ordinary technology, localized customizations or change-management programs.

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Dr. Chandrani Singh



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Founder President Message, STES



Dear Friends,

Sinhgad Institutes welcomes you all for the IT-RIBW-18 to be held at Pune. This theme touches all the latest topics for research in the field of ICT. At this year's conference, we will bring you outstanding resources and tools those which will help you create many opportunities.

This conference is your unique opportunity to meet with educationalists, entrepreneurs and technology experts across the globe. No one will leave without learning best practices, making new contacts and creating strong bonds of support. This year's conference is being hosted by STES's SIOM Vadgaon, in association with SPPU, Pune, under the Q.I.P. of Savitribai Phule Pune University.

I look forward to welcome you to Pune and to be a part of a productive and fulfilling conference. I am sure the aspirants will gain real knowledge treat from informative skill- building sessions and research presentations.

I hope that all participants will enjoy our warm hospitality and leave with pleasant memories at the end of the conference. I look forward to welcome you.

All the Best!!!

Prof. M. N. Navale
Founder President, STES

Message from Founder Secretary, STES



IT-RIBW-18 is an amalgamation of IT and Management tracks where researchers come together and discuss various issues. It is noteworthy that, academicians, technologists and IT professionals all over the globe are coming to present their research work, exchange their ideas and views. This conference provides a platform to impart knowledge in multidisciplinary fields in the IT and Management sectors.

Sinhgad Institutes have always worked with a perspective of research in diverse fields of IT and Management which helps in culminating the academic brilliance in all dimensions.

I express my gratitude to Savitribai Phule Pune University for being our partner in this immeasurably important knowledge sharing conference at an international level.

I extend my warm wishes to all participants and faculty members who worked hard to make this IT-RIBW-18 a grand success.

Dr.(Mrs.) Sunanda M. Navale
Founder Secretary, STES

Message from Vice President (HR),STES



Dear Participants,

International Conference IT-RIBW-18 is a true reflection of progress that Sinhgad Institutes is making. The conference is meant for investigators, practitioners, management consultants, students, industry leaders and other experts to exhibit their application oriented dreams and analytical vision innovatively through research and suggest measures for meeting the evolving challenges.

The exchange will hopefully benefit the aspiring research world. Sinhgad Institutes is one of the largest educational conglomerates in western India with a vision towards excellence in all spheres of educational dimensions.

Sinhgad Institutes always endeavor towards providing quality education along with overall development of individuals through research by conducting International Conferences.

I congratulate everyone for attending the conference!

Mr. Rohit M. Navale
Vice President (HR), STES

Message from Vice President (Admin.), STES



Dear Researchers,

IT-RIBW-18, International Conference is a medium by which diverse people from various fields come together to share their understanding and research work. It is a great platform for researchers, scholars, students, academicians and industry personalities.

Sinhgad Institutes is a national leader in imparting education and is recognized globally. It is an organization which is raising its global prominence through research.

To enhance its position as an international leader, it has made an agreement with Harvard Business Schools (HBS) for strengthening its research base and inspiring diversity in various perspectives.

I wish you all the very best to showcase your talents and acquire tremendous knowledge for your growth through this conference.

Mrs. Rachana Navale Ashtekar
Vice President (Admin.), STES

Message from Director, SIOM-MCA



Dear Researchers,

IT and ICT are the tools that have been empowering everyone around the world, by playing a pivotal role for global coordination and cooperation. Such programs will help Institutions and businesses to engage in constructive discussions, exchange knowledge and build political momentum to promote positive change.

During the Conference, all participants will share lessons learned and strive to establish a vision of ICT development needed for a socio-economic transformation and shared prosperity worldwide. Through the delivery of collaborative activities with industry and education providers, these initiatives focus on encouraging students to pursue ICT-related careers, tapping into alternative potential sources of work areas, and delivering training programs that are responsive to industry needs.

Dr. Chandrani Singh
Director, SIOM-MCA

PREFACE

Dear Distinguished Delegates and Guests, The Organizing Committee warmly welcomes our distinguished delegates and guests to the 2018 International Conference on IT Revolution in Business World held during February 27 and 28, 2018 in Pune, Maharashtra, India. IT-RIBW 2018 is sponsored by Savitribai Phule Pune University (SPPU). This conference is aimed at discussing with all of you the wide range of problems encountered in present and future high technologies in IT and Management. The . IT- RIBW is organized to gather members of our International community research students, faculty members and students so that researchers from around the nation can present their leading-edge work, expanding our community's knowledge and insight into the significant challenges currently being addressed in that research. This proceeding records the fully refereed papers presented at the conference. The main conference themes and tracks are IT and Management. The main goal of these events is to provide national scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers from around the nation. Both inward research; core areas of IT and management and outward research; multi-disciplinary, inter-disciplinary, and applications will be covered during these events. The conference has solicited and gathered research submissions related to all aspects of major conference themes and tracks. All the submitted papers in the proceeding have been peer reviewed by the reviewers drawn from the committee, external reviewers and editorial board depending on the subject matter of the paper. Reviewing and initial selection were undertaken electronically. After the rigorous peer-review process, the submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the conference. The conference program is extremely rich, featuring high-impact presentations. We are grateful to all those who have contributed to the success of IT-RIBW 2018. We hope that all participants and other interested readers benefit from the proceedings and also find it stimulating in the process.

With best wishes from

Editorial Board IT-RIBW 2018

An Analytical Study of Internet of Things (IoT) Devices Used in Hydroponic System and its Impact on Productivity of Agricultural Sector Special Reference to Hydro culture Farming

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Abstract:

This research is based on the Hydro-culture Farming sector in India, where agriculture is backbone of the country. Agriculture is overwhelmed by several problems to overcome from such problems like small and fragmented land holdings, fertilizers, pesticides, chemicals used for agriculture. The solution is hydroponic system .Hydroponics is a method in which plant grow without using soil and gives you more production than soil farming within less time. However, purity of water control by this system which can result to growing of plant. Microcontroller automatically maintains purity level in water solution using turbidity sensor. Lastly, this study also gives insight on the ability of the system can adjust the purity in water solution with the help of IoT Devices. The solution of water from the flow system container is moved to the main tank to measure the level of purity by turbidity sensor and make changes if required and then transfer back to the system container to continue growing the plant. This project helps to solve above difficulties

.Hydroponic system does not required land so is land free farming ,Consumers demanding quality food which is free from chemicals and pesticides Here we can go organic ,it should done in controlling environment .you also can do it at garden, balcony or in some controlling area. This research paper is basic study of Internet of Things (IoT) Devices Used in Hydroponic System and its Impact on Productivity of Agricultural Sector Special Reference to Hydro culture Farming

Keywords: Hydroponic agriculture, Internet of things, sensor, Arduino.

I. Introduction

a) Current Status of Agricultural



Agriculture is backbone of India 54.6% population is working in agriculture sector and allied activities (census 2011) and its contribution in gross value added is 17%.agriculture is an important sector ,India government took forward steps for its steps are taken to improve soil fertility on maintainable basis through soil health card scheme.to provide advance access to

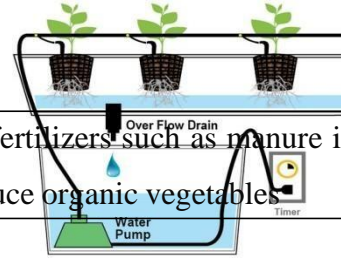
irrigation and improved water efficiency through “**Pradhan Mantri Krishi Sinchai Yojana (PMKSY)**”, to enhanced organic farming through “**Paramparagat Krishi Vikas Yojana (PKVY)** “,to boost the income of farmers creation of unified agriculture market to alleviate agricultural risk a new scheme " **Pradhan Mantri Fasal Bima Yojana(PMFBY)** “has been

launched for carried out from kharif 2016. Recorded GDP of agriculture and allied sector was USD 244,74 billion in 2016 the major attention would be on increasing farmers income by 2022.other than, the government would increment expenditure in farm and rural sector, sector of infrastructure and social sector.

b) Hydro culture Farming

i] Soil depend Agriculture Vs. Hydroponic Agriculture

Sr.No	Soil depend Agriculture	Hydroponic Agriculture
		
2.	Good top soil is required	No soil is required
3.	Plant necessity to be irrigated to control water stress	Automatic irrigation system no water stresses.
4.	Crop productivity unpredictable	Crop productivity is reliable
5.	More production cost	Less production cost as compared to soil based farming
6.	Required to add nutrients in soil you can add nutrient as per soil laboratory report	Nutrients are already there only having needed to use soluble fertilizers. Nutrient content are balanced in hydroponic fertilizer formulation
7.	We can't reject Soil borne diseases	Soil borne diseases can be rejected



8.	Due to organic fertilizers such as manure it is possible to produce organic vegetables	Due to artificial nutrients are always used hydroponics production is not organic
----	--	---

Fig2. Hydroponic vegetable

production

ii] Below depicted some

types used in agriculture

Types	Image	Explanation
Hydroponics Farming		Farming without soil
Wick system		This system is used for the decorative gardening with regular soil
Drip System		This system is popular with small commercial hydroponics growing operations and design to grow tomatoes, peppers, flower crops and herbs
Deep water culture		This system is supreme to help small fast-growing plants that requires a lot of liquid

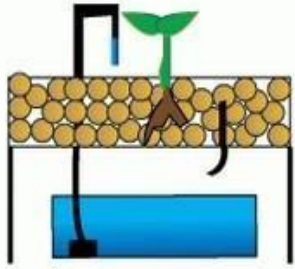
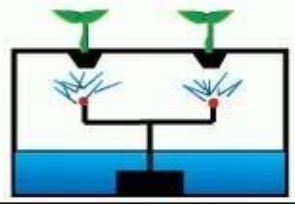
<p>EBB & Flow system</p>		<p>Nutrient solution is brought to the roots in the substrate (coir, haydite, gravel, perlstone, etc) and then it flows over into the tank. The process is automatic depends upon the pump timer.</p>
<p>Aeroponics</p>		<p>Superb for large crops of seedlings or growing plants, roots are sprayed by nutrient rich water.</p>

Fig 1. Types of hydroponics

c) Architecture Internet of Things (IoT) Technology in Hydroponic Agriculture:-

To attract every farmer to do agriculture business digital and smart agriculture. The below architecture is used in hydroponic system. This is latest double-precision, farming techniques are automated crop control, collection of useful data; there are surprisingly many advantages of networked farm.

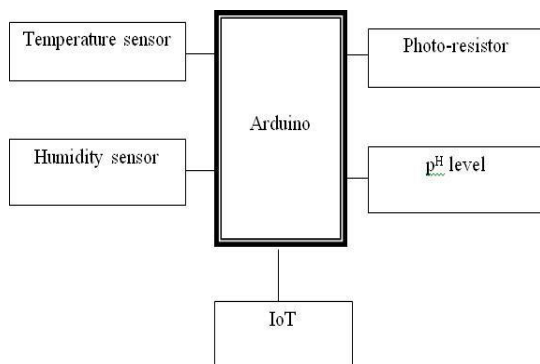


Fig 3. Architecture of IoT Based Hydroponics System

Farmers development depends upon development of agriculture .development of agriculture will help farmers to enhanced .Rural larger section of poor are directly connected in agriculture or indirectly linked with consumers. Efficient way of production, higher income from agriculture will create more rich environment in the country for the development of the Indian economy .Smart agricultural is concept in market now days so to enhanced the traditional system of Indian agriculture will improve we can use smart growing technology like hydroculture it will solve so many problems in India . Nutrition’s in land, less water required, less land required also can decrease diseases.

Below is catalogue of IoT devices used in Hydroponic Agriculture -

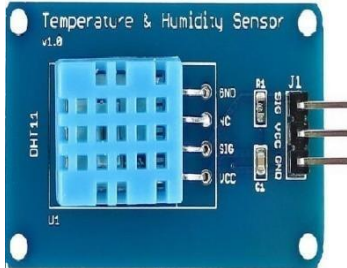



IoT Devices	Device	Usage	Hardware configuration	Software configuration	Other parameters
Temperature sensor and Humidity sensor		Controls temperature and humidity	Arduino DHT22 Sensor 10k Resistor	JavaScript code	Accuracy ,Cheap
Arduino		Controlling of all devices through this board	Adafruit CC3000 Shield,LEDs,220 Ohm resistor,power supply	JavaScript code	Simple to use, Cheap
pH level		It checks pH level of water.	Sensor, light, ppm test pen, digital monitor, pH meter	JavaScript code	Accuracy, easy to handle
Photo-resistor/Light sensor		Photo-resistor controls emit of light	LED ,Male to male,Jumpers,Arduino Board	JavaScript Code	Quick fluctuates cheap easy to handle

Fig 4. IoT devices used in Hydroponic Agriculture

II. Significance of Study

Nowadays hydroponics technology is enhancing farming. Various countries accepted hydroponics method on large

scale and obtained result. The two advantages of this system you can do farming at very small place and without soil. This system is profitable with great

benefit to humanity .people in cities can grow gardens in their small place.

III. Literature Review : Hydroponic Agriculture

Hydroponic is the system of growing plant without soil but using water and the required essential Nutrients This system is specially taken from the hanging garden of Babylon ,the floating garden of the Aztecs of Mexico and in traditional Chinese culture (rash 1995.William Gerick of the university of California Barkley) began promoting the hydroponic system (gardening without soil culture).

Hydroponics is part of Hydro culture, hydroponic farming does not need soil it means this technique would applicable for desert area in India because growing of plant can possible in rough environment

.hydroponics cannot grow without nutrients since a plant receives much of their nutrients through dirt alone .here we can add nutrients in water solution as per requirement and we can control on that. Hydroponics gives you fresh and good food .hydro culture saves the cost of material because you can use same equipment more times.

IV. Objective of Study

Based on literature of review following research objectives have been finalized for this study

- 1) To study hydro culture and hydroponics

system.

- 2) To study IoT Devices used in hydroponics system
- 3) To analyze strength and weakness of IoT device used in Hydroponics system
- 4) To identify challenges and opportunities for developing new IoT devices used for hydroculture

V. Research Gap Hydroculture

is the emerging agriculture which can have positive impact on GDP rate of India there is huge opportunities to increase the productivity of agriculture sector with the help of novel IoT devices used in hydroponics system there is less focus on challenges and opportunities for new IoT devices from research insight

VI. Research Design And Methodology

Research creation and design methodology has been prepared for further IoT Device prototype Development. After doing a lot of research on farming and its various types from various countries the one hydroponics is the method that is main goal of research .by the definition, is soil less cultivation, which requires only nutrient rich solution. Hydroponics does not need soil, instead of the root system is supported with the medium like Rockwool, perlite, clay pellets peat moss, or vermiculite. The goal was to determine water would be compared and estimate the amount needed. All hydroponics systems are gives positive result when everything is in right

proportions as per the plant required. Nearly all the types of hydroponics solution contain automatic system. All this system checks pH and nutrient level. But shortage of the system is need continuous electricity as well as pump or timer. To avoid dying of plants need to use moisture holding substrates (vermiculite, coir etc.).Hydroponics system equipment's are costly but you can prepare your own gear (apparatus) .principles of main hydroponics are same.

VII. Conclusion

After a description of soilless culture, a system to control and monitoring hydroponic culture has been presented. For its characteristics, the system is a significant innovation for agriculture applications. As one of typical applications, more and more people realize the application of the IoT (Internet of Things) will bring extensive development to the digital life. In the interim, we have an idea that the device of hydroponic can be connected with social communication platform, which can realize a wonderful, dream that farmers can interact with their hydroponic plants on line through a mobile terminal. It is unique system which can improve the agriculture production and save the many more lives of human being from starvation.

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9. Present status of Indian agriculture

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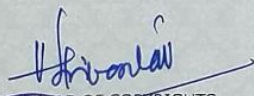


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