

An aerial photograph of a dense urban skyline, likely Hong Kong, featuring numerous high-rise buildings, a harbor with ships, and mountains in the background under a blue sky with scattered clouds. The text is overlaid on the top half of the image.

CONTEMPORARY ISSUES IN BUSINESS MANAGEMENT AND ECONOMY

**DR. KHUSHBU AGARWAL
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Contemporary Issues in Business, Management and Economy



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Contemporary Issues in Business, Management and Economy

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PREFACE

The central idea of this book, *Contemporary Issues in Business, management and economy*, gives a thorough description of the various issues of business operations in India and elsewhere throughout the world have to deal with. Businesses face a variety of obstacles at the start of the twenty-first century. The management of human resources, operations and production, financing, and marketing concerns pertaining to the performance of a company entity and the organisation as a whole are some of these obstacles.

Businesses are simultaneously dealing with a number of difficulties related to moral and legal concerns affecting their operations. Furthermore, the fundamental structure of business activities in the globe today, particularly in India, has changed as a result of the radical developments in technology, particularly artificial intelligence.

It is crucial to do research solely to satisfy the expanding need for commercial activities in light of the difficulties facing business. These researchers ought to limit their attention to current problems that endanger the viability and prosperity of commercial endeavours in the modern world. In addressing the business difficulties of today, these studies offer fresh perspectives and a road map for moving forward. This book presents the most recent and relevant information regarding corporate operations and activities in this case. However, you should also make clear comments and suggestions in an effort to address the underlying issues in corporate operations.

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It is our first and foremost duty to acknowledge all those members who contributed very significantly to make this book a successful one. We are sincerely thankful to all the authors for contributing their valuable research work to our book. Special thanks to all those who gave their time to read or edit the chapters. Your honesty, suggestions and advice helped us refine our ideas and approach throughout the creative process.

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We are thankful to our families who taught us discipline, tough love, manners, respect, and so much more that has helped us succeed in life.

Having an idea and turning it into a book is as hard as it sounds. The experience is both internally challenging and rewarding. We especially wish to thank the individuals that helped make this happen.

Thank you to everyone who strives to grow and help others grow!!

Dr. Khushbu Agarwal

Dr. Devendra Shrimali

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DIGITAL MARKETING ACTIONS – HEALTHCARE PROVIDERS OF DUBAI

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ABSTRACT

Digital Marketing has become important tool in campaigns, which attract and retain Internet users for healthcare issues. This study investigates the main ways in which patients can be gained and retained by the doctors / medical staff on behalf of healthcare providers of Dubai using digital marketing actions. This research study deals with a new approach that will optimize digital marketing tools and technologies for the evolution of patient trends, and therefore, will be of academic and professional use for doctors / medical staff, marketing managers and web solution developers working for the healthcare providers. The results and conclusions of the research identify the specific actions that must be carried out to attract and retain patients by healthcare providers that use the digital marketing tools and technology on the Internet. The results further indicate that the digital marketing of healthcare providers of Dubai through Internet is considered by the patients with the presence in social media has a reinforcing effect on building trust and long-term relationships by the doctors / medical staff.

Keywords: digital marketing actions; healthcare providers; doctors / medical staff; patients; Dubai.

JEL Classification: M12; J81; J24; O15.

INTRODUCTION

According to the Communication Advertising and Marketing Education Foundation, “Digital Marketing is a broad discipline, bringing together all forms of marketing that operates through electronic devices such as on-line, on-mobile, on-screen. Over the years, it has developed and operated enormously and it continues to do so all over the

world in general and Dubai in particular. Based on recent research from renowned IT and management consulting firms, the impact of Artificial Intelligence (AI) on the global economy is forecasted to be massive. In a 2016 report, Forrester predicted that AI-driven companies would realize \$1.2 trillion in additional annual economic value compared to their laggard peers by 2020. This appears to have been a conservative forecast. McKinsey Global Institute now forecasts \$3.5 - 5.8 trillion impact from AI by 2020. Healthcare services represent one of the fastest growing segment of the United Arab Emirate's economy. The UAE spends about double that of other Arab nations as a share of GDP (>10%). The current healthcare debate related to marketplace reform is only one outgrowth. Contributing to the larger crisis is the ever changing marketplace, from rapidly advancing technology and medical science with its corresponding new treatment options, to the persistent erosion of the tertiary level hospital, to changing demography. These and other shifts have affected virtually every area of healthcare delivery. The increasing factors will continue to challenge marketing planners and decision makers who interface directly with patients as service providers, as never before. The purpose of this research paper is to share the experiences of private healthcare sector efforts to enhance their marketing performance through their continuing efforts to monitor their service to patients and deliver value consistent with their continuing patient oriented research program. Recent research shows that work and employment are not only drivers of happiness, but that happiness can also itself help to shape job market outcomes, productivity, and even healthcare business performance. While happiness is often thought of as the experience of pleasant emotion and a general satisfaction with life, we know true happiness requires more than a pleasant life. Individuals need to have a sense of purpose, they need positive relationships and they need to achieve meaningful goals. The study of happiness in the healthcare workplace has become confused by separately evaluating job satisfaction, employee engagement, flow and other constructs. Martin Seligman attempted to solve this problem by developing the PERMA model, which acknowledges and incorporates all the elements into one model. He chose to call the outcome "well-being".

Around 200 AD, woodblock printing was invented. This heralded an era for physicians, apothecaries, pharmacies, clinicians and healers. They could alert the public using

“outdoor advertising.” Simply, a rudimentary sign on the side of their wagon. When doctors established an office, they would hang a shingle to let passersby know that they were open for business. Local townsfolk could be healed from whatever ailed them. For the next 200 years, the use of the advertising media continued to expand and evolve. Furthermore, when automobiles became popular in the early 20th century, it launched the creation of outdoor board companies. First with signs on buildings in town and on barns in rural communities. And later, 30-sheet outdoor boards along America’s highways. Do you remember the “Burma Shave” ads? Those ads were outdoor advertising at its best – as an early healthcare advertising message for a medicated shaving cream. The most advanced medical services of the day were primitive. As the research illustrates, the marketing as a science substantially accelerated development, and commissioning of healthcare services allowing patients to derive economic value from medical advancements coupled with marketing and information technology applications faster by building the necessary platform components for healthcare providers. Digital marketing is evolving steadily and hugely every day. From infusing into every possible industry, to become the major source of online marketing for several corporations, digital marketing has settled well. Traditional marketing techniques do not tend to be as effective as digital marketing today. That is why digital marketing is being used by areas like the food sector, travel industry, IT industry as well as the healthcare industry. The main reason for this progress is digitalization. The same way the healthcare industry can’t just overlook digital marketing. Healthcare patients have more options than ever before. With so much information available online, these patients no longer feel the need to visit the closest hospital, a medical practice closest to their location, or even healthcare practices with multiple locations in the community. That’s why it’s so important to have a planned, budgeted healthcare marketing plan to reach new and returning patients in your area at the best moment. Healthcare Marketing, even if you’re happy with your current patient volumes, can’t happen without a planned medical marketing strategy to keep the healthcare brand at the forefront of people’s minds. Think of all the reasons someone might decide to switch healthcare providers: changes in the type of healthcare insurance, relocation, dissatisfaction with

wait times, or just one negative experience. You are not guaranteed to keep up your patient volumes forever.

1. Research Problem

Advances in digital technology have made a significant impact on marketing theory and practice. Technology expands the opportunity to capture better quality customer data, increase focus on customer relationship, rise of customer insight and Customer Relationship Management (CRM). Availability of big data made traditional marketing tools to work more powerful and innovative way. In current digital age of marketing some predictions of effects of the digital changes have come to function but still there is no definite answer to what works and what doesn't in terms of implementing the changes in an organization context. As per Smyth (2007), the Internet market was dominated by Google and Yahoo for search engines. Internet search traffic increased the rise of search engine optimization spread for major companies like Google. In 2007, the usage of mobile devices enlarged the Internet usage on the move dramatically, and people all over the world began connecting with each other more conveniently through social media. In the 2010s, digital marketing became more sophisticated as an effective way to create a relationship with the consumer that has depth and relevance. Year 2015 onwards, the developed world, firms have realized the value of digital marketing.

A research area covers many topics researchers can study in the context of a scientific discipline. A research topic is "the broad subject matter addressed in a study" (Creswell, 2012). Since it is the broad subject matter of a research, many researchers begin here. It helps in narrowing the topic down to something that is reasonable to conduct a study. Research can be defined as a systematic investigation, study of relevant material and sources in order to establish facts and reach new conclusions. A "Statement of the Problem" is a description of a difficulty that needs to be solved or at least researched to see whether a solution can be found. It can also be described as either **a gap** or **contradiction** between principles and practices. The ultimate goal of a problem statement is to transform a generalized problem something that is not in the right perspective or into a well-defined problem that can be resolved through focused

research and appropriate decision-making. The statement of the problem should include the following:

- A clear statement that the problem exists;
- Evidence that supports the existence of the problem;
- Evidence of an existing trend that has led to the problem;
- Definitions of major concepts and terms;
- A clear description of the setting;
- Probable causes related to the problem;
- A specific and feasible statement.

This research is focused on the digital marketing tools for the private healthcare providers of Dubai. Recently, large healthcare organizations in Dubai have made substantial investments to provide state of the art medical facilities to the population of Dubai. While evidence shows that better performing healthcare organizations have happier employees, there has been much less research on whether happy employees contribute to better healthcare organizational performance. Finding causal relations between employee well-being and healthcare organizations performance is important for them to justify spending healthcare organization resources to provide a happier work environment for their employees. While correlational and research studies do find a positive relationship, the evidence remains sparse. The private healthcare sector in United Arab Emirates in general and Dubai in particular have no exception in it. But it is more important to know how patients are considering the healthcare facilities that are critical to the success of private healthcare organizations.

In the past, we all have studied that the concepts and conventions of happiness are relevant to success of an organization. The economic success of the healthcare organization depends a lot on the repeat business by the patients based on various factors – personal and professional. It is a case study which dealt with various patient perceived parameters in private healthcare organizations in Dubai. Dubai private

healthcare sector has been chosen as a case study for examining the application of digital marketing tools for the success of healthcare providers in Dubai.

E-commerce adopters have clearly understood and experiences the immense benefit of digital marketing. Therefore, the commercial organizations are scaling down mass media advertising description of E-commerce. The main digital platform such as Google, Facebook, Twitter, You-tube are adding more user friendly products that are allowing smaller as well as large organizations to market with high efficiency to early users. It has resulted in increase in digital marketing spending by commercial organizations in particular. The innovation of digital media coupled with E-commerce mechanism is moving sharply to address the needs of customers. Therefore, it is imperative for the healthcare providers of Dubai should join the main stream for their successful operations.

2. RESEARCH METHODOLOGY

The current research is exploratory in nature; it focuses on literature review, newspapers, journals, and the personal experiences of the authors. Additionally, websites of some digital marketing agencies and healthcare providers in Dubai have been visited to know the process, elements and functions of digital marketing. The authors have methodically collected the data from healthcare consumers / patients and healthcare providers in Dubai. The data collected by the authors was analyzed using scientific methods and drawn the conclusions. The authors discussed the issues arising from the data and its application with the established research in the field.

Methodology is crucial for this study because an unreliable method produces unreliable results and as a consequence undermines the credibility of interpretations and findings relating to the study in this context. The process used to collect information and data for the purpose of making healthcare business decision. It includes research publications, interviews, surveys and other research techniques. In management, digital marketing of healthcare business, it is important to provide relevant and sufficient information for researchers in the field to adopt the methodology used in this study. The researchers would want to understand on how the new or existing methodology is used in an innovative process.

This study is basically explorative in nature and mainly based on primary and secondary data. The collection of primary data through the field survey method was conducted from different patients, employees working in private healthcare providers in Dubai. The secondary data is collected from Dubai Statistical Department and other informal yet reliable sources.

Sampling is done based on the response getting from employees working in private healthcare providers followed by the scientific data collection methods. This study was undertaken to examine the digital marketing tools that are useful for the success of private healthcare providers in Dubai. To answer the research questions this study follows two different approaches.

After the initial data collection, a basic analysis of the gathered data was conducted. The first data set was checked for possible errors, missing values. Second, the response rates were calculated and the characteristics of the respondents were analyzed. Third, the data was compared with the research materials and the best of all is to be considered for deciding factors of digital marketing tools for the success of healthcare operations.

3. Research Questions, Sources for Data Collection

The purpose of this research is to investigate the overall role and impact of the digital marketing on healthcare services in Dubai both from the doctors' / medical staff and the patients' perspectives, in order to identify commonalities and differences between the two groups. We looked into the extent to which the doctors / medical staff make use of the digital marketing, the type and intensity of use, the perceived benefits, as well as the effectiveness of digital marketing tools as judged by the patients. The investigation focused specifically on the following research questions:

- A. What are the primary roles of the digital marketing tools from the point of view of doctors / medical staff and patients?
- B. What are the most popular digital marketing platforms for doctors / medical staff and patients and how are they used?
- C. What are the perceived benefits of the use of the digital marketing for doctors / medical staff and patients?

- D. What are the differences between the perceptions of doctors / medical staff and patients with regard to the role and use of the digital marketing in healthcare sector?
- E. What is the impact of the digital marketing on the choice for doctors / medical staff and their professional growth in the case of healthcare services?

The study involved both a qualitative and a quantitative stage. Data was collected from doctors, medical staff and patients of healthcare providers in Dubai. The analysis of the qualitative part of the investigation informed our understanding of the phenomenon and formed the basis for the overall direction of the quantitative study and the questionnaire development. The qualitative stage involved semi-structured interviews with doctors / medical staff and separate semi-structured interviews with patients' / healthcare users. For the quantitative stage of the investigation, doctors / medical staff were randomly selected. Of the 600 questionnaires were sent to doctors / medical staff, 483 completed questionnaires were received. For patients, given that the target group was men and women over 18 years old, the method used was non-probability snowball sampling, which resulted in 1,408 usable responses. The administration of the questionnaires was done online using the Survey Monkey software and the participants were invited to participate via email. The statistical program SPSS was used for the analysis of the data.

4. RESULTS

Table 1. Gender Wise Profile of Respondents – Doctors / Medical Staff in the survey for digital marketing tools for the success of healthcare providers in Dubai

Details	Frequenc y	Percent
Females	359	74
Males	124	26
Total	483	100

Table 2. Gender Wise Profile of Respondents – Patients in the survey for digital marketing tools for the success of healthcare providers in Dubai

Details	Frequency	Percent
Females	901	64
Males	507	36
Total	1408	100

Table 3. Age Wise Profile of Respondents – Doctors / Medical Staff in the survey for digital marketing tools for the success of healthcare providers in Dubai

Details / Age of Respondents	Frequency	Percent
18 years – 29 years	22	5%
30 years – 39 years	173	36%
40 years – 49 years	113	23%
50 years – 59 years	135	28%
60 years and above	40	8%
Total	483	100

Table 4. Age Wise Profile of Respondents – Patients in the survey for digital marketing tools for the success of healthcare providers in Dubai

Details / Age of Respondents	Frequency	Percent
18 years – 29 years	332	24%
30 years – 39 years	388	27%
40 years – 49 years	321	23%
50 years – 59 years	245	17%
60 years and above	122	9%
Total	1408	100

In an effort to optimize the use of the available space, results are presented below as answers to the research questions.

A. What are the primary roles of the digital marketing tools and technologies from the point of view of doctors / medical staff and patients?

More than half of the doctors / medical staff who participated in the study (65.7%) stated that they use digital marketing for professional purposes. In order of descending importance, doctors / medical staff indicated that they use the digital marketing tools and technologies for sending test medical results, publishing articles and answers to medical inquiries, providing information about their healthcare organization, posting Resumes and photographs but not for booking medical appointments and consultations.

Most of the patients (90.4%) indicated that they have used the digital marketing tools and technologies for information about healthcare issues, mainly about a specific illness followed by search for information about general medical and health issues. Patients have admitted that they resort to the digital marketing tools and technologies first to look for information about their symptoms and condition before visiting the physician. Patients stated that they made use of digital marketing tools even after visiting the physician for second opinions and to learn more about their condition and understand better the physician's diagnosis and follow-up.

B. What are the most popular digital marketing platforms for doctors / medical staff and patients and how are they used?

Doctors / medical staff admitted that Facebook (98.3%) is the most popular platform followed by blogs; most respondents also use LinkedIn (79.5%) as a professional network and have an active profile. YouTube (64.9%) is next in popularity for viewing video material but Twitter (46.2%), Instagram (39.7%) and Pinterest (32.8%) are not popular among the doctors / medical staff. Patients on the other hand prefer Facebook (98.3%), MySpace (95.1%), Google Plus (85.4%), Twitter (79.6%), LinkedIn (70.5%), YouTube (70.1%), Flickr (62.9%), blogs (55.8%), microblogs (49.3%), Wikipedia (41.7%), Virtual reality and gaming environments (38.5%). Articles of physicians published on digital marketing platforms can entice patient interest and perceptions about healthcare providers. Digital marketing platforms build the attitude and the patient-doctor / medical staff relationship which significantly impact the healthcare organizations in Dubai. It is interesting however, that overall the website is seen as the most valuable source of information about the doctors / medical staff, contact details, access map, resumes, photos and informative articles.

C. What are the perceived benefits of the use of the digital marketing for doctors / medical staff and patients?

Doctors / medical staff indicated that their perceived benefits of using the digital marketing as it Improves the patient reach (95.3%), Increases service awareness (89.9%), Counter the possibility of misinformation (88.0%), Ensures the easy access for patients (83.5%), Build Patient – Doctor / Medical Staff trust (73.3%), Customize

healthcare digital marketing strategy (69.8%). The patients perceived the benefits of using digital marketing such as no more consulting their friends and relatives but began their session at a search engine such as Google or Yahoo (96.2%), patients feel more valued as a patient when doctors / medical staff use social marketing tools and technology such as blogs (81.7%), use search engines and check emails for health related updates from the healthcare providers (75.0%). Furthermore, doctors / medical staff and patients expressed that the digital marketing tools and technology enable them to project a modern image, technologically advanced, allow two-way communication with patients and caregivers, contribute to relationship building process, increase awareness of health and related issues and play an increasingly important role as the digital marketing tools and technology enhance and blend the traditional healthcare solutions with online communication via the website and other advanced platforms.

D. What are the differences between the perceptions of doctors / medical staff and patients with regard to the role and use of the digital marketing in healthcare sector?

Doctor / medical staff rightly presume that patients use the internet and social media in order to be better informed about health issues and to gain support from other patients (74,6%). Doctor / medical staff also believe that the patients evaluate positively their web presence and can be influenced by forum discussions on the choice of a doctor / medical staff / healthcare provider (68,9%). The positive influence of the web presence is in most cases mediated by personal experiences from earlier contacts with the doctor / medical staff (61.8%). Communication via e-mail is positively evaluated by patients (95.0%). The possibility of online communication, specifically informing patients about test results and answering questions, influence positively the patient's perception about their doctor / medical staff (93.4%). Patients like to be educated online about health issues but doctors / medical staff oppose patients buying medicines online / Over The Counter medicines as some of them may be harmful or unsuitable based on individual patient conditions (99.2%). Therefore, the doctors / medical staff advocate that the patients must always consult their doctor / medical staff before self-medication (92.5%).

E. What is the impact of the digital marketing on the choice of a doctor / medical staff for healthcare services?

The overwhelming majority (96%) of doctors / medical staff believe that recommendations from family and friends remains the most important influencing factors. This perception is in agreement with the patients' view (84.3%) agreed. From the doctor / medical staff perspective, the website comes second (52.8%) and recommendations in forums (44.7%) follow. Social media networks are considered important by (41.6%) of the patients and advertising on search engines or other sites by (32.7%). Less than half of the patients (47.3%) indicated that they do not use the digital marketing and a surprising 32.8% indicated that they would never contact a physician they learned about online. It is evident that in Dubai the digital marketing significantly effective in attracting new patients who are not already familiar with the doctor / medical staff.

5. DISCUSSION

There were some research articles on the subject. Few of them on this subject are:

Investigation into Big Data Impact on Digital Marketing by Ketty Grishikashvili, Open University, UK, S. Dibb, Open University, UK, M. Meadows, Open University, UK. The research paper focused on theoretical dilemmas of the digital revolution and importance of challenges within practice. Preliminary results show that those industries that tried to narrow the gap and put necessary mechanisms in place to make use of big data for marketing are upfront on the market. However, when we compare our research with this article it is different because it is totally focused on Healthcare sector of Dubai.

In another research article, Digital health innovation ecosystems: From systematic literature review to conceptual framework by Gloria Ejeihohen Iyawaa,c,*, Marlien Herselmana,b, Adele Bothaa,b. The article focused on the study identified components of digital health, components of innovation relevant to the healthcare domain and components of digital ecosystems. It further suggests, within the context, a comprehensive definition of digital health innovation ecosystems. A conceptual framework for digital health innovation ecosystems is proposed. The findings from this study could conceivably be a step towards enabling a common understanding of practitioners, professionals and academics within the digital health domain as well as a basis for further studies on digital health innovation ecosystems. However, the present

study was of practical relevance to application of digital marketing tools and technology in the geographical setting of Dubai which is a practical application in healthcare sector.

The Impact of eHealth on the Quality and Safety of Health Care: A Systematic Overview Ashly D. Black¹ , Josip Car¹ , Claudia Pagliari² , Chantelle Anandan² , Kathrin Cresswell² , Tomislav Bokun¹ , Brian McKinstry² , Rob Procter³ , Azeem Majeed⁴ , Aziz Sheikh² * The research was focused on: In the light of the paucity of evidence in relation to improvements in patient outcomes, as well as the lack of evidence on their cost-effectiveness, it is vital that future eHealth technologies are evaluated against a comprehensive set of measures, ideally throughout all stages of the technology's life cycle. Such evaluation should be characterised by careful attention to socio-technical factors to maximise the likelihood of successful implementation and adoption. While we compare and contrast this study with our research it is totally different approach to add insights of application of technology and marketing as applied digitally by the doctors / medical staff and patients. Therefore, the two are not similar at all.

In another study on the similar subject: Promotion of mHealth Applications in Search Engines - A Study of Australia and Slovakia Andrej Miklosik, Maria Hasprova and Stefan Zak Department of Marketing, Faculty of Commerce, University of Economics, Bratislava, Petržalka, Slovakia. The study focused on The findings indicate that the level of promotion varies significantly across the keyword category, platform, location, and mHealth application. The competition in search results for keywords related to two categories of mHealth applications - exercise and training and mental health - is more intense than in two other areas of healthy living - general and healthy eating/diet. There are significant differences between search visibility in search engine results pages in Australia and Slovakia. The current research used totally different approach by evaluating the current practices by the doctors / medical staff compared to the needs and aspirations of patients in a multicultural young society of Arab origin.

Therefore, the two subjects sound similar and their application and adaptability is different altogether. In this study, we have investigated and summarized five digital marketing research questions relating to healthcare sector of Dubai. The results of this

valuable research study were found to be supportive for establishing the impact the digital marketing tools and technology for the successful operations of healthcare sector in Dubai. Thus, the findings of our study are unique to the healthcare sector of Dubai. Such empirical study was not carried out in recent times. Therefore, it attaches a significant importance to highlight the role of fast developing technology blended marketing approach has made inroads into the business world in general and the healthcare sector of Dubai in particular. It is imperative to know that the lessons learned from this study could easily be applied in other sectors of the business in Dubai especially at this critical juncture of Covid 19 pandemic.

The present study confirmed that the decision for the selection of a doctor / medical staff is not dependent upon the presence of the physician available in any part of Dubai or United Arab Emirates. A significant selection criterion for a doctor / medical staff in any specialty in Dubai is not on the recommendation by family or friends. The good old days are over when the patient use to be at the mercy of known person to recommend a doctor / medical staff. The tools and technology of digital marketing is helping the people through search engines to find the best available doctor / medical staff to address the needs of patients.

Traditional marketing techniques do not tend to be as effective as digital marketing today in the whole world in general and Dubai in particular because majority of population consists of young people from different nationalities live in. That is why digital marketing is being used by areas like the food sector, travel industry, IT industry as well as the healthcare industry. The main reason for this progress is digitalization. The same way the healthcare industry can't just overlook digital marketing. Let's have a look at the relationship between the healthcare industry and what digital marketing has to offer. In this context, the current research study measured the needs and aspirations of doctors / medical staff and the patients of Dubai in line with the advancements of digital marketing. The existence of a well-maintained website adds to the visibility and the credibility of the doctor / medical staff. On the digital marketing front, even though social media presence does not influence the patients' choice for a doctor / medical staff, this also importantly acts in a reinforcing manner, increasing visibility. People

don't just blindly follow doctors and are becoming more and more aware. There is a rise in the awareness levels in people who are becoming increasingly health-conscious. Digital marketing is helping by pushing and advertising products and services across several platforms. Apps, website, blogs and even social media are equally using digital marketing. There is a wave of digital marketing covering every sector with the increasing developments in the IT sector. Healthcare industry is benefiting from this symbiotic professional relationship between the digital marketers and healthcare professionals.

A recent study found that 77% of patients perform online research prior to booking an appointment. Even more profound, another study by the Pew Internet & American Life project found that 93 million Americans (approximately 80% of Internet users) have searched for a health-related topic online. It has become clear that consumers and patients are taking advantage of online resources both during initial research and ongoing care – thus, it is increasingly important that healthcare organizations and doctors / medical staff take advantage of digital marketing to boost patient engagement and, ultimately, care outcomes. From a managerial point of view, doctors / medical staff in Dubai seem to believe that new media technologies can be used as a great supportive tool for promoting themselves and advancing their work. From the patients point of view, the study shows that the website is the most valuable channel of information about physicians, containing the physician's Resumes, information about their specialization and practice, and providing access details to their private practice. For those doctors / medical staff who choose to have digital marketing tools and technology, it is important to invest in writing articles or reports about healthcare matters, as well as providing general or customized advice. Concerning Facebook (which is by far the most popular social network in this industry), the postings of healthcare providers choosing to promote their work via this medium should be such that provide value to the prospective patients. In this way, the current study approach and results are in line with the practices of other research work in similar setting. However, none of the studies mentioned above have made any attempt to concentrate their study in the Middle East Region in general and Gulf Cooperation Council Countries in particular. Therefore, the present study was undertaken in line with the

aspirations and policies of Government of Dubai to make Dubai a prominent healthcare hub for the entire region.

Aristotle argued that, happier people are those who feel what they consider the right feelings, given their typical situations. Our findings support Aristotle's claims empirically. In this study, we found that the doctors / medical staff working for healthcare organizations by applying the well tested tools and technologies of digital marketing may be able to full fill the needs and aspirations of their patients for the wellbeing of healthy population of Dubai.

CONCLUSIONS

The major finding from the current empirical evidence for the beneficial impact of digital marketing for the success of healthcare providers at best is modest. While absence of evidence does not equate with evidence of ineffectiveness, reports of negative consequences are possible based on patients indulging in self-medication based on online data and information might lead to disaster. Therefore, the digital marketing tools and technology is an additional tool for the patient safety and convenience but not replace the skills and diagnostic wisdom of qualified and experienced doctors / medical staff.

One of the main purpose of this research article was to help healthcare providers in Dubai understand their patients / customer needs and aspirations in terms of digital marketing tools and technology matching with the skills equipped with the doctors / medical staff. The research results indicate that the skill sets of doctors / medical staff need to be constantly upgraded to match patient needs and aspirations in order to serve better. Healthcare providers in Dubai are using different tools and technology to promote their healthcare services. The analysis of respondent interview results showed that the competition among the healthcare providers on various technological platforms and locations might increase the possibility of acquisitions, mergers and push for undesirable targets upon doctors and medical staff.

Pioneering technologies, unless properly evaluated with results fed back into development, might not prove desired results to the extent that is needed to realize their potential when deployed in everyday healthcare scenarios. The paradox is that while the

number of digital marketing tools and technologies in healthcare sector are growing, we still do not have proper understanding on how and why such technical interventions do or do not work in the long run and up to the expectations of the patients.

Webinars / webcasts play important role in digital marketing strategies. Use of such tools help the e-commerce grow leaps and bounds and first movers will definitely will have edge over others. However, in healthcare industry the webinars / webcasts will lead to cosmetic changes in the clinical practices in a highly competitive markets like Dubai. There is potential for increased misuse of digital marketing as a tool in this context.

These and similar tools and technologies developed and pursued in other parts of the world offer an unparalleled opportunity not just for improving healthcare sector, but also for learning how to (or how not to) implement digital marketing tools and technology systems and contextualize them for the local and regional culture.

When used wisely and prudently, the digital marketing tools, technology and platforms offer the potential to promote individual and public health for all categories of patients, as well as professional development and advancement for doctors and medical staff. However, when used carelessly, the damages and dangers of these tools and technologies pose a formidable threat to the patients and the society as a whole. Therefore, ethical guidelines and standards for healthcare organizations and doctors / medical staff go in a long way to avoid any pitfalls.

SCOPE FOR FURTHER RESEARCH

There is scope for funded research of digital marketing across all sectors of Dubai economy and could be compared with the public sector organizations for boosting productivity and Foreign Direct Investment – FDI.

The is further future scope for studies in this domain clearly focused towards more medical specializations, and across Gulf Cooperation Council Countries.

REFERENCES

- [1] Alexander G, Stagers N (2009) A systematic review of the designs of clinical technology: findings and recommendations for future research. *ANS Adv Nurs Sci* 32: 252–279.
- [2] Ammenwerth E, Schnell-Inderst P, Machan C, Siebert U (2008) The effect of electronic prescribing on medication errors and adverse drug events: a systematic review. *J Am Med Inform Assoc* 15: 585–600.
- [3] Barello S, Triberti S, Graffigna G et al (2016) eHealth for patient engagement: a systematic review. *Front Psychol* 6:2013. <https://doi.org/10.3389/fpsyg.2015.02013> CrossRef Google Scholar
- [4] Black AD, Car J, Pagliari C et al (2011) The impact of ehealth on the quality and safety of health care: a systematic overview. *PLoS Med* 8: e1000387. <https://doi.org/10.1371/journal.pmed.1000387> CrossRef Google Scholar
- [5] Blaya JA, Fraser HSF, Holt B (2010) E-health technologies show promise in developing countries. *Health Aff* 29:244251. <https://doi.org/10.1377/hlthaff.2009.0894> CrossRef Google Scholar
- [6] Chretien, K., & Kind, T. (2013). Social Media and Clinical Care: Ethical, Professional, and Social Implications. *Circulation*, 1413-1421. doi:10.1161/CIRCULATIONAHA.112.128017
- [7] Collins SA, Currie LM, Bakken S et al (2012) Health literacy screening instruments for eHealth applications: A systematic review. *J Biomed Inform* 45:598–607 CrossRef Google Scholar
- [8] Constantinides E, Karantinou K, Alexiou M, Vlachaki A (2016) The efficacy of the internet and social media as medical marketing tools. In: 45th EMAC annual conference 2016: marketing in the age of data Google Scholar
- [9] Coulter, A., Entwistle, V., & Gilbert, D. (1999). *Informing patients: An assessment of the quality of patient information materials*. London: The King's Fund

- [10] Damiani G, Pinnarelli L, Colosimo SC, Almiento R, Sicuro L, et al. (2010) The effectiveness of computerized clinical guidelines in the process of care: a systematic review. *BMC Health Serv Res* 10: 1472–6963.
- [11] Eisenstein EL, Ortiz M, Anstrom KJ, Crosslin DR, Lobach DF (2006) Assessing the quality of medical information technology economic evaluations: room for improvement. *AMIA Annu Symp Proc.* pp 234–238.
- [12] Fitzpatrick LA, Melnikas AJ, Weathers M, Kachnowski SW (2008) Understanding communication capacity. Communication patterns and ICT usage in clinical settings. *HIM J* 22: 34–41.
- [13] Gunter, B. (2005). *Digital health: meeting patient and professional needs online.* NY – London : Routledge, Taylor and Francis Group.
- [14] Hofnie-Hoëbes K, Weightman A, Shatona M, Kelson M (2018) Information sources consulted by women in African countries to manage menopausal symptoms: a systematic review and meta-analysis. *Open J Nurs* 8(5):317CrossRefGoogle Scholar
- [15] Jeffrey, K., Abdallah, S., and Michaelson, J. 2014. Wellbeing at work. Available at: <http://www.neweconomics.org/publications/entry/well-being-at-work>
- [16] Key, T.M. (2017), Domains of digital marketing channels in the sharing economy. *Journal of Marketing Channels*, 24(1-2).
- [17] Kim H, Xie B (2017) Health literacy in the eHealth era: a systematic review of the literature. *Patient Educ Couns* 100:1073–1082CrossRefGoogle Scholar
- [18] Kraak VI, Story M (2015) An accountability evaluation for the industry’s responsible use of brand mascots and licensed media characters to market a healthy diet to American children. *Obes Rev* 16:433–453. <https://doi.org/10.1111/obr.12279>CrossRefGoogle Scholar
- [19] Löwe, B., Wahl, I., Rose, M., Spitzer, C., Glaesmer, H., Wingenfeld, K, and Brähler, E. 2010. A 4-item measure of depression and anxiety: Validation and standardization of the patient health questionnaire-4 (PHQ-4) in the general

- population, *Journal of Affective Disorders*, 122(1): 86-95. DOI: 10.1016/j.jad.2009.06.019
- [20] McKnight PE, Kashdan TB (2009) Purpose in life as a system that creates and sustains health and well-being: an integrative, testable theory. *Rev Gen Psychol* 13:242–251. <https://doi.org/10.1037/a0017152>CrossRefGoogle Scholar
- [21] Miklosik A (2018) Promotion of Mhealth applications in search engines—a study of Australia and Slovakia. *Aust Acad Bus Econ Rev* 4(2):103–111Google Scholar
- [22] Moher D, Liberati A, Tetzlaff J, Altman DG (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *J Clin Epidemiol* 62:1006–1012. <https://doi.org/10.1016/j.jclinepi.2009.06.005>CrossRefGoogle Scholar
- [23] Parsons, M. Z and Waitman, R (1998) “Organizing Today For The Digital Marketing Of Tomorrow”. *Journal of interactive Marketing*. John Wiley & Sons, Inc. and Direct Marketing Educational Foundation, Inc. CCC 1094-9968/98/010031-16
- [24] Rozenblum, R., & Bates, D. (2013). Patient-centred healthcare, social media and the internet: The perfect storm? *BMJ Quality & Safety*, 22(3), 183-186.
- [25] Shortell, S.M., O’Brien, J.L., Carman, J.M., Foster, R.W., Hughes, E.F.X, Boerstler, H., and O’Connor, E.J. 1995. Assessing the impact of continuous quality improvement/total quality management: Concept versus implementation, *Health Services Research*, 30(2): 377–401.
- [26] Stelfox M, Hanik B, Chaney B et al (2011) eHealth literacy among college students: a systematic review with implications for eHealth education. *J Med Internet Res* 13:e102CrossRefGoogle Scholar
- [27] Storey D, Seifert-Ahanda K, Andaluz A, Tsoi B, Matsuki JM, Cutler B (2014) What is health communication and how does it affect the HIV/AIDS continuum of care? A brief primer and case study from New York City. *JAIDS J Acquir Immune Defic Syndr* 66:S241–S249CrossRefGoogle Scholar

- [28] Tobia SNM, Masroma M (2016) Strategic advantages of social media within healthcare business activities: organizational practical implications, Laws, regulations and theoretical concerns. *Abstr Bus Strateg Soc Sci* 5Google Scholar
- [29] Türk B, Erciş A (2017) 4A marketing mix impacts on organic food purchase intention. *Serbian J Manag* doi 12:189–199. <https://doi.org/10.5937/sjm12-10785CrossRef>Google Scholar
- [30] Vikram, V. (2010). *Impact of Social Media in Healthcare. Transforming Healthcare through Social Media. Wipro Healthcare.*
- [31] Wicklund, E. (2015), Top mHealth Apps as Rated by Doctors. Available from: <http://www.mobihealthnews.com/news/top-mhealth-apps-rated-doctors>.
- [32] Wymbbs, C. (2011). Digital marketing: The time for a new “Academic Major” has arrived. *Journal of Marketing Education*, 33(1), 93–106.

A STUDY ON IMPACT OF EDUCATION IN WOMEN EMPOWERMENT AND DEVELOPMENT

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ABSTRACT

The purpose of the current study is to explore the impact of education in women empowerment and development. Women who are empowered are able to live decently in society and have unlimited access to possibilities in a range of areas, including education, lifestyle, and other areas. Status is raised by knowledge, awareness, literary training, and decision-making power. A nation's overall development depends on the empowerment of women. Only with the appropriate education can one unlock the golden door of freedom in development. Pandit Jawaharlal Nehru once said: "If you educate a lady, you educate a family." "If you educate a man, you educate a person.

Keywords: Women, Education, Empowerment, Development, issue and challenges.

1. INTRODUCTION

Women who are empowered are able to live decently in society and have unlimited access to possibilities in a range of areas, including education, lifestyle, and other areas. Status is raised by knowledge, awareness, literary training, and decision-making power. A nation's overall development depends on the empowerment of women. Only with the appropriate education can one unlock the golden door of freedom in development. Pandit Jawaharlal Nehru once said: "If you educate a lady, you educate a family." "If you educate a man, you educate a person.

Women who are empowered are prepared and able to learn things that will advance their social and personal development and increase their awareness of cultural issues. For women's work, health, and education, extra effort must be made. For the female sex ratio to improve, economic empowerment is necessary, but it is only achievable when women are educated.

Indian women are regarded as shakthi, which is Sanskrit for "power." Without justice, what good is power?

Governments must also finding appropriate action to promote empowerment. Interventions require carefully planned strategies that are carried out methodically and assign women specific tasks. Conceptually and methodologically, women's empowerment and development go hand in hand. Therefore, encouraging women to achieve their goals on par with men in various aspects of life is crucial for cultivating and sustaining a culture of unity, equity, and dignity. The value addition of culture and knowledge strengthens the argument for social liberation, political advancement, and economic empowerment. Women become economically sound through education, which is the foundation for various forms of women's empowerment, including social, psychological, technological, and political.

Multiple Methods for Empowerment

Individual Rights: To be empowered as an individual means to be able to speak clearly and highlight having the authority to debate and make decisions.

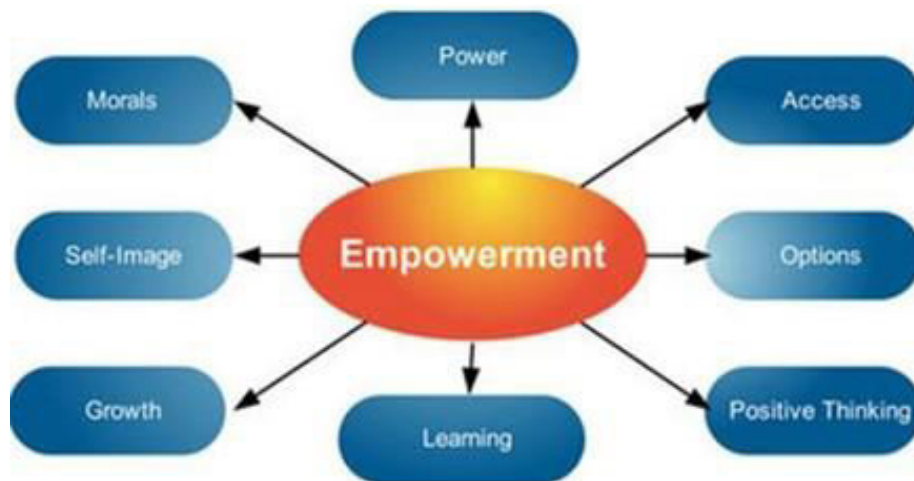
Social Empowerment of Women: The development of gender equality is a key component of social empowerment of women.

Educational Women Empowerment: Implies giving them the information, abilities, and self-belief they need to take part fully in the development process. It entails educating women about their rights and giving them the self-assurance to exercise them.

Economic and Professional Empowerment: Making them an important component of the human resource will help them become less financially dependent on their male counterparts.

Legal Women Empowerment: It supports for the establishment of a strong legal framework that supports women's empowerment.

Political Women's Empowerment: This is the state of having a political system that encourages women's participation in and control over political decision-making and governance.



OBJECTIVES OF THE STUDY-

- The impact of education on empowerment of women.
- The challenges and changes from education on women empowerment.
- **Methodology**

The collecting of data from secondary sources is the foundation of the current investigation.

Secondary data is gathered from a variety of public and unpublished sources, books, magazines, and journals.

The position of Women in India

- **Woman as a wife:** In an ideal world, a woman's status as a wife would be practically identical to her husband's, and she would carry out both social and biological tasks. In terms of character, the husband-wife partnership has evolved into one that is much more equalitarian and companionable. Thus, the shift in the structure of the family goes hand in hand with increased marriage freedom.

- **Women's Role in Society:** Modern women are sensitive to social issues and work very hard to raise the standing of women in society. Women have been motivated to leave the four walls of the home as a result of more knowledge and education. Many women enthusiastically supported the nationalism movement, took part in it, and won prestigious positions and posts in the government and public life of independent India. Indian women have historically been created by and for their families.
- **Women's Role in Politics:** Some people join political parties, go to party gatherings and conventions, and engage in political activities. Some women are rising to positions of political influence, and they are playing a significant role in influencing public opinion in favour of improving the status of women in society.
- **Participation of Women in Socio-Economic Activities:** Today's woman is pursuing new career paths that were previously out of her traditional role-set domain. These represent the woman's involvement in the political, social, and economic spheres.

Characteristics of Women Empowerment

- Giving women power is empowering women. Women are benefiting from it more. Women are able to feel more independent and more confident as a result.
- Women's empowerment is the process of giving women the power they need to recognise their rights and carry out their obligations to others and to themselves most successfully.
- Women's empowerment gives them more autonomy, the ability to organise themselves, and a boost in self-reliance.
- Women's influence over material resources, intellectual resources, and ideologies is referred to as women's empowerment.
- The emancipation of women eliminates all gender-based discrimination in all societal organisations and systems.

- Empowering women entails exposing the repressive aspects of current gender social norms.
- Women's empowerment gives them the strength to face life's problems and overcome obstacles like handicaps and inequities.

Barriers to Women Empowerment

- **Gender inequality:** Women's empowerment goes beyond just achieving economic independence for them; it also includes achieving gender equality.
- **Family Restrictions:** Illiterate parents that refuse to educate their female children in schools.
- **Early Marriages:** Early marriages cause school dropouts. One of its reasons is also a lack of knowledge about female education.
- **Violence:** The main thing standing in the way of women's emancipation is violence. The reduction in the female sex ratio is caused by the deep-seated physical, emotional, and mental suffering that has existed in society from ancient times.

It is required to change how women view themselves and their empowerment. They should work to shed their stereotypes of being helpless, reliant, and passive, and instead try to develop into autonomous, active, strong, and determined individuals.

RECOMMENDATIONS

Based on the data gathered, this paper urges the government to take the following actions to advance education in the nation.

- Empowering women and fully utilising education to drive knowledge expansion
- Educating and looking after women's health to increase productivity and social advancement.
- To better protect women's interests and promote effective governance, women should be empowered and given fair representation at all levels of decision-making in the government.
- Upholding women's rights so they can actively participate in the nation's economic, social, political, cultural, and other spheres, promoting growth.

- Since the environment is the main engine driving the nation's economy, protecting the environment would help promote sustainable growth.



Challenges

- Because men have an innate complex about government, they frequently don't let women get as far as they do.
- Significant family obligations
- Limits on what can be done in terms of social, economic, and religious activities
- In contemporary society, boys frequently receive preferential treatment for education and a healthy diet compared to girls.
- Many families in the culture still favour having male children.

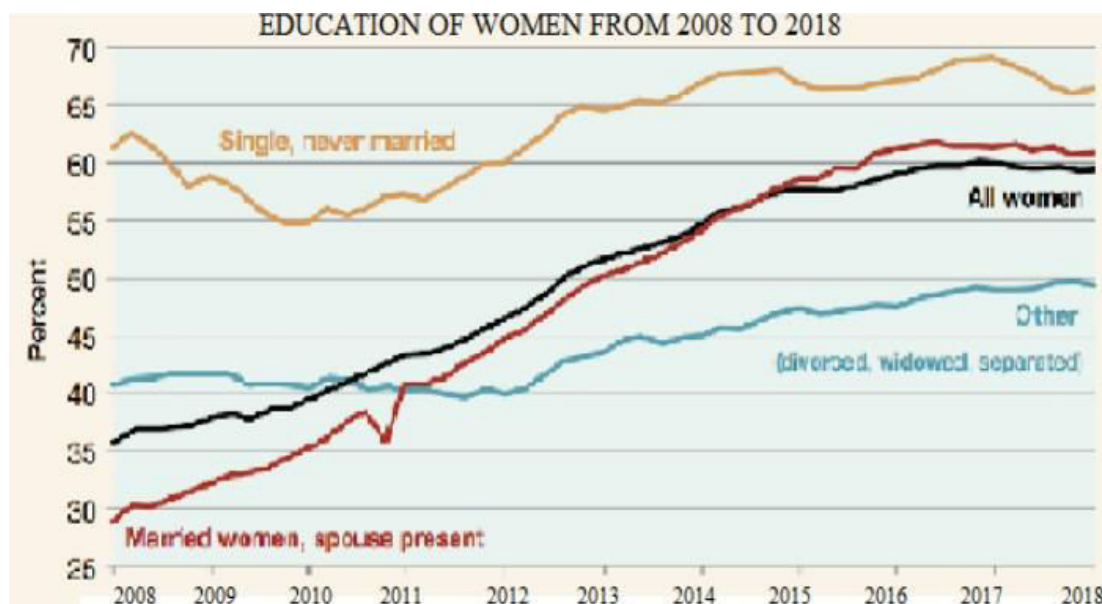
Solution

- Mass communication for education is crucial. Men and women should be made aware of their duties in promoting and putting gender equality into practise.
- Compile data on a national level and pinpoint the regions with the highest rates of violence and gender disparity. The government may make use of this information. NGOs and field workers to advance women's status
- The general public should be educated about the equality of boys and girls and the need for equal access to resources.

EDUCATION FOR EMPOWERMENT OF WOMEN

IMPACTS

1. Self-Confidence
2. Family Welfare
3. Involvement In Social And Political Activities
4. Predictability Of Life
5. Absolute Living



FINDINGS OF THE STUDY

- Education is a form of mental liberation. Books that educate us open our minds to possibilities, places, and people we might not have otherwise considered. Consequently, a woman who is educated will likewise be liberated.
- Barriers can be overcome through education, including those related to religion, language, culture, politics, gender, and location.
- The right to choose is made possible by education: They will learn to distinguish between right and wrong through education and how to make moral decisions.
- Education mobilises: Women will be inspired by education to fight against the social ills that still exist in Indian society.

- Independence is fostered by education: The majority of today's young, educated women are entering their own self. They pretty much do everything the way they want to, including dating the people they want and selecting their life partners.

This is a continuation of my earlier statement that education leads to financial independence and helps choosing a career. Today's education allows women to pursue careers outside of those that were once thought to be most suited for them, such as those in nursing, teaching, librarianship, etc. Today, women are smashing the glass ceiling by pursuing careers as models, actors, fighter pilots, fitness instructors, police officers, writers, engineers, architects, journalists, scientists, business, legal, filmmaking, and other fields. A well-educated woman boosts the economy: Visualize a society where women are capable of holding down employment. The workforce's contribution will increase output, which will lead to economic growth. And I'm not only referring to businesses and industries; I'm also bringing up topics like healthcare, education generally, the arts, science, literature, etc.

SUGGESTIONS

- Since women's education is the root of the issue, it should be given the highest priority. As a result, women's education needs to get special attention.
- Awareness-raising campaigns must be launched to educate women.
- Women should be able to work and be given the necessary protection and assistance to do so.
- Programs and laws should be strictly enforced in order to curb the harmful behaviours that are pervasive in society.

CONCLUSION

1. Women lead free and respectable lives.
2. It boosts their confidence.
3. It helps individuals develop a unique identity.
4. They can rise to respected positions in society.
5. Able to purchase all they want and need.
6. They are able to contribute significantly to society's well-being.

7. They contribute as responsible citizens to the nation's improved Gross Domestic Product (GDP) growth.

8. They have fair and equal access to the nation's resources.

REFERENCE

- Amtul Waris, B.C. Viraktamath (2013) Gender gaps and Women's Empowerment in India—Issues and Strategies, International Journal of scientific and Research Publication. ISSN 2250-3153
- Dr. Rita Khatri (2016) — The Role of Education towards women empowerment in India, International Journal of Advanced Research, (550-555) DOI: 10.21474/IJAR01/2117
- Eeva ERIKSSON, “Women's empowerment and its links to sustainable development” Policy Department C: Citizens' Rights and Constitutional Affairs European Parliament B-1047 Brussels.
- Endalcachew Bayeh (2016) — The role of empowering women and achieving gender equality to the sustainable development of Ethiopia Department of Civics and Ethical Studies, College of Social Sciences and Humanities, Ambo University, Ambo, Ethiopia Pacific Science Review B: Humanities and Social Sciences 2 (2016) 37e42 Elsevier3.
- <http://www.yourarticlelibrary.com/essay/problems-and-issues-of-women-education-inindia/44862>
- <http://www.ecoleglobale.com/blog/education-best-way-spread-message-womenempowerment/> IN SIDE DIAGRAM CONTENT
- <https://www.readglobal.org/blog/126-10-ways-to-empower-women>
- <https://www.indiacelebrating.com/article/article-on-women-empowerment>.

**INTRAPRENEURSHIP PRACTICES BY INDIAN COMPANIES: A CASE
STUDY**

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ABSTRACT

Intrapreneurship refers the autonomy an organization gives to their employees to act like an entrepreneur within organizational itself. Intrapreneurs are self-driven employees who take initiatives by their own and with the encouragement, mentorship and support from management they create an innovative entrepreneurial environment within organisational boundaries. Organizations are facing challenges due to ever-changing, dynamic and competitive market .Intrapreneurship serves as strategic tool to foster innovation.

The paper discusses about Intrapreneural activities, policies, programmes and outcome of 10 different Indian companies .The paper also conveys the role of Intrapreneurship as a competitive tool .From study made on 10 Indian company we can suggest that Intrapreneurship, if implemented effectively in organizations, can prove to be best retention and engaging policy. The paper also focuses upon the opportunities and the challenges associated with Intrapreneurship in brief.

The paper throws light on the fact that Indian private sector businesses have been nurturing Intrapreneural capacities of employees by providing them best of resources still these companies need to implant many systems and requires to implement procedures that support Intrapreneural activities on ground. Public sector in India is still followed by orthodox pattern which is needed to be changed with some Intrapreneurship development schemes.

Keywords: Intrapreneurship, Entrepreneurship, Intrapreneur, Proactive, Autonomy, Innovative, Organization

INTRODUCTION

India is one of the largest countries with more than 1.30 million populations with lakhs

of organizations where thousands of industries with hundreds of employees are working. India is an opportunistic market place at global level. It is important for the Indian industries to catch up this opportunity which can be done by participation, motivation and development of employees.

Intrapreneurship is one of those strategies which connect employees, who otherwise could become entrepreneurs by their own someday. According to Pinchot (1978) “Dreamers who do” are the Intrapreneurs. They are the valuable employees of organisation who take the responsibility to bring innovation in business. If the organisation need continuous innovation for its product and services than the managers need to identify, motivate and develop their Intrapreneurs and help them to implement their idea. The term ‘Intrapreneurship’ was coined by Gifford PinchotIII and Elizabeth in white paper “intra-corporate entrepreneurship” in the year 1978, which was used in so many different ways that time than today.

Intrapreneurship is a term which turns an innovative idea into valuable reality within a company by just pushing and promoting its employees to think beyond limits. Desouza (2011). In this rapidly changing competitive scenario it is important to bring innovative change in product and service and when employees with passion and new idea are managed well it can be a trump card. The study proved that there is a positive correlation between innovative atmosphere and employees performance. But to reduce cost and to increase customer alienation towards the organisation are the main objectives of Intrapreneurship. It is important for the organizations to implement the ‘Intrapreneurship mindset’ to sustain in this competitive environment instead of ‘employee mindset’. Sheshdri&Tripathy(2006)

Need to Study

Literature review shows that there is not enough work done on Intrapreneurship in India. Instead of having big business houses only a few organizations in India have been practicing Intrapreneurship which is very important to motivate employees, to be in competition at global level and to be innovative.

LITERATURE REVIEW

Jong & Wennekers (2008) Stated in there article that Intrapreneurship is a very authentic and special case of entrepreneurship and it possesses certain characteristics

which are as follows:

1. Independent in decision making
2. Taking initiative in finding something new from existent resources
3. Proactive
4. Imaginative

Intrapreneurship can be divided in following stages:

First stage comprises of imagination and having vision.

Second stage comprises of Preparation and organizing the newness

Third stage comprises of Exploitation of ideas.

The researcher further concluded by nomological net which explains:

Individual antecedent (Proactive persona, Cognitive skills and Autonomy in work) when combined with Firm antecedent (Intrapreneur work climate, Support from management and availability of resource) leads to appropriate Intrapreneural behavior which has positive relation with improved and innovative output.

Buekens (2014) Expressed that European countries were innovating but were not able to match the pace of dynamic market thus Intrapreneurship became the solution to the barriers. Intrapreneur manages the flair of entrepreneur within limit of organizational culture and environment.

There are certain key factors which are required to be a successful Intrapreneur which are as follows:

1. Their vision is clear
2. They are surrounded by great people
3. They are passionate about their startups
4. They are focused
5. They strive for perfection in whatever work they do.

Intrapreneurs are employees working as entrepreneur within organization according to

Learning, Intrapreneurship concept and its importance in Lifelong(2011).They accept

the organizational goals and do whatever best they can do within their scope. If European countries want to survive competition then Intrapreneurship is the only solution. It is also said that “Intrapreneurship is the competitive factor par excellence”

North(2015) Presented individual Intrapreneurship process model which mentions following steps:

Creative stimulus leads to opportunity recognition, Creative development, Idea testing,Support generation, Going ahead, Implementation on ideas and learning from results.

Hiwarkar (2019) Concluded from his research that organization performance can be improved with Improvement of old product, development of new product and even upgradation in process and system is demand of time. All improvements could be result of Intrapreneurship. Thus organizations should foster such work culture which supports innovation.

Hiwarkar(2019) Claimed that Entrepreneurship to larger market is same as Intrapreneurship is into existing business .Intrapreneur creates marketplace within organization whereas Entrepreneur creates market place outside organization. Entrepreneurship is very helpful for economic growth of organization:

1. It helps in generating business growth
2. It provides environment which sustains and supports innovation.
3. Best attraction and retention policy for entrepreneur leader.
4. It is helpful in accelerating and managing change.
5. Employee can grow while working within organizational boundaries.

MAIER2 & ZENOVIA (2011) Discussed about differences between Intrapreneurship and Entrepreneurship which are as follows:

- Entrepreneur takes risk, whereas In Intrapreneurship Company takes risk.
- Entrepreneur owns conceptual and intellectual rights, whereas In Intrapreneurship Company owns conceptual and intellectual rights.
- Entrepreneurs get de-motivated if failure occurs whereas in Intrapreneurship there is

more flexibility as company bears risk.

Veronica, Anca, & Răzvan (2013) explained Intrapreneur as an example of employee motivation. Organizations achieve their objectives by stimulating employees to be creative. Creative employees work as a strategic tool for competitive advantage.

Molina & Callahan (2009) Demonstrated, Intrapreneurship as a critical tool to creative thinking which helps in achieving organizational objective.

Stefanovici (ND) Concluded that there are two main characteristics of Intrapreneur and other characteristics revolve around them. When compared to Entrepreneurs, Intrapreneurs take more risk.

Study on Intrapreneurship in Indian context

India is 5th largest economy in the world and there are so many big business houses in India but very less examples of Intrapreneurship can be seen. This paper discusses some cases of Intrapreneurship in India and also tries to find out the opportunities and challenges associated with this concept. How this new trend can become popular in India to make organizations far more innovative in long run.

1. Tata Group- Jamshedji Tata started business activities in year 1868 with a startup which is today known as Tata group. It has revenue of 106\$, 30 group companies and 750000 employees.

Tata group defined Intrapreneur as an entrepreneur who works upon his idea and turn it up into reality.

The company has few examples of Intrapreneurship –

“Implementation of Cold rolling Mill”- By creating sense of “ownership” and “Intrapreneurship” in team an impossible task can be accomplished with hard work, positive approach and continuous leadership. Mr. R.P. Singh was assigned with the responsibility to implement cold rolling mill and he set a world record in terms of shortest time span with least cost. It was all possible because of the confidence he had in his idea and the support he received from leaders and managers of organisation.

“Revamping the Blast Furnace- F Mr. R P Singh was again trusted with a responsibility to fix new updated blast furnace-F. It was the strong belief of

management for his vision which helped to create world records for company.

Turnaround of merchant mill The trend to motivate experimentation can result differently as what happened with Merchant Mill. The mill could be sold out but Mr. Nandji pandey was an Intrapreneur, the one who never give up as he feel 'ownership' in the organisation.

2. Mahindra group- The Mahindra group is a multinational brand engaged in various sectors. The group considered on the proposal to invest in start-ups within organisation. There are a few examples of Intrapreneurship within group companies- ZensEYE ZensEYE is a specimen of Intrapreneurship within Mahindra group. This device is made for people who are "visually impaired. There are so many other ideas received from employees and many of them are under process, like "first choice wheels" 'Mahindra logistics" and 'Mahindra ocean blue Marine'. (The economic times July 16 2015)

3. ITC- A diversified multinational company too encouraged intrapreneurship.

E-Choupal Shiv Kumar a manager associated to ITC Group Company had an idea to help farmers of MP in procurement. He wanted the company to invest rupees 50 lakh, the management showed confidence in his idea and rest is the history. E-choupal has become a national portal for procurement.

4. Reliance Group – Reliance innovation Leadership Centre (RIL-C) takes initiatives to motivate innovative employees within organisation. 'LEAP', 'Mission kurukshetra', '7 innovation habits programme and 'D4' are the programmes which promote creativity and new ideas to the people of Reliance.

5. Aditya Birla group- Aditya Birla group is also one of those Indian organizations who are ready to pay off the passion and new ideas of employees to make their own company. The group has announced a new programme to promote Intrapreneurship called. 'Innolabs' in which employees can take some time like 6 months from their job to fulfill their idea or ambitions. (economictimes.com 17 February 2016)

6. TVS group – To give power to innovation TVs started "FINDHAN" which is an initiative to invite Indian startups from fintech or others to collaborate with TVS credit. This programme includes activities to give opportunity to develop new products or new strategies with tvs credit. It will give motivation to those who want

to execute their ideas.

7. Infosys- “zero distance innovation programme” was launched for employees who want to think beyond certain limits. it was a scheme to motivate employees by giving them incentives for their innovative ideas. “Onmobile Global” is one of the examples from innovation programme.
8. Bajaj Group- one of the oldest and largest with 37 group companies based in Mumbai. The company has started a youth entrepreneurship programme to develop young in partnership with Bharatiya Yuva Shakti trust. This programme will support young minds between 18-35 years financially and by guiding them towards right direction. This programme was awarded for setting up milestone for other companies to promote ideas of youth Business India.com(15 february2020)
9. Bharti Airtel ‘Sparkplug’ is a programme that helps the employees of organisation to work on their own ideas and make it a reality with help of firm. There are some programmes like “zing laboratory” and “startup weekend” run for innovative people having ideas outside the firm. Sanjay Mittal is one of those examples in organisation whose idea was funded, mentored and developed within the organisation. m.economictimes.com (04 Dec 2011). Bharti airtel ltd also launched an innovation fund of ₹ 200 cr to provide opportunity to those have no access to fund but idea. <http://www.vccircle.com> (11 September 2008)
10. Google Alphabet)- Although Google is not an Indian company but ‘Google news’ was created by an Indian Krishna Bharat as his idea was managed well while working with Google as research scientist, who has also opened an R&D center in Bengaluru.

Opportunities associated with Intrapreneurship

Csorba & Termuende (September 2015)

1. Generation on new ideas, programs and process allowing organization to have incremental and radical advantages.
2. Employees feel motivated and capitalize their talents, skills and insight resulting in new and fresh ideas from employees.

3. It is also considered as best retention policy for employees, as employees feel more engaged on personal level and contributes best to organization.
4. Serves in improving employer branding as it invites entrepreneurial talent to be recruited.
5. Optimum utilization of Human Resources
6. Employees earn rewards for the contributions made by them.

Challenges associated with Intrapreneurship

Intrapreneurship - Make your Business great again

1. Whenever there is newness there is always resistance associated to change .Intrapreneurship involves newness, innovation or change so it's generally challenging.
2. Fear of newness-Intrapreneurship involves innovation which may have failures, Thus employee and organization may have fear of failure.
3. Disruption is considered as general avoidance by majority of organizations, thus intrapreneurship may become challenging.
4. Politics – Managers which are on top of hierarchy may feel threat from innovative and hardworking employees.

Every new idea requires extra effort thus employees should be motivated enough to take extra responsibilities and work extra miles

CONCLUSION

This research paper discusses some cases of the Intrapreneurial development programmes by famous private sector Indian businesses. This research paper includes ten reviews of literatures including books, journals, articles and others, which shows the meaning of Intrapreneurship, its importance in today's competitive environment and the need to follow this trend by organizations. This research paper tries to explore opportunities and challenges faces by different organizations while promoting Intrapreneurship.

This research paper shows that most of the examples of Intrapreneurship can be seen in

private sectors so what about public sector companies? Indian public companies are still following the same orthodox pattern that should be replaced or supported by some innovative programmes for employees who want to contribute their ideas to the organisation. In past few years some programmes were launched but so much work is to be done to get out of shell.

To conclude, the objective of Intrapreneurship is to ignite imaginary powers of the employees, give them support and develop their ability by working with them to perform effectively. Organizations need to convert challenges into opportunities and utilize employees' capacity to the optimum level.

REFERENCES

- Learning, Intrapreneurship concept and its importance in Lifelong. (2011).
- Buekens, W. (2014, May). Fostering Intrapreneurship: The challenge for a New Game Leadership. 21st International Economic Conference 2014.
- Christensen*, K. S. (2004). A classification of the corporate entrepreneurship umbrella: labels and perspectives. 1(4).
- Csorba, E., & Termuende, E. (September 2015). INTRAPRENEURIAL OPPORTUNITIES: LEVERAGING PEOPLE'S SKILLS AND TALENTS WITHIN ORGANISATIONS.
- Hiwarka, A. S. (2019, January). Importance of Intrapreneurship. 6(1).
- Hiwarkar, A. S. (2019, January). Importance of Intrapreneurship. 6(1).
- Intrapreneurship - Make your Business great again. (n.d.). Retrieved from <https://mooc.house/>
<https://mooc.house/courses/bizmooc2018/items/6cZth7AE3bLhZIO8RJfnvU>
- Jong, J. d., & Wennekers, S. (2008, May). Intrapreneurship Conceptualizing entrepreneurial employee behaviour.
- MAIER2, V., & ZENOVIA, C. P. (2011, December). Entrepreneurship versus Intrapreneurship1. *Review of International Comparative Management*, 12(5).
- Molina, C., & Callahan, J. L. (2009). Fostering organizational performance The role of learning and intrapreneurship. *Journal of European Industrial*, 33(5).

- North, J. J. (2015, December). INDIVIDUAL INTRAPRENEURSHIP IN ORGANISATIONS: A NEW MEASURE OF INTRAPRENEURIAL OUTCOMES.
- Stefanovici, S. (ND). Intrapreneurship – a review of recent literature.
- DVR seshadri, Arbinda Tripathy (2006, January). innovation through Intrapreneurship: The road less travelled. SAGE journals
- Veronica, M., Anca, B., & Răzvan, N. (2013). INTRAPRENEURSHIP AS A PLATFORM FOR INTERNAL NETWORKS.
- MEGHA MANDAVIA jul 16 2015) Mahindra group may allow ‘intrapreneurs’ to invest in its startups <https://economictimes.indiatimes.com/small-biz/startups/mahindra-group-may-allow-intrapreneurs-to-invest-in-its-startups/articleshow/48092083.cms?from=mdr>
- TATA.com
- TV Mahalingam Feb 17 2106 <https://economictimes.indiatimes.com/news/company/corporate-trends/innolabs-aditya-birla-group-to-give-employees-time-off-for-pursuing-entrepreneurial-ambitions/articleshow/51017842.cms>
- <http://Unyscape.com/inspiring-examples-of-indian-intrapreneurship/> 4nov 2019
- <http://worldpopulationreview.com>
- <http://www.tvscredit.com>>Findhan
- <http://www.vccircle.com> (11 September 2008)
- <https://businessindia.co/csr/the-bajaj-group-has-started-a-youth-entrepreneurship-development-programme> (13 february2020)
- <https://www.ril.com/ar2016-17/people-and-innovation.html>

ISSUES AND CHALLENGES FOR WOMEN IN SOCIETY FROM ANCIENT TO MODERN INDIA

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ABSTRACT

This paper attempts to analyze the status of women in India from Ancient to Modern Era. Position of women in our society is ever changing. In Ancient times there were many restrictions and prohibitions for women and their status was not so good but in present, women plays a vital role in many fields like Business, Education, Administrative Services, Medical etc. So this paper contributes the women growth and development by facing various issues and challenges in such a competitive environment and how they manage their work and family with effective and efficient manner.

Keywords: Women Empowerment, Issues and Challenges, Ancient and Modern India, Women Status and Historical Background.

INTRODUCTION

A woman is a most important factor in our society who plays a vital role in each and every steps of life. If we talk about the ancient times- women were known as **Janani, Devi, Mata** and receives so much respect from the society but on the other hand women were not allowed to get education, doing job or work in offices or in any other fields they had to live in '**Pardah**' too. Meanwhile they were treated like a burdensome, they faced many inequalities, discrimination etc. in ancient time.

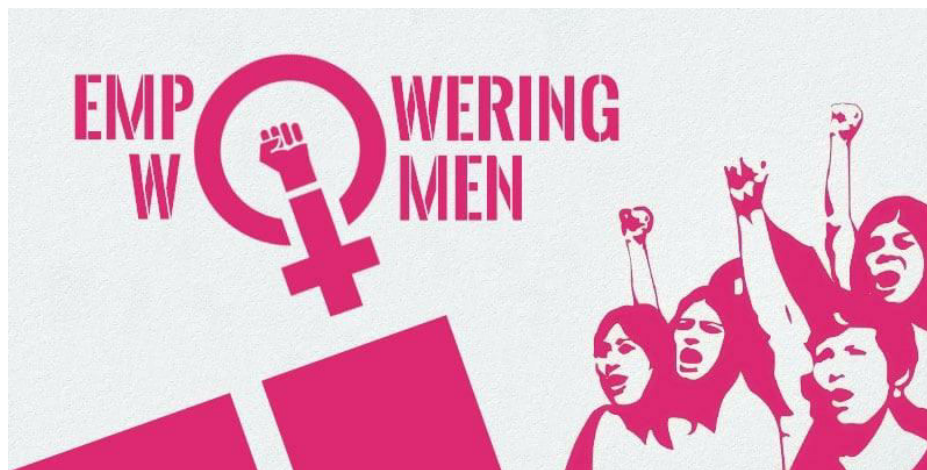


Another aspect of women empowerment is to give freedom for each and everything. According to the UN definition, women's empowerment has five components:-

- Women's sense of self-worth*
- Right to have and to determine choices*
- Right to have access to opportunities and resources*
- Right to have the power to control their own live, both within and outside the home*
- Ability to influence the direction of social change to create more special and economic order, nationally and internationally.*

Above definition describes that the women have rights for everything and right to get proper opportunities and facilities for their personal benefits. Women empowerment relates to the creation of an environment for women where they can make decisions of their own for their personal benefits and development as well as for the society.

According to Nancy Rathburn *“A strong woman understands that the gifts such as logic, decisiveness, and strength are just as feminine as intuition and emotional connection. She values and uses all of her gifts.”*



Throughout the world, the power relations that shape social, political, economic and cultural life prevent women from participating fully in all areas of their lives, whether it's in the home, or in the society. Mainstreaming women through their active participation in the formulation and implementation of policies is accepted as a

precondition for achieving equitable development of the society in any developing country.

REVIEW OF LITERATURE

Dhar Prosun, 2017 he studied the actual position of women in ancient time to modern times. He observed that the women empowerment could be enhance by education, employment and change in social structure are only the enabling factors.

Sharma Sengar Mridula, 2016 in this paper she studied the status of women in our society from Ancient to Modern Times. This paper categorized in three sections, firstly discussed the historical perspective of woman, secondly described the legal provisions for the encouragement of position of women and last presented the contemporary position of women in India.

Bhat Ahmed Zubair, 2016 in this paper the author examined the problematic issues and challenges for Indian women from Ancient to Modern phase.

Kumari V., 2014 in this paper author studied the problems and issues faced by urban working women in India. Main objective of this paper was to identify the key socio-economic pointers contributing to women's status, safety and security.

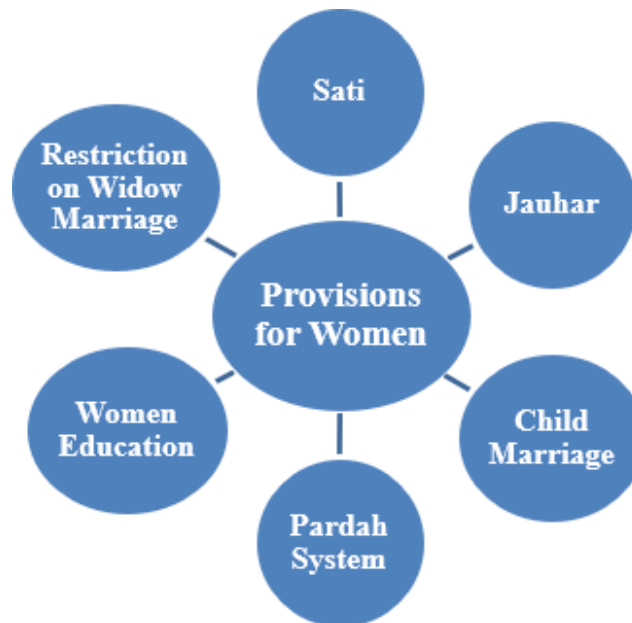
Thomas Elizabeth Reshma, 2013 this paper examined the gender inequality in Modern India. She focused on the women's growth and development by providing safe environment and a productive future.

Women's Status in Ancient Times

Women were recognized only as wives and mothers. Their position was as subordinate to men. The Indian patriarchal society that dominates the social, political and economic life of people in the country has never encouraged its women in any field, except kitchen. Women were got respect from each and every one but were not allowed to participate in other activities like education, job, involvement in politics or economic activity.

Women were largely restricted to the home and lacked the right to come and go as they pleased. They also had been destitute of the right to choose or refuse marriage partners or end a marriage. Whether women could dress as they liked was an issue during this time as well.

Provisions for Women in Ancient Time



Sati: In Ancient times if the husband of any women died than she had to die with her husband too. The custom of sitting on the funeral pyre of the husband and getting burnt to death is known as “Sati”.

Jauhar: It was such a custom in Rajput societies where mass suicide occurred by Rajput women for their self respect and safety from the enemies. During the battle with enemies Rajput Sainik sure that they were going to die, then all the wives of Rajput Sianik arrange a large pyre and set themselves afire. Therefore protect the holiness of the women and the whole family.

Child Marriage: Girls were married off at the very early age of in Ancient Time. They were not allowed access to education and were treated as the material being. Child marriage also brought some more problems such as-increased birth rate, poor health of women, high mortality rate of women and children.

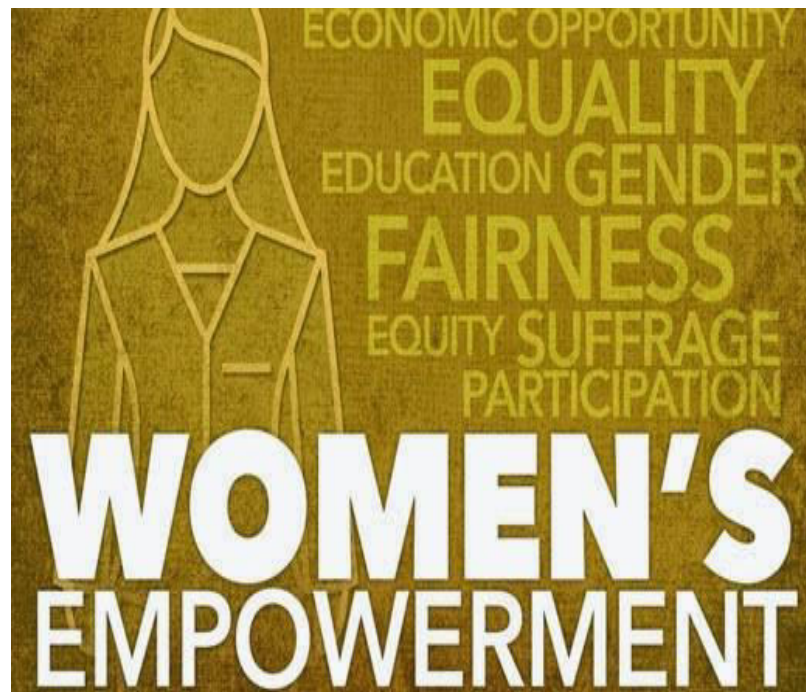
Restriction on Widow Remarriage: during ancient period in India women were restricted for widow marriage. This was major drawback at that time. The condition of widows was very poor. They were treated as a material and they had a lot of restrictions too like their presence in any good work was strictly prohibited, not allowed to remarry, they got cursed by each and everyone in the society.

Pardah System: ‘Pardah’ system was widely frequent in Indian society. It was used to
Dr. Khushbu Agarwal and Dr. Devendra Shrimali

protect themselves from enemies, unknown person. But this system curtailed women's freedom.

Women Education: In Ancient times women were not allowed to get education. They supposed to do only household works, cooking, take care of their children. But no education was enhanced for women for their personal development.

Present Status of Women in India



From above discussion and picture shows the position of women in Modern India. In present scenario women plays an important in our society whether in household work or at workplace. Women get acknowledge from each and every part of life. They motivate by their family, society and from Nation too.

Several women have served in various senior official positions in the Indian government like the President of India, the Prime Minister of India, and the Speaker of the Lok Sabha. Women in India now participate fully in areas such as education, sports, politics, media, art and culture, service sectors, science and technology, etc.

Women get equal opportunities as Men in each and every sector. Their participation in an Administrative decision plays a vital role in the society as well as they contribute towards Nation's growth and development.

Government Schemes for women Empowerment

In Modern India there are many Government schemes for women development conducted by the Government of India. Some of these schemes are as follows:

Sr.No.	Government Schemes
1.	Rashtriya Mahila Kosh (RMK) 1992-93
2.	Mahila Samridhi Yojana (MSY) October ,1993
3.	Indira Mahila Yojana (IMY) 1995
4.	Women Entrepreneur Development Programme given top priority in 1997-98
5.	Mahila Samakhya being implemented in about 9000 villages
6.	Swayasjdha
7.	Swa Shakti Group
8.	Support to Training and Employment Programme for Women (STEP)
9.	Swalamban
10.	Creches/Day care centre for the children of working and ailing mother
11.	Hostels for working Women
12.	Swadhar
13.	National Mission for Empowerment of Women
14.	Integrated Child Development Services(ICDS)1975
15.	Rajiv Gandhi Scheme for Empowerment of Adolescence Girls (2010)
16.	Integrated Child Protection Scheme (ICPS) 2009-2010
17.	Dhanalakahmi (2008)
18.	Short Stay Homes
19.	Vjjawala (2007)
20.	Scheme for Gender Budgeting (xi plan)
21.	Integrated Rural Development Programme (IRDP)
22.	Training of Rural Youth for Self Employment (TRYSEM)
23.	Prime Minister's Rojgar Yojana (PMRY)
24.	Women's Development Corporation Scheme (WDCS)
25.	Working Women's Forum
26.	Indira Mahila Kendra
27.	Mahila Samiti Yojana
28.	Khadi and village Industries Commission
29.	Indira Priyadarahini Yojana
30.	SBI's Sree Shakti Scheme
31.	SIDBI's Mahila Udyan Nidhi Mahila Vikas Nidhi

32.	NGO's Credit Schemes
33.	National Banks for Agriculture and Rural Development's Schemes
34.	Sukanya Samriddhi Yojana

In such a competitive environment not only Government but also many non-government It is not only the Government but also several non-governmental bodies playing an important role to facilitate women empowerment.

CONCLUSION

So from above description regarding women status and position, with reference to my paper, if we examine the issues and challenges of women from ancient to modern times were changes time to time. The status of women was controversial in the Indian society. Slowly but steadily position of women was improving from ancient to present. If we talk about the Women Empowerment, now a day's many schemes, facilities, benefits are providing by Government and Non-Government bodies. Our society also encourage women for better growth and development of themselves by getting proper education, give equality in all respect too. In the modern democratic community, women should be received as equal with equal rights and privileges. She must be given genuine respect for her individuality. In nut shell, society must take advantage to create an environment in which there are no inequalities and women have full opportunities of self decision making, getting education, active participation in social, political and economic life of the Nation.

REFERENCES

1. Kumar Ravi, 2019 "Educational Status of Dalit Women in contemporary India- Issues and Challenges", ISSN – 2348-1757 page- 75-85
2. Dhar Prosun, 2017 "Challenges of Women Empowerment in India from Ancient to Modern Times" ISSN 2349-5138
3. Sharma Sengar Mridula, 2016 "Status of Women in India :- Ancient to Modern" ISSN 2278-6236
4. Bhat Zubair Ahmad, 2016 "Status of Women in India: Issues and Challenges" ISSN 2394-4404
5. Kumari V., 2014 "Problems and Challenges faced by urban working in India"

6. Thomas Reshma Elizabeth, 2013 “Gender Inequality in Modern India – Scenario and Solutions” ISSN – 2279-0845
7. Mazumdar Vina, 1994 “Women’s Studies and the Women’s Movement in India: An Overview” pp – 42 – 54 Vol. 22

LIFE EXPECTANCY OF SOUTHERN STATES IN INDIA

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ABSTRACT

According to the World Health Organization (WHO), life expectancy is defined as "The average number of years that a newborn could expect to live if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area." India has also witnessed a significant mortality transition in a short period. life expectancy has increased from 23.7 years in 1881 to 64.6 years in 2006–2010 (Dandekar, 1972; R.G.I., 2012). The study made an effort to analyze the life expectancy in southern states from 2008 to 2018. It compares the rural and urban life expectancy in the southern states of India and finds the major determinants of life expectancy in the southern states of India. It found that in all southern states, life expectancy was increasing gradually among the southern states of India, Kerala has the highest and Karnataka has the lowest life expectancy at birth. In terms of urban and rural life expectancy at birth for southern states, except Kerala other states have high urban life expectancy than rural this is mainly because of urbanization, In health measures and policies, the Government needs to focus on reducing the Death Rate, Infant Mortality Rate, and Maternal Mortality Rate because these are the primary factors that significantly impact life expectancy.

Keywords: Life Expectancy, Southern states, Maternal Mortality Rate, Infant Mortality Rate

INTRODUCTION

Life expectancy at birth is a valuable indicator of health, and it is also widely used as a broad indicator of national development. According to the World Health Organization (WHO), life expectancy is defined as " The average number of years that a newborn

could expect to live if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area."

The life expectancy at birth in developed countries is more than 70 years while developing countries are improving and, with some time lag, are escalating to achieve this level sooner or later (WHO, 2011). The improvement in life expectancy is much faster for today's developing countries than the industrialized countries in the past. In the recent past, developing countries have experienced a more rapid improvement in life expectancies than that experienced in European countries (Vallin & Mesle, 2004). The registered number of deaths and the age-wise population determine the life expectancy at birth, possibly the most frequently referenced summary statistic of population health. The change in the country's cause-of-death pattern is credited with an increase in life expectancy.

Between 2000 and 2019, global life expectancy grew by more than six years, rising from 66.8 years in 2000 to 73.4 years in 2019. While Healthy Life Expectancy (HALE) increased by 8% from 58.3 in 2000 to 63.7 in 2019, this was due to declining mortality rather than reduced years lived with disability (World Health Organization). The Sample Registration System (S.R.S.) is the country's and its constituent states' primary source of accurate vital data. S.R.S., however, has not gone beyond the 16 major states in predicting life expectancy at birth and constructing life tables, probably because of sample size issues.

India has also witnessed a significant mortality transition in a short period. Life expectancy has increased from 23.7 years in 1881 to 64.6 years in 2006–2010 for males and from 25.6 to 67.7 years for females (Dandekar, 1972; R.G.I., 2012). The rapid increase in India's life expectancy points to the fast convergence of Indian life expectancy with wealthy countries.

India's life expectancy at birth was 69.4 years in 2014-18. In rural areas, the life expectancy at birth is 68.0 years, while it is 72.6 years in urban areas. At the national level, males have a life expectancy of 68.2 years, and females have 70.7 years (S.R.S.).

Statement of the Problem

Life expectancy is one of the significant concepts in health studies. Many changes are happening in the present economic scenario compared to the past years, and the importance of life expectancy has increased. India is a developing economy; the health sector has developed much more than in previous years. The study made an effort to analyze the life expectancy in southern states from 2008 to 2018. It also focused on the determinants and comparisons of the southern states of India. The study used secondary data to identify the life expectancy of the southern states in India. The secondary data has been collected from the Ministry of Home Affairs and the Census of India

Objectives of the Study

- To analyze the life expectancy in the southern states of India.
- To compare the rural and urban life expectancy in the southern states of India.
- To study the major determinants of life expectancy in the southern states of India.

REVIEW OF LITERATURE

Mahfuz Kabir (2008) in the study *Determinants of Life Expectancy in Developing Countries* research uses multiple regression and probit frameworks, it attempts to investigate the socioeconomic factors of life expectancy in 91 developing countries. For three sets of countries with low, medium, and high life expectancy, disaggregated probit regression was used. The majority of explanatory variables were statistically insignificant. According to the findings, governments should develop and implement suitable social sector policies and programs to increase physician availability, reduce adult illiteracy, and improve adult nutrition to improve their life expectancies. **M.R. Singariya (2013)** studied the Principal Component Analysis of socioeconomic factors and their association with life expectancy in India. The goal of this article is to look into numerous socio-economic aspects that are linked to life expectancy at birth and their influencing factors in India's fifteen major states. Using secondary quantitative data from a variety of databases. Life expectancy is an important health outcome and a vital indication of human development. A variety of social and demographic factors have an impact on it. **Mohsen Bayati, (2013)**, *International Journal of Health Policy and*

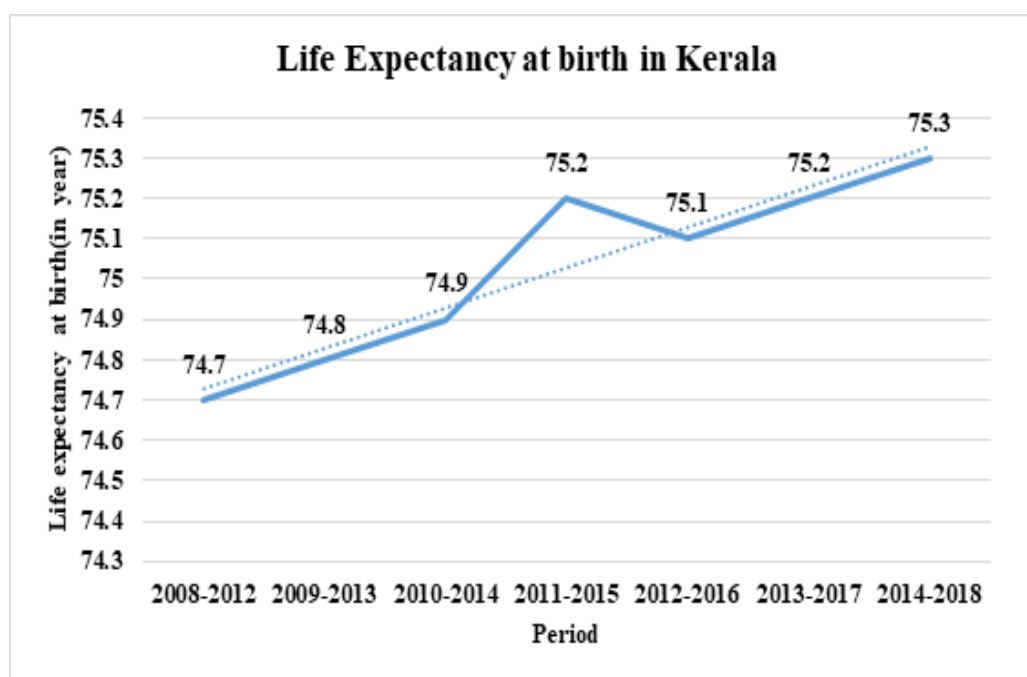
Management. In the research paper on determinants of life expectancy in the eastern Mediterranean region: health production function, he focused on estimating health production function. The econometrics method and panel data model are used to determine the relationship. Findings are the factors that evaluate the health production function and elasticity of life expectancy concerning the employment rate. To improve life expectancy in E.M.R. countries, then policymakers should focus on health and economic growth. **Ranjana Kesarwani (2015)**, The life expectancies for districts in India's top states for the census year 2001 presented in this study. When looking at district variation, Udupi in Karnataka has the highest life expectancy at birth, while Kargil in Jammu and Kashmir has the lowest. Males have the highest L.E.B. in Pune and Sangli, Maharashtra, while females have the highest L.E.B. in Udupi, Karnataka. As a result, the study discovered considerable differences in life expectancy estimates by gender and district. At the same time, it has highlighted the wide range of variance within and across states in the country. As a result, the findings clearly show that a coordinated approach to health interventions and policy will not effectively lower mortality disparities between districts. As a result, the study suggests health policies for tiny areas. **Senthil Kumar Anantharaman (2017)** To investigate life expectancy in Indian states, as well as how characteristics such as gender, per-capita income, gender, age, and location affect life expectancy. It shows that literacy rate and net income have a beneficial impact on life expectancy at birth in both urban and rural locations across all states. Other factors, such as the types of diseases that reduce life expectancy, can be explored in greater depth in the future because they may have a greater impact on life expectancy. Miqdad Asaria et al.,(2019)in their study Socioeconomic inequality in life expectancy in India This study calculates health inequities for the entire Indian population throughout their lives. These figures are used to calculate the socioeconomic disparities in population life expectancy at birth. To compute the wealth quintile-specific death rate, data from the Indian Sample Registration System were coupled with data from the National Family Health Survey on mortality rates by wealth quintile. **Saravanan Chinnaiyan (2021)**.Impact of life expectancy on health care expenditures and economic growth in India. In the years that followed, the data from World Bank Development Indicators from 2005 to 2017, health expenditure was an independent

variable, and life expectancy was a dependent variable. Ordinary least squares (O.L.S.) regression has been used to estimate the life expectancy on economic growth and health care expenditure in Python. Females had a longer life expectancy than males. In the findings, a one-dollar increase in current health expenditure (C.H.E.) per capita will increase life expectancy by 0.25 years. A one-dollar increase in domestic general government health expenditure (D.G.G.H.E.) per capita will increase life expectancy by 0.27 years. A one-dollar increase in domestic public government health expenditure per capita will boost India's life expectancy by 0.06 years.

METHODOLOGY

The study's methodology, includes the study's period, data collection, and the various tools chosen by the researcher for the analysis part. The current study covers ten years, i.e., from 2008-2012 to 2014-2018. The current study is based on secondary data available for analytical purposes. The Government's official website, like the census of India, is used to acquire secondary data. Secondary data is used for the study from census S.R.S. lifetable, S.R.S. based abridged life table (2014-18), Ministry of Home Affairs. The current study used a simple statistical tool such as line charts.

Figure 1: Life expectancy in Kerala*

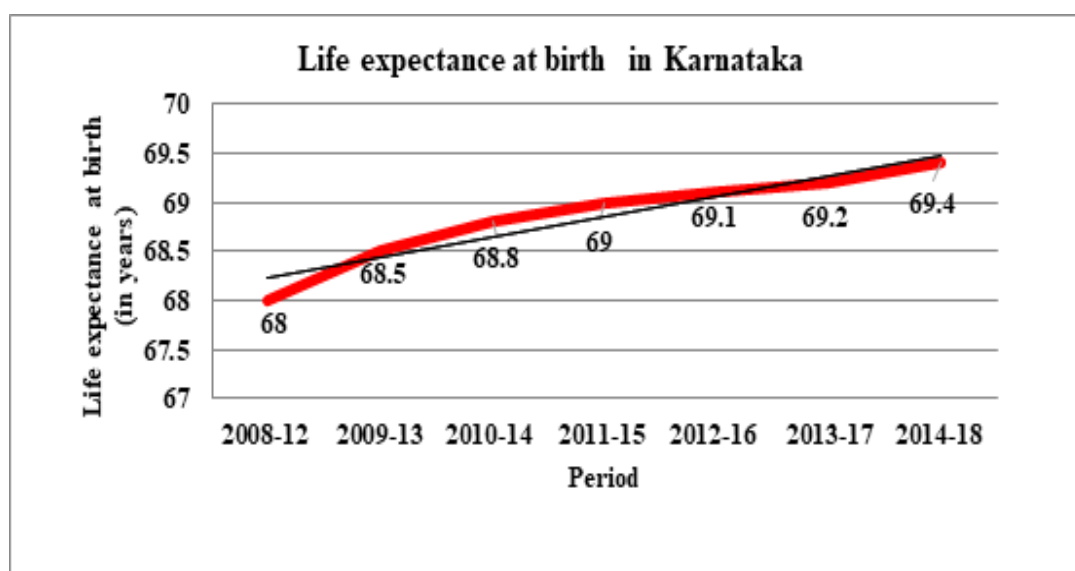


Source: (S.R.S) Sample Registration System based Abridged Life Tables 2014-18.

*Quinquennial Survey

In figure 1 the life expectancy of Kerala from 2008 to 2018 shows an increasing scenario. The life expectancy was 74.7 years from 2008 to 2012, which increased to 75.2 years from 2011 to 2015, and a slight decline from 2012 to 2016, then it increased to 75.3 years from 2014 to 2018. The primary reason for this increase in life expectancy is the decline in the Infant Mortality rate. The Kerala infant mortality rate was 12 deaths per 1000 live births in 2008 which reduced to 7 deaths per 1000 live births. One of the fundamental causes for the continued rise in the share of the population of elderly persons is the improvement in health care services. Kerala is India's top state in terms of life expectancy at birth. Its life expectancy at birth was 75.3 years in 2018. Kerala significantly increased the number of medical facilities, hospital beds, and doctors. According to the Ministry of health and family welfare, the Primary health centers in Kerala, the number of primary healthcare institutions increased to 931. Looking into the death rate in Kerala acts as a pull-down factor. In 2008 the death rate was 6.6, slightly to 6.9 in 2018. But, the life expectancy in Kerala is increasing, and it is the highest life expectancy in India.

Figure 2: Life expectancy in Karnataka

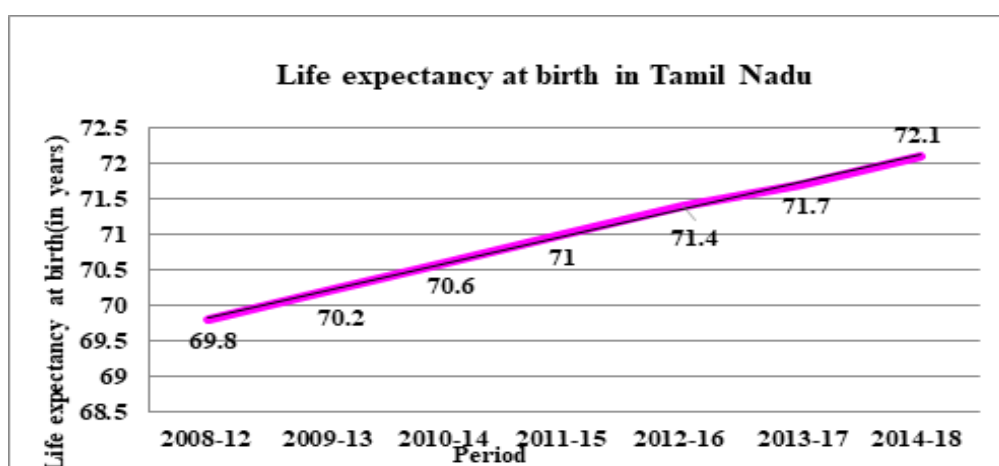


Source: S.R.S based Abridged Life Tables 2014-18. *Quinquennial Survey

Figure 2 indicates that Karnataka's life expectancy from 2008 to 2018 has increased from 68 to 69.4 years, indicating that the situation has improved. The increase in life

expectancy is mainly because of a decline in infant mortality and death rate. In 2008, the Infant mortality rate level was 45 deaths per 1000 live births, and in 2018 it decreased to 23 deaths per 1000 live births. Primary health centers in Karnataka had increased by nearly 2562. According to Times of India news report, in 2018, Karnataka's population per-doctor ratio was 507 people per doctor, one of the best population-doctor ratios in India.

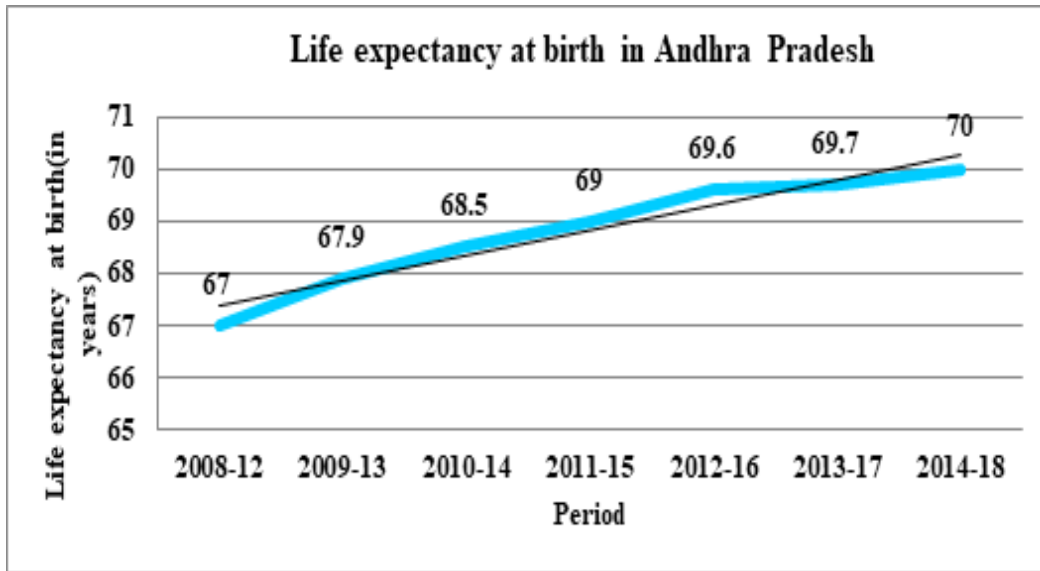
Figure 3: Life expectancy in Tamilnadu*



Source: S.R.S based Abridged Life Tables 2014-18. *Quinquennial Survey

The above figure shows that life expectancy in Tamil Nadu increased from 69.8 years in 2008-12 to 72.1 years in 2014-18. In 2008 the Infant mortality rate in Tamil Nadu was 31 deaths per 1000 live births, reduced to 15 deaths per 1000 live birth. It was one of the primary reasons for the increase in life expectancy in Tamil Nadu. There was also a decline in death rates in Tamilnadu from 7.4 to 6.5 from 2008 to 2018. The proposition of doctor population ratio for Tamilnadu achieved the world health organization guideline of 1:1000 doctors. Tamilnadu has 253 people per doctor. The number of primary health centers in 2008 was 1215, which has now increased to 1,885. Under the Center's flagship program, Ayushman Bharat, 1,384 existing Primary Health Centers (P.H.C.) in Tamil Nadu became health and wellness centers. The National Health Mission (N.H.M.) - Tamil Nadu has converted 985 of the state's 8,000 health sub-centers into health and wellness centers. Maternal Mortality is also a fundamental reason for the increase in life expectancy-the Maternal Mortality rate declined from 2008 was 97 to 60 per 1000 live birth in 2018.

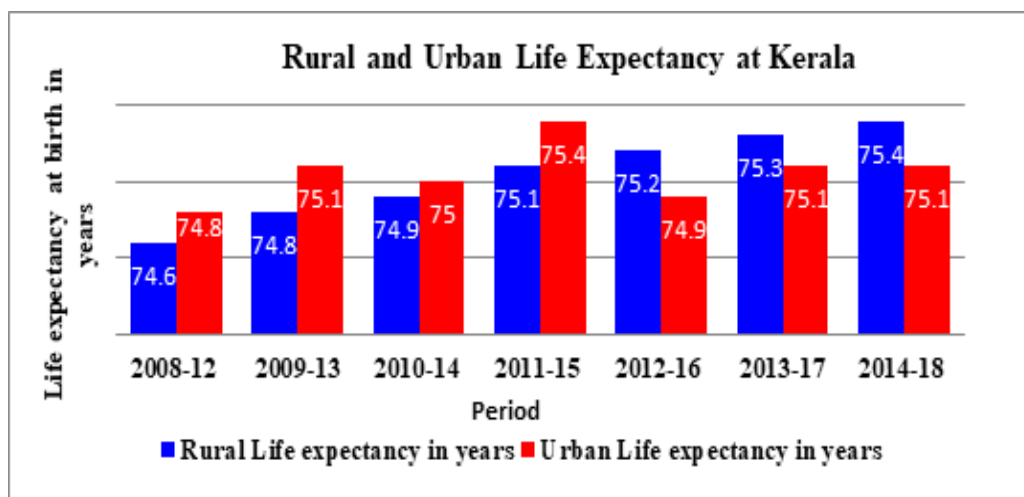
Figure 4: Life expectancy in Andhra Pradesh*



Source: S.R.S based Abridged Life Tables 2014-18. *Quinquennial Survey

Figure 4 shows life expectancy in Andhra Pradesh. Life expectancy increased from 67 years in 2008 to 70 years in 2018. The level of the infant mortality rate was 52 death per 1000 live births, and reduced to 29 deaths per 1000 live births was one of the most significant declines that helped increase life expectancy over the period. The death rate also decreased from 7.5 to 6.7 in 2008. In 2018 the National Health Mission Primary Health Centers were established to cover the population of Andhra Pradesh. There are 1,509 Primary health centers in Andhra Pradesh.

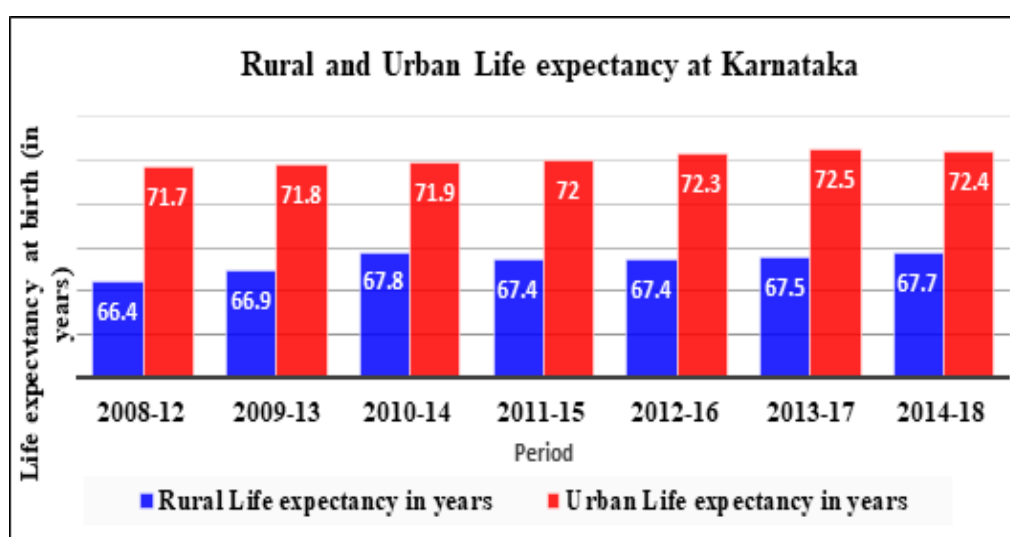
Figure 5: Rural and Urban life expectancy in Kerala



Source: S.R.S. based Abridged Life Tables 2014-18. *Quinquennial Survey

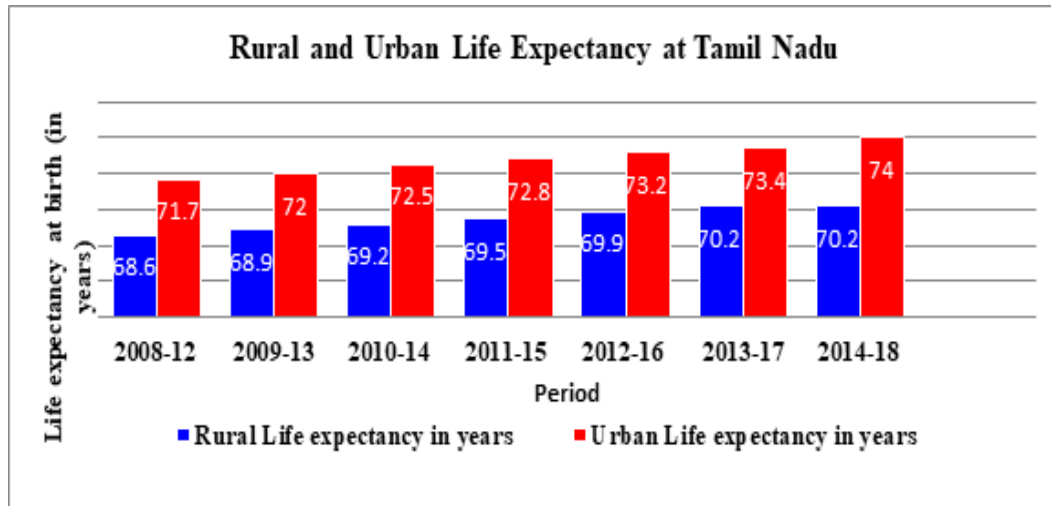
Figure 5 shows the Rural and Urban life expectancy in Kerala from 2008 to 2018. In 2008-12 the rural life expectancy at birth was 74.6 years, and in urban, it was 74.8 years. The Gap between them was very minimal, 0.2 years, but in 2012-16 the urban life expectancy reduced slightly, whereas rural life expectancy gradually increased. In 20014-18, the Rural has high life expectancy than the urban. The gap between them is 0.3 years. Kerala has 7.4 million residents over the age of 60, according to the 2011 Census. In rural areas, the proportion of people aged 60 and up is slightly higher than in urban areas. Around 12.6 percent of the population is over 60 years old, making it the country's most aging. It increased by nearly 2% every year from 10.5 percent in 2001. With an annual exponential growth rate of 0.5 percent in 2011, Kerala's aged population is expanding at a perpetual rate of 2.3 percent, which is slower than the population's overall growth rate. As a result, the proportion of elderly in Kerala is growing over time.

Figure 6: Rural and urban life expectancy in Karnataka*



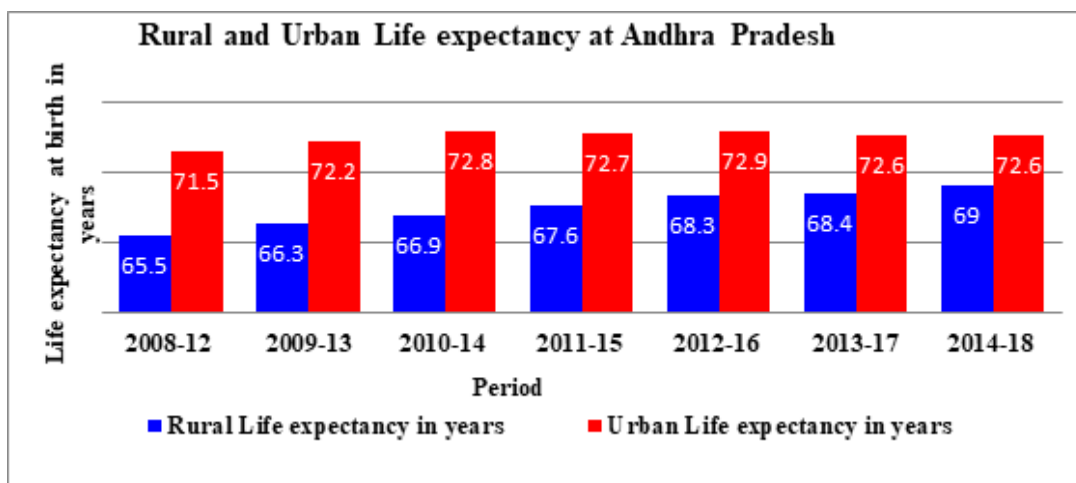
Source: S.R.S. based Abridged Life Tables 2014-18. *Quinquennial Survey

Figure 6 shows the rural and urban life expectancy of Karnataka from 2008 to 2018; both rural-urban life expectancy at birth gradually increases over the years. While comparing rural and urban life expectancy in Karnataka the urban life expectancy at birth is higher at 72.4 years than the rural life expectancy at birth at 67.7. In 2008-2012 the gap between rural and urban life expectancy was 5.3 years, and in 20014-2018, the gap between rural and urban life expectancy was 4.7 years.

Figure 7: Rural and Urban life expectancy in Tamil Nadu*

Source: S.R.S. based Abridged Life Tables 2014-18. *Quinquennial Survey

The figure depicts Tamil Nadu's rural and urban life expectancy from 2008 to 2018. Both rural and urban life expectancy at birth has steadily increased over time. When comparing Tamil Nadu's rural and urban life expectancies, the urban life expectancy at birth is 74 years, whereas the rural life expectancy at birth is 70.2 years. According to the 2011 census of India, Tamil Nadu is the eighth-most urbanized state in India, with a population of 48.40 percent. Between 2008 and 2012, the disparity between rural and urban life expectancy was 3.1 years, while between 2014 and 2018, the gap was 3.8 years. The life expectancy disparity has also increased slightly in recent years.

Figure 8: Rural and Urban life expectancy in Andhra Pradesh*

Source: S.R.S. based Abridged Life Tables 2014-18.pdf *Quinquennial Survey

Figure 8 demonstrates that rural and urban life expectancy at birth in Andhra Pradesh has gradually increased. In Andhra Pradesh, the urban life expectancy at birth was 72.6 years, whereas the rural life expectancy at birth was 60 years in 2014-2018. The difference in life expectancy between rural and urban areas was five years from 2008 to 2012 and 3.6 years from 2014 to 2018. In comparison to previous years, the life expectancy disparity has shrunk slightly. At the 2011 census, Andhra Pradesh had a rate of urbanization of 33.49 percent, up 6.19 percentage points from 2001.

Table 9: Major determinants of Life Expectancy in southern states (2018)

Southern states	Death Rate (per 1,000 live birth)	Maternal Mortality Rate (per 1,00,000 live birth)	Infant Mortality Rate (per 1,000 live birth)	Number of Public Health Centers	The proportion of doctors (people per doctor)	Literacy rate (in percentage)	Urbanization (in percentage)
Kerala	6.9	1.4	7	931	535	94.0	47.2
Karnataka	6.3	4.3	23	2562	507	75.37	38.67
Tamil Nadu	6.5	3.0	15	1885	253	80.09	48.5
Andhra Pradesh	6.7	3.2	29	1509	689	67.02	33.36

Source: Census of India, 2011

Figure 9 represents the significant determinants of Life expectancy in southern states of India. The data are taken for 2018, as the study period is from 2008 to 2018. The vital determinants of Life Expectancy are death rate per 1000 live birth, maternal mortality rate per 100000 live birth, infant mortality rate per 1000 live birth, number of public health centers, doctors, population ratio, literacy rate, and urbanization.

It shows that in Kerala, the death rate was 6.9 per 1000 live births, while the death rate was high compared to other southern states. Also, it was nearer to the death rate of India, which is 7 per 1000 live birth. The maternal mortality rate was 1.4 per 100000 live birth, and the infant mortality rate was 1.4 per 1000 live birth. Both are very low in

rates compared to other southern states, which implies it acts as a significant determinant in increasing life expectancy. The number of Public Health Centers was 931, and the proportion of doctors, for one doctor, there are 535 people, which shows that there are more doctors than the WHO guideline (1:1000). Kerala was in the 4th rank in India and 3rd rank in southern states for a doctor to population ratio. As per the 2011 census of India, the literacy rate of Kerala was 94.0%, which is the highest in southern states. In India, the level of urbanization is 47.2%, and it is less in Kerala than in the rural population. As per the data, M.M.R., I.M.R., doctor-to-population ratio, and literacy rate were the significant determinants of life expectancy in Kerala.

In Karnataka, the death rate was 6.3 per 1000 live birth, which is lower compared to other southern states. The maternal mortality rate was 4.3, which was higher than in other states despite being lower than India's mortality rate of 6.5 per 100000 Live birth. Karnataka has 2562 P.H.Cs. It has more P.H.C.s than other southern states. It ranks in 3rd position in overall India for a doctor-to-population ratio, that is 507 people per doctor. It is more than the WHO guideline of 1:1000 a doctor to population ratio. But the literacy rate was 75.37%, 15th position in overall India and 3rd position in southern states. The percentage of urbanization was 38.67%, according to the 2011 census of India. These are the determinants in Karnataka, and the significant role played in the increase in life expectancy was a reduction in death rates. The P.H.C. population ratio played a major for increasing life expectancy in Karnataka in 2018.

In Tamil Nadu, the death rate per 1000 live birth is 6.5, the 2nd lowest death rate among southern states. The exact position in maternal mortality rate is 3.0 per 100000 live birth, and the infant mortality rate was 15 per 1000 live birth. Tamilnadu has 1885 P.H.C, the 2nd place next to Karnataka among southern states of India. A primary determinant is the number of doctors; the doctor-people ratio is 253 people per doctor and is the leading one with less number of people for a doctor. Among other states of India, this 1st breaks the guidelines of WHO, doctor-people ratio of 1:1000. In terms of literacy rate, Tamilnadu stands 2nd place among southern states with an 80.09% of literacy rate. Tamil Nadu was 48.5% of urbanization; according to the census of India 2011, Tamil Nadu was the fastest urbanizing state. From the determinants in Tamil

Nadu, Death rate, maternal mortality rate, infant mortality rate, P.H.C., Literacy rate, and urbanization, all the factors have an equal value in determining the life expectancy by 2018.

In Andhra Pradesh, the death rate was 6.7 per 1000 live birth, and the maternal mortality rate was 3.2 per 1000 live birth. In both death and maternal mortality rates, Andhra Pradesh stands in 3rd position among the southern states. Infant mortality was 29 per 1000 live birth, and this was the high infant mortality rate among southern states and very near to India's Infant mortality rate of 32 per live birth. The number of P.H.C.s is 1509, the 3rd place among southern states of India. The doctor-population ratio has more doctors than the WHO guideline(1:1000). In Andhra Pradesh, the doctor-to-population ratio was 1:689 (including Telangana), which is the last position among Southern states of India. The literacy rate of Andhra Pradesh was 67.02%. According to the 2011 census of India, it was the lowest among the southern state of India (74.04%). 33.36% of urbanization in Andhra Pradesh, according to the census 2011 India.

SUGGESTION

The Government of India should plan more policies that help to increase life expectancy; those plans should mainly concentrate on the states which have a low life expectancy.

While seeing the southern states of India, Karnataka has low life expectancy than others, and they should increase the policies for education because their literacy rate is 67.02% which is lesser than India's literacy rate of 74.04%

In Tamil Nadu, Karnataka, and Andhra Pradesh, the rural life expectancy is lower than the urban life expectancy. The Government should bridge the life expectancy gap by implementing more rural health programs and providing more healthcare facilities like doctors, healthcare providers, and healthcare centers.

CONCLUSION

Life expectancy is an essential metric for assessing population health. It is a measure that summarizes a country's mortality, which allows us to compare it by generation. It provides vital information on the level of development of a country's welfare state. The current study on Life Expectancy in the Southern States of India has analyzed the

situation of life expectancy and has focused on the significant determinants of death rate, maternal mortality rate, and infant mortality rate. A comparison is the years of life expectancy made in consideration between rural and urban areas of the southern states of India. The southern states included in the study are Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu which Kerala has the highest life expectancy in India. Longer life expectancy means a higher return on human capital, which encourages more investment in education and stimulates economic growth. On the other side, Karnataka has the least life expectancy compared to the other three states. The life expectancy of southern states is higher except Karnataka, it is slightly less than India's average life expectancy, which is an optimistic sign.

REFERENCES

- Anantharaman, S. K. (2017, July). Prime Determinants that Influence "Life Expectancy": An Analysis across Indian States Using Multiple Regressions. *Indian Journal of Economics and Development*, 5(7). doi:10.5281/zenodo.3362418
- Andhra Pradesh Sex Ratio. (n.d.). Retrieved from <https://www.census2011.co.in/census/state/andhra+pradesh.html>
- Bureau, P. I. (2020, September 18). Primary Health Centres (PHCs). Retrieved from Press Information Bureau: [https://pib.gov.in/Pressreleaseshare.aspx?PRID=1656190#:~:text=Primary%20Health%20Centres%20\(PHCs\)&text=Under%20the%20National%20Health%20Mission,hilly%2C%20tribal%20and%20desert%20areas.&text=Sr.](https://pib.gov.in/Pressreleaseshare.aspx?PRID=1656190#:~:text=Primary%20Health%20Centres%20(PHCs)&text=Under%20the%20National%20Health%20Mission,hilly%2C%20tribal%20and%20desert%20areas.&text=Sr.)
- Bureau, P. I. (2020, September 18). Primary Health Centres (PHCs). (G. o. India, Editor) Retrieved January 7, 2023, from [https://pib.gov.in/Pressreleaseshare.aspx?PRID=1656190#:~:text=Primary%20Health%20Centres%20\(PHCs\)&text=Under%20the%20National%20Health%20Mission,hilly%2C%20tribal%20and%20desert%20areas.&text=Sr.](https://pib.gov.in/Pressreleaseshare.aspx?PRID=1656190#:~:text=Primary%20Health%20Centres%20(PHCs)&text=Under%20the%20National%20Health%20Mission,hilly%2C%20tribal%20and%20desert%20areas.&text=Sr.)
- Elderly Population: State Scores a First. (2014, September 20). *The New Indian Express*. Retrieved from

<https://www.newindianexpress.com/cities/thiruvananthapuram/2014/sep/20/Elderly-Population-State-Scores-a-First-662864.html>

- IAS, D. (21 Sep. 2021). “Urbanization.”. Retrieved from <https://www.drishtiiias.com/to-the-points/Paper2/urbanisation-3>.
- Kabir, M. (2008). Determinants of Life Expectancy in Developing Countries. *The Journal of Developing Areas*, 41(2), 185-204. doi:10.1353/jda.2008.0013
- Karnataka Population | Sex Ratio | Literacy. (n.d.). Retrieved from <https://www.census2011.co.in/census/state/karnataka>
- Kerala Population | Sex Ratio | Literacy. (n.d.). Retrieved from <https://www.census2011.co.in/census/state/kerala>
- Kesarwani, R. (2015, July). Estimation of Life Expectancy from Infant Mortality Rate at Districts Level. *International Research Journal of Social Sciences*, 4(6). Retrieved from <https://www.researchgate.net/publication/281405390>
- Kumar, R. a. (2018). “India Achieves Who Recommended Doctor Population Ratio: A Call for Paradigm Shift in Public Health Discourse!”. *Journal of Family Medicine and Primary Care*.
- Miqdad Asaria, S. M. (2019, May). Socioeconomic inequality in life expectancy in India. *British Medical Journal Global Health* , 4(3). doi:DOI: 10.1136/bmjgh-2019-001445
- Nagarajan, R. (Sep 2, 2018). “6 States Have More Doctors than Who's 1:1,000 Guideline: India News - Times of India.”.
- Patel, S. (2019, January). An Empirical Study of Causes of Disability in India”. *The Internet Journal of Epidemiology*. *Internet Journal of Epidemiology* , 6(2). Retrieved from <https://www.researchgate.net/publication/260510820>
- Raja, D. M. (Ed.). (n.d.). Retrieved from <https://www.informaticsjournals.com/index.php/jnr>.

- Sample Registration System (Srs)-Abridged Life Tables. (n.d.). Retrieved from <https://censusindia.gov.in/census.website/data/SRSALT>
- Singariya, M. (2013, May 20). Principal Component Analysis of Socioeconomic Factors and their Association with Life Expectancy in India. *The Journal of Economics.*, 163-172. Retrieved from <https://sites.google.com/site/photonfoundationorganization/home/the-journal-of-economics>
- Tamil Nadu Population | Sex Ratio | Literacy. (2011-12). Retrieved from <https://www.census2011.co.in/census/state/tamil+nadu.html>
- THE GLOBAL HEALTH OBSERVATORY. (n.d.). Retrieved from Life expectancy at birth (years): <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/65>
- World Health Organisation. (n.d.). Retrieved from THE GLOBAL HEALTH OBSERVATORY: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/1141>
- World Health Organisation. (n.d.). Retrieved from Maternal mortality ratio (per 100 000 live births): <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/26>.
- World Health Organisation. (n.d.). Retrieved from Indicator Metadata Registry List: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3138>

CHALLENGES IN DIGITAL INCLUSION OF TRIBAL YOUTH OF SOUTHERN RAJASTHA

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ABSTRACT

Digital India is an ambitious, programme run by the government of India to make this society a digitally empowered society. Digital technologies are increasingly being used b as in day life for making bill payment, paytm, Google pay , Google maps, e-shopping, e-leaning, booking tickets ,transferring money and more. This technologies which include internet and mobile app have emerged as channel for speedy economic growth and citizen development. This digitalization of payment system in Indian economy will have on the socio economy development of the Rural Indian sector. From the rural and urban reviews it can be conclude that earlier digital inclusion did not came into the frame but in present era it spread its wings in urban areas as well as in tribal areas too. It is a challenging job to study the mindset of tribal people, to understand their perception, knowledge about the digitalization, sustainable development and socio economy of the India in effective manner.

The purpose of this research paper is to answer the following question:

- a) To study the concept of digital inclusion.*
- b) To identify challenges in digital inclusion of tribal youth.*

To develop the conclusion descriptive research design is used. Primary data is collected with the help of questionnaire and data is analyzed with the help of various statistical techniques.

Conclusion of the paper help in identify challenges in digital inclusion on tribal youth of southern Rajasthan.

Keyword: Digital divine, digital inclusion, digital society, challenges, participation

INTRODUCTION

Digital India is a campaign run by the Government of India to make this country a digitally empowered country. The aim of launching this campaign is digital empowerment of Indian citizen will really make possible of digital literacy through universally. **Digital India** is a campaign launched by the Government of India in order to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. Digital technologies are increasingly being used by us in day to day life for making bill payment, paytm, e-shopping, e-sign framework, e-hospital application, e-learning, digital locker, google maps, booking tickets, transferring money, food ordering and more. It is being used in retail stores, educational institutes, government offices, and almost everywhere. They help us in online transactions, connecting with each other and sharing information from everywhere in the world. The technologies which include internet and mobile apps have emerged as channel for speedy economic growth and citizen development.

There are many states in India where digitalization is growing and spreading effectively. Like if we talk about Rajasthan state as it is a largest state of India. The Government of India's Digital India Programme has given a concrete structure and roadmap to empower the country through technology by launching programmes in the areas of digital infrastructure, digital empowerment, on-demand government services, expanding internet connectivity to rural areas, boosting manufacturing of electronic goods, etc. With this massive digitalization push, the lives of women, youth, farmers, and others in the country have changed for the better. Sectors such as healthcare, education, agriculture, manufacturing, etc. have undergone a tremendous transformation. Rajasthan has one been at the forefront of passionately rallying for and diligently implementing this Digital India dream.

Concept of digital inclusion:

Digital inclusion is relatively new concept that attempt to address issues related to digital literacy and access to technologies.it involves the activities necessary to ensure

equitable access to and use of information and communication technologies for participation in social and economic life including education , health , agriculture, banking , social and community participation.

DIGITAL INCLUSION COVERS

Digital Skills: Being able to use digital device (such as computer or smart phones and the internet .this is important, but lack of digital skills is not necessarily the only, or the biggest, challenge people face.

Connectivity: Access to the internet through broadband, Wi-Fi, tab and mobile .people need the right infrastructure but that is only the start.

Accessibility: services need to be designed to meet all user needs, including those dependent on accessory technology to access digital services.

By making the internet more accessible, connect, affordable and giving people the skills they need to use it they can bridge the digital divide and empower every individual to feel included online.

REVIEW OF LITERATURE

Siddharth, (2019) According to this study addressed the challenges faced by companies when trying to increase the last mile delivery to rural markets using the same channels that have been used in urban settings.by consolidating information from various secondary sources, the article puts forth viable options that can replace the traditional courier delivery, through suitable initiatives for the rural market, by also substantiating the same with examples.

Joshi, (2019) According to this study the main objective of this paper is to analyze the present status of digital payment and financial inclusion in the country. This study also highlights the major challenges faced by digital banking in the country. The overall performance of digital banking indicates that digital payment is an essential part of financial inclusion in India.

Pavithra, (2019) According to this study The Digital India concept focuses on clean digitization of data on the way to help in making much green and fast in the future. It

will reduce paper work, save man energy and save time also. This paper discussed about the digital India campaigns whole along with its advantages and disadvantages among rural people Tamil Nadu.

Objectives of the study

The purpose of this research paper is to answer the following question:

- a) To study the concept of digital inclusion.
- b) To identify challenges in digital inclusion of tribal youth

RESEARCH METHODOLOGY

(a) Research Design: - The descriptive research design was used to get the primary data and collected data from four districts of southern Rajasthan (Banswara, Dungarpur, Pratapgarh and Udaipur) with the help of structured questionnaire.

(b) Sample Design: - Responses were received from 368 Respondents out of a sample of 400 were selected from stratified purposive sampling.

(c) Analysis: - the data collected was analyzed with the help of various statistical tools like Mean, Standard Deviation, t-test and ANOVA etc.

Analysis & Interpretations

1. As per the data majority of respondents (N=251, Percentage=68.21) were males whereas rest 31.79% respondents (N=117) were females.
2. As per the age of respondents maximum number of respondents were from age group of 35 to 40 years (N=122, Percentage=33.15) followed by 29.62% respondents (N=109) who were from the age category of 25 to 30 years. There were 18.75% respondents (N=69) from the age group of 30 to 35 years and 13.04% respondents (N=48) were of 20 to 25 years age group. Rest of the respondents (N=20, Percentage=5.43) were aged between 40 to 45 years.
3. As per the data 65.22% respondents (N=240) were married whereas 26.63% respondents (N=98) were unmarried. Out of rest 3.26% respondents (N=12) were widow and 4.89% respondents (N=18) were divorced.

4. As per the data 1.36% respondents (N=5) were illiterate, 2.72% respondents (N=10) were 5th pass, 3.26% respondents (N=12) were 8th pass, 13.86% respondents (N=51) were 10th pass, 17.66% respondents (N=65) were 12th pass, 45.92% respondents (N=169) were graduate, 11.14% respondents (N=41) were post graduate and rest 4.08% respondents (N=15) were having some other qualification like CA, CS, PhD, LLB, LLM etc.
5. The area of residence of respondents. It was seen that 14.95% respondents (N=55) were residing in urban area, 27.45% respondents (N=101) belonged to semi-urban area and 57.61% respondents (N=212) were from rural area.
6. As per the data that maximum number of respondents (N=132, Percentage=35.87) were in private jobs, followed by 16.58% respondents (N=61) who were house wives. 15.49% respondents (N=57) were students and 11.41% respondents (N=42) were having their own business. 9.41% respondents (N=35) were in government jobs the rest of the respondents (N=41, Percentage=11.14) were, farmers, daily labor, trainees etc.
7. As per the data that 27.45% respondents (N=101) were earning less than Rs. 25000 per month, 53.80% respondents (N=198) were getting Rs. 25001 to Rs. 50000 per month, 16.30% respondents (N=60) were earning Rs. 50001 to Rs. 75000 per month and rest of the respondents (N=9, Percentage=2.45) were earning more than Rs. 75000 per month.
8. As per the data that 30.43% respondents (N=112) were from Banswara, 28.53% respondents (N=105) were from Dungarpur, 23.64% respondents (N=87) were from Pratapgarh and 17.39% respondents (N=64) were from Udaipur district.
9. As per results 40.49% respondents (N=149) were from ST category, followed by OBC (N=102, Percentage=27.72) and SC category (N=81, Percentage=22.01). The rest of the respondents (N=36, Percentage=9.78) were from general category.
10. As per results 40.49% respondents (N=149) were from ST category, followed by OBC (N=102, Percentage=27.72) and SC category (N=81, Percentage=22.01). The rest of the respondents (N=36, Percentage=9.78) were from general category.

Challenges faced by Respondents in using Digital Inclusion Platforms

The table 1.1.1 is presenting the challenges faced by respondents in using Digital Inclusion platforms. According to results the major challenge faced by respondents in using digital inclusion platforms was data security & privacy (Mean=4.42) followed by unavailability of safety measures (Mean=4.34), language issues (Mean=4.21) and technical issues (Mean=4.15).

The challenges which were sometimes faced by Respondents were Poor/no internet connection (Mean=3.82), Lack of knowledge (Mean=3.74), Non availability of updated information on portals (Mean=3.58) and Inconvenience (Mean=3.42). The challenges which were seldom faced by respondents were non availability of hardware (Mean=3.29), slow response of application servers (Mean=3.25) and no scope of personal advice (Mean=3.14).

Table 1.1.1: Challenges faced by respondents in using Digital Inclusion Platforms

Challenges	Mean	S.D.	C.V.	Rank
Poor/No Internet Connection	3.82	0.512	0.13	5
Data Security and Privacy	4.42	0.489	0.11	1
Technical Issues	4.15	0.471	0.11	4
Non Availability of Hardware (Computer/Mobile/Laptop etc.)	3.29	0.254	0.08	9
Lack of Knowledge	3.74	0.359	0.10	6
No Scope of Personal Advice	3.14	0.478	0.15	11
Language Issues	4.21	0.45	0.11	3

		9		
Unavailability of safety measures	4.34	0.34 7	0.08	2
Inconvenient	3.42	0.41 9	0.12	8
Slow response from Application Servers	3.25	0.54 8	0.17	10
Non availability of updated information on portals	3.58	0.36 9	0.10	7

The table 1.1.2 is presenting the overall challenges faced by respondents in using Digital Inclusion Platforms. According to results, 87.77% Respondents (N=323) have faced challenges in adoption of Digital Inclusion Platforms, whereas 12.23% Respondents (N=45) indicated that they have not faced challenges in using Digital Inclusion Platforms. The mean score (41.36) indicates that overall respondents have faced challenges in adoption of Digital Inclusion Platforms.

Table1. 1.2: Overall Challenges faced by Respondents' in using Digital Inclusion Platforms

Overall Challenges Faced	N	Percentage
No	45	12.23
Yes	323	87.77
Total	368	100
Mean Score	41.36	
Result	Yes	

To measure difference in Respondents' opinion about challenges faced in adoption of Digital Inclusion Platforms with respect to their demographic variables, t-test and ANOVA test was applied and results received are presented in table 1.1.3 and 1.1.4. According to t-test results of table 1.1.3 there is a significant difference in the opinion of

respondents with respect to gender. It was observed that females (Mean=45.29) have faced more challenges as compared to males (Mean=39.64) in adoption of digital inclusion platforms.

The table 1.1.4 is presenting the ANOVA results to measure significant difference in Respondents' opinion with respect to their age, area of residence, marital status, mother tongue, category, qualification, occupation and monthly income. It can be observed that the F-statistic is significant for age, marital status and monthly income only so it can be concluded that there is a significant difference in challenges faced by respondents with respect to their age, marital status and monthly income. The table 1.1.5 is presenting the mean scores of challenges faced by respondents in adoption of Digital Inclusion Platforms with respect to their age, marital status and monthly income.

It can be seen that respondents aged between 40 to 45 years (44.28) have faced maximum challenges whereas respondents of 25 to 30 years age (38.57) have faced least challenges. In marital status category widow respondents (45.19) have faced maximum challenges, and the respondents earning more than Rs. 75000 per month (37.15) have faced least challenges.

Table 1.1.4: t-Test results to measure difference in Challenges faced by respondents in adoption of Digital Inclusion Platforms with respect to their gender

Demographic Variable		Overall Perception about Benefits of Digital Inclusion		t-value	p-value	Result
		Mean	S.D.			
Gender	Male	39.64	8.259	6.522	0.000	Significant t
	Female	45.29	7.404			

Level of Significance=5%

Table 1.5: anova results to measure difference in Challenges faced by respondents in adoption of Digital Inclusion Platforms with respect to their demographics

Demographic Variable	Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Ratio	p-value	Result

Age	Between Samples	855.528	4	213.882	3.885	0.00 0	Significant
	Within Samples	19982.95 2	363	55.049			
	Total	20838.48	367				
Area of Residence	Between Samples	163.622	2	81.811	1.444	0.12 5	Not Significant
	Within Samples	20674.85 7	365	56.643			
	Total	20838.47 9	367				
Marital Status	Between Samples	855.528	3	285.176	5.195	0.00 0	Significant
	Within Samples	19982.95 2	364	54.898			
	Total	20838.48	367				
Mother Tongue	Between Samples	512.783	2	256.392	2.617	0.12 5	Not Significant
	Within Samples	35755.16 6	365	97.959			
	Total	36267.94 9	367				
Category	Between Samples	136.509	3	45.503	0.789	0.74 2	Not Significant
	Within Samples	20986.13 3	364	57.654			
	Total	21122.64 2	367				
Qualification	Between Samples	300.16	7	42.880	0.741	0.84 1	Not Significant
	Within Samples	20822.51 5	360	57.840			
	Total	21122.67 5	367				
Occupation	Between Samples	248.899	5	49.780	0.863	0.95 8	Not Significant
	Within Samples	20873.77	362	57.662			

		6					
	Total	21122.67	367				
		5					
Monthly Income	Between Samples	349.87	3	116.623	9.249	0.000	Significant
	Within Samples	4589.65	364	12.609			
	Total	4939.52	367				

Level of Significance=5%

Table1. 1.6: Mean Scores of Challenges faced in adoption of Digital Inclusion Platforms

Demographic Profile		Mean Score
Age	20 to 25	39.12
	25 to 30	38.57
	30 to 35	42.49
	35 to 40	43.79
	40 to 45	44.28
Marital Status	Unmarried	40.12
	Married	41.26
	Divorced	45.19
	Widow	47.29
Monthly Income	Less than Rs. 25000	42.12
	Rs. 25001 to 50000	42.19
	Rs. 50001 to 75000	38.24
	More than Rs. 75000	37.15

CONCLUSION

we can conclude that the digitalization becomes boom in the market. This digitalization of payment system in Indian economy will have on the socio economy development of the Rural Indian sector. It can be conclude that earlier digital inclusion did not came into the frame but in present era it spread its wings in urban areas as well as in tribal areas

too. It is a challenging job to study the mindset of tribal people, to understand their perception, knowledge about the digitalization, sustainable development and socio economy of the India in effective manner. Their Education, Income, Language, Gender and standard of living of tribal peoples. The most important resource in southern Rajasthan has its, citizens. Young women and men the back bone of its state Rajasthan's. Their talent and spirit of innovation is driving socio economy development to new levels in the state and Rajasthan is leads the country into the field of digital innovation space. The younger generation remains the prime manner of the smartphone revolution in Rajasthan tribal area. The importance of internet facility in tribal area cannot be denied.so that we concluded that the youth generation have faced more challenges in adoption of digital inclusion platform.

REFERENCES

- https://en.wikipedia.org/wiki/Digital_India
- <https://indianexpress.com/article/india/aadhaar-driving-licence-linking-ravi-shankar-prasad-5525713/>
- <https://www.iamai.in/>
- <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/digital-inclusion/what-digital-inclusion-is>
- <https://www.digitalinclusion.org/definitions/>
- Prakash, Amit. "Digital India needs to go local". The Hindu. Retrieved 26 February,2017
- Mannathukkaren, Nissim. "The grand delusion of Digital India". The Hindu. Retrieved 26 February, 2017.

A STUDY OF CONSUMER PERCEPTION TOWARDS MIRAJ BRAND WITH SPECIAL REFERENCE TO RAJSAMAND DISTRICT

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ABSTRACT

The basic idea of this paper is to understand the perception of consumers for the brand 'Miraj' in its district of origin Rajsamand by using questionnaire method of survey. The findings of questionnaire suggest that even a local brand can be popular and people would prefer to buy if right strategy and approach is followed. The research paper also suggests that aggressive social services and good quality of product are the most promising reasons for popularity of Miraj brand.

The literature review of 10 papers is discussed to find out the relationship between many variables that impact buyers perceptiveness towards local brand and also tells about the successful diversification strategy of some of the famous companies. The reviews of already published literature also helps to find the unavailability of enough research work done on 'Miraj' brand which has been quite successful in years by following the same strategy as ITC ltd adopted.

To conclude it can be said that this is the time to be 'vocal for local' and consumers are aware about the fact but at the same time they are obsessed with exported brands also. So it is important for the brands to explore opportunities to become the need of consumer in global market India.

Keywords-: conglomerate diversification, CSR, brand image, vocal for local

INTRODUCTION

Organizations today are facing hard times in terms of tough competition. Trends like expansion, 'Diversification', 'vocal for local, CSR' require companies to innovate continuously in order to sustain in market. To become the continuous choice of consumer for longer time organizations need to look upon different dimensions. Perception and satisfaction of consumers depends upon the product quality,

extraordinary promotional activities, excellent brand image and good social services. To make brand in the mind of buyers is the actual success of a brand which is all dependent upon right strategy at the right time.

MIRAJ group started its business in 1987 with tobacco which has been extended to 20 group companies of almost each and every product line including pipe & fittings, FMCG, Real estate, film & productions, engineering, hospitality, entertainment and retail. Miraj group adopted all the diversification activities whether vertical, forward or conglomerate. The turnover is in billions and growth is substantial which all result of hard work and foresightedness. Diversified group Miraj extended social services beyond next level which attract consumers emotionally.

LITERATURE OF REVIEW

ITC ltd is one of those leading brands in country which adopted conglomerate diversification in most of the sectors as a strategic tool to survive in market and for continuous growth. At present ITC ltd is successfully serving in four segments which are totally unrelated to its first product line, but there were challenges (Jairath, 2014)

Diversification is a strategy which is followed in each of the business sectors and the success depends upon ability to cope up with challenges in it. There are so many companies which have been doing well after diversification and so many organizations failed at the same because of not managing the process well. So to summarize there are seven basic characteristics can be commonly said to be essential for successful diversification. (kenny, 2009)

ITC limited changed its strategy to conglomerate diversification which takes complete changes to be made in structure. Many sources show the futuristic approach behind these steps. (mahapatro, 2016)

Logo is a very important facet in mind of customers. A logo is the identity of the brand which helps to create loyalty among costumers. The study shows a positive relation between logo and brand value. . (gupta & pabalkar, 2020)

Logo is an important aspect of brand which differentiates a brand product from other brand product and creates awareness about particular brand. It gives buyers a

confidence to go with the well-known brand name to lessen the risk factor. Logo plays a dominating role to create brand awareness which finally increases the number of consumers, sales and maximize the profit. (karthikeyan & kumar, 2016)

Social activities by brands change the perception of consumers towards the products of that brand. , Social brand image' is something which can be created by paying off due responsibility to consumers. It helps to create brand loyalty and can give increasing rewards.

Buyers feel more attracted towards foreign brands and take it as 'sine qua non'. (Kyanak & kara, 2002) the reason seems to be buyer's perception for global brands, unavailability of well known "inexpensive" brands ,lack of fashion brand that attract youngsters and unorganized Indian retail market. India is a market of opportunities for all global brands so it is important to know consumer behavior if local brands need to be as effective as foreign brands. Kyanak & Kara, 2002)

Having a sound financial system, perfect promotional strategy, proper distribution channels and understanding the nerve of changing behaviour of consumer are the keys to success for a new brand to enter in market rest is done by 'word-of-mouth'. Prasad, 2019)

What are the thoughts behind making brand strategies? A lot of pressure of changing marketing factors left managers in dilemma to manage brand name with different products.

Laforet; Saunders

Conglomerate Diversification is a new trend for the growth of business. India has a very few examples of this new trend. ITC ltd is one of those companies of India which has adopted conglomerate diversification strategy successfully. (Gupta, 2015)

RESEARCH METHODOLOGY

This part of paper includes research design, the objectives, population, and sample size, sampling techniques and data collection and analysis which justify the hypothesis.

Need to Study- Miraj group is one of those leading brand in country like ITC ltd which has successfully applied diversified strategy on smaller scale. This is the matter of

study how a brand associated with particularly one product can start absolutely unrelated product lines with massive success.

OBJECTIVES

1. To study the perception of consumers towards Miraj brand in its district of origin 'Rajsamand'
2. To find out the awareness about 'Miraj' in its own region 'Rajsamand District'.
3. To understand the impact of diversification and social services on consumer's mind.

RESEARCH DESIGN

This research paper has descriptive research design where we have tried to establish a relation between variables like diversification strategy, promotional activities social services with brand image through questionnaire. This paper deals mainly with quantitative nature.

Data Type-

Primary Data- A Google form of questionnaire was circulated to 120 respondents and collected responses for study.

Secondary Data- To paper contains data from sources created by other persons

Published literature

Books

Articles of newspaper

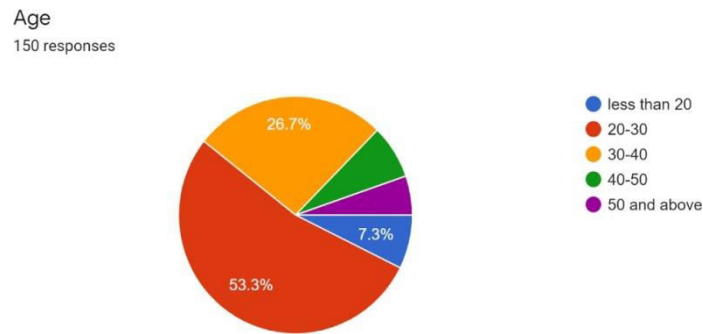
Websites

Data Collection

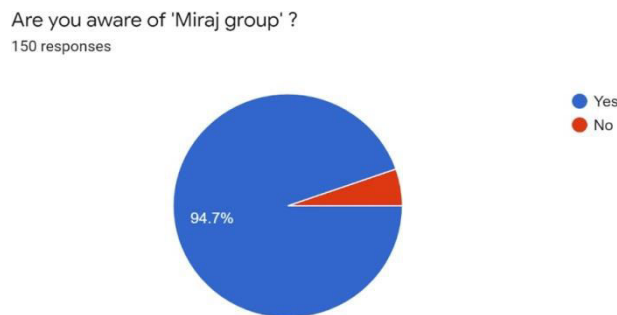
In this paper non-random convenient sampling technique of primary data collection is used through questionnaire survey. The questions were asked from all respondents of Rajsamand district of any age group. The survey was based online with keeping all prerequisites in mind. The collection of secondary data was done by authentic sources like books, journals, articles or websites.

Interpretation

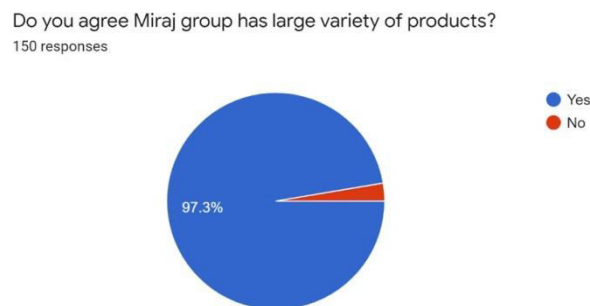
The following pie chart shows that out of 150 respondents approximately 53% fall under 20-30 age category and approximately 27% are in in the category of 30-40 age categories. So we can predict that major part of respondents say 120 are from 20-40 age groups.



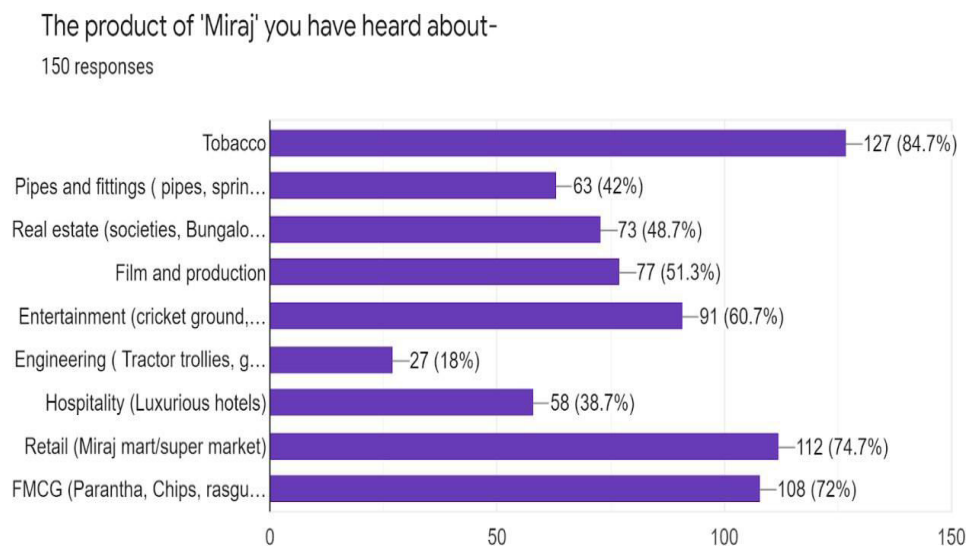
This pie chart shown below predicts that out of 150 people who responded, approximately 95% or 142 people are aware about the product. So on the basis of this result we can interpret that ‘Miraj’ is a very well-known brand in Rajsamand district.



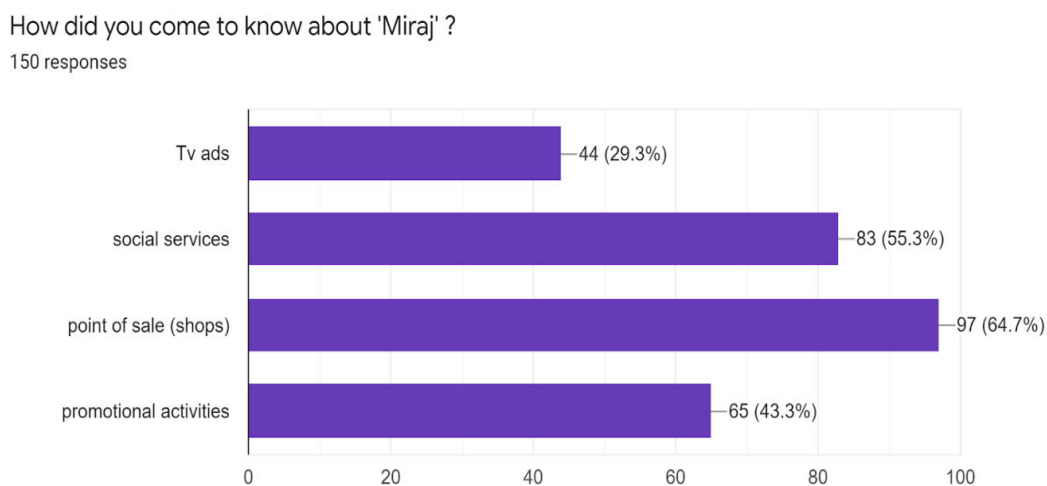
Here is the next response in the form of pie-chart which shows about the awareness about availability of different product lines from ‘Miraj’ brand.so the result shows that almost 97% or 145 people do agree about Miraj having large variety of product range.



The following chart shows the responses about the product of miraj they have heard about and 127 have heard 'miraj tobacco', 112 about Retail, 108 about FMCG product, 91 about entertainment and compare to these figures only 27 respondents are aware about engineering products. The prediction says as out majority of respondents are young mind they should be more acquainted with products related with agriculture or engineering.

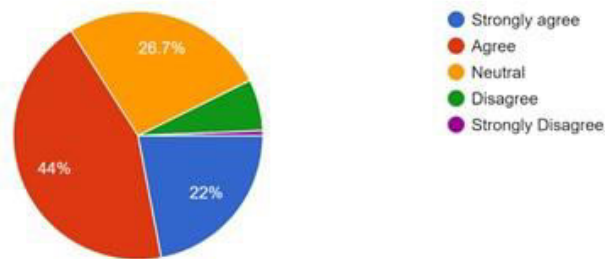


As the figure depicts there are various sources to promote Miraj products and out of which the point of sale shops and social services are most vocal about brand 'Miraj. CSR has been a big contributing factor for promoting brand. TV ads are less popular so the promotional activities like free sampling.



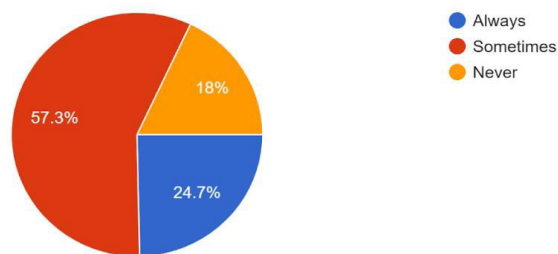
The following prediction is about the quality of product. 22% or 33 of the respondents are strongly agree about quality being high and others do agree or like to be neutral about quality of product. Only a small portion of respondents do not agree about the fact. Still we can interpret that quality should be improved.

Rate of agreement level for this statement "Miraj products are of high quality"
150 responses



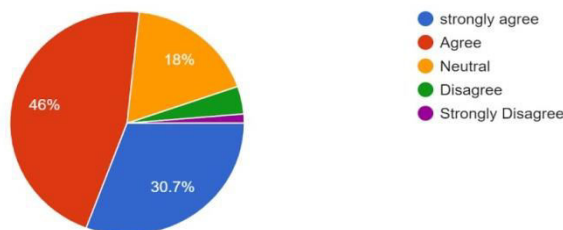
The pie chart for preference of Miraj brand as first brand choice, shows that not many of them are ready to do so. The difference should be find out that when 97% of people are aware about the product than why do they not prefer brand as their first choice.

Do you consider 'Miraj' as your first brand choice?
150 responses



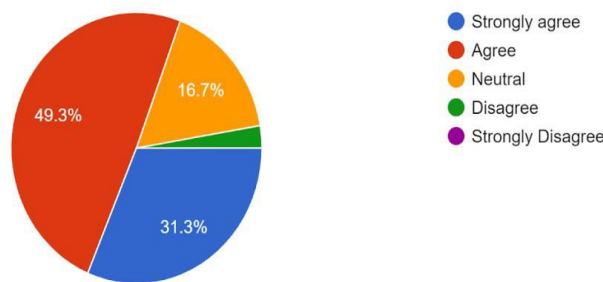
The following chart make very clear assumption that social services have been proved a very good source of good brand image.

Rate your agreement level for following statement-"Miraj made good brand image with social services"
150 responses



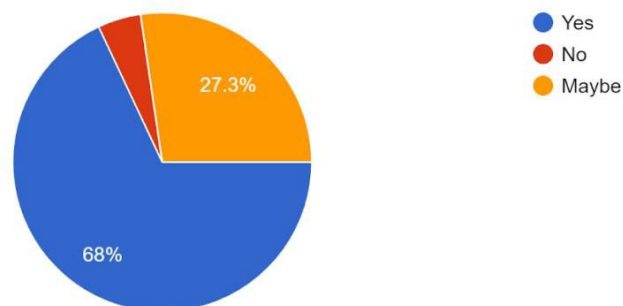
A local company like ‘Miraj’ made a significant change in the lives of so many local people. It encourages so many people to start their own business. Most of the respondents are agree with the point that Miraj is brand that support local resources to be used for local people first.

Rate your agreement level for following statement - "Miraj is a brand that supports vocal for local"
150 responses



The final response in the form in the pie-chart shows a positive response for the brand. 68% says that they would like to buy products from Miraj in future.

Do you want to buy 'Miraj' products in future?
150 responses



CONCLUSION

Previous research papers shows that consumers’ perspective for foreign countries has always been supportive and they feel local product as of inferior quality. If the quality of local brand is improved, if the local brands follow the latest trend and when adequate information is provided to customers through different promotional sources, local brands can be popular and people are ready to go with it. Brands of the country need to follow aggressive approaches towards consumer perception.

REFERENCES

1. Jairath Jyotishna (2014). , ITC limited: diversifying for growth- a case study. 4(3), 218-228, International journal of management, IT and Engineering
2. Kenny Graham, diversification strategy: how to grow a business by diversifying successfully. 2009 Kogan page publishers,
3. Mahapatro D multi business strategies: restructuring and diversification at ITC ltd. (2016), repository.iimb.ac.in
4. Pal Arch's journal of archaeology of Egypt/Egyptology (2020) 17 (12), 1786-1792,
5. D Krishna Kumar, k karthikeyan A study on brand awareness of sun feast yippee noodles with special reference to ITC ltd in Salem district
6. Sinha P K, Mishra H G, singh S Impact of consumer social responsibility and brand social responsibility image on brand loyalty, Piyush kumar sinha, Hari govind Mishra, sarabjot singh. IIM Ahmedabad
7. Dutta k, kumar p, kaur A, megha Our heritage – Indian consumers perspective towards regional and imported products: the preference gap approach kunal dutta, piyush kumar, anudeep kaur, megha kaurmittal school of business, lovely professional university, Punjab
8. Prasad Neena. The rise of patanjali' business perspectives and research 7(1), 108-119, 2019
9. Laforet S, Saunders j. Managing brand portfolios: why leaders do what they do 1999, go.gale.com
10. Gupta S. (2015) Profitability trends in ITC ltd during the pre and post diversification periods: A comparative study
11. Singh yuvika, kaur S. A study of consumer perception towards patanjali brand with special reference to Mohali city. 9(1), 2018
12. <http://www.mirajgroup.in/index.html>

**A STUDY OF CUSTOMER PERCEPTION OF FINANCIAL SERVICES BY
BANKS WITH SPECIAL REFERENCE TO BANKS IN UDAIPUR,
RAJASTHAN**

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ABSTRACT

The importance of banks in our lives can never be overstated. They not only have a role in the lives of citizens, their role in national economy as well as the financial health of a country is central too. It is with the purpose of understanding customer perceptions about banking services that a research study was carried out where multiple facets of banking operation were studied based on primary data collected from a hundred respondents through a structured questionnaire. The hypotheses tested related to: (i) identifying which sector, public or private was more popular among customers; (ii) basis for choice of banks and factors that help customer retention; (iii) is the extent of customer satisfaction high enough to get customers to recommend their bank to others; and (iv) use of digital payments by customers. Based on the study, it is concluded that private sector banks are no longer lagging behind government banks in acceptance among customers and locality of the bank is a very important factor in choice of bank but customer retention requires delivering high quality service. Though banks score high on customer satisfaction with most customers willing to recommend their banks to others, there are areas of improvement as well. These include: (i) need to address all customer requirements; (ii) improving the loaning process/facility; (iii) reducing waiting time for customers; and (iv) augmenting the range of financial services offered and grievance handling. Finally, it was found that bank customers have taken to digital payments in a big way.

Keywords: Economy, financial services, customer retention, digital payments, loan facility

INTRODUCTION

Banks play a central role in modern economies as also in India. With several economic forecasts predicting rising inflation, food and energy shortages along with tighter monetary policies, a recession in 2023 could be inevitable and the role of banks will only increase in importance. The world is likely to witness, especially as regards weaker economies, capital outflows, currency depreciation and severe draining of national reserves. However, as far as Indian economy is concerned, the macroeconomic parameters do not show any signs of imminent disaster. In fact, fueled by increasing credit demand, the balance sheets of scheduled commercial banks has expanded significantly. Even the overall performance of non-banking financial companies (NBFCs) improved as the severe impact of Covid-19 began to diminish [5]. The big challenges that the financial sector in India are likely to be confronted with in the short term include: (i) Impact of rising interest rates may not be very severe on banks; (ii) Resolution of stressed assets will continue to pose challenges given the prevailing limitations in insolvency and bankruptcy laws and their implementation; (iii) Securitization of stressed assets will seek innovative solutions to ensure protecting investors and banks at the same time while also facilitating transfer of resources in efficient hands; (iv) Expected credit loss due to default occurrence; (v) Cyber security risks; and (vi) Need for banks to contribute to the problem of climate change and green finance.

Given the rapidly changing global scenario, it is unlikely that Indian economy as well as Indian banks and non-banking financial companies will have the option of gradual adjustments. Rather, they will need to demonstrate high agility to minimize adverse impact of changes or maximize benefits from opportunities. Banks that demonstrate these traits will be the ones that are very high on customer orientation. This study aims to examine the perception of users of banking services as far as banks in Udaipur are concerned and focuses on identify features that help customer retention at the bank.

LITERATURE SURVEY

Money lending and banking are connected so there is a certain closeness in the period of their emergence with professional banking existing in India even around 500 BC. The banking system then worked through a network of banks operating in places of

commercial importance with such a high level of mutual trust that there was a minimal need for securities or other mechanisms of assurance that was integral to banking practices in England. Before independence in 1947, most banks were private banks that worked as joint stock companies while the establishment of Reserve Bank of India (RBI) in 1935 ushered in the era of modern banking. In December 1934, the total deposit in banks was about Rs.234 Crores. A big concern before RBI's creation was failure of banks with as many as 78 banks failing in the four-year period from 1913-16. Though this figure improved in subsequent years, it continued to be a matter of concern with as many as 27 banks failing in the five-year period from 1917 to 1921. It is to the credit of RBI and successive governments that bank failures have become a thing-of-the-past [6]. The present day State Bank of India (SBI) is the rechristened Imperial Bank of India that was formed by the merger of the three banks founded by the presidency government of India, namely, Bank of Calcutta, Bank of Bombay and Bank of Madras. The present-day Indian banking sector is a humongous network that includes 96000 rural cooperative banks, about 1500 urban cooperative banks, about 55 regional rural banks, about 45 foreign banks, over 20 private sector banks and over 10 public sector banks with the total asset value in all these banks approaching USD 2.67 Trillion in 2022. The Indian banking sector continues to experience robust growth driven by increasing demand in an economy striving to grow. Additional facilitators in this growth are the emergence of innovative practices and policy support for the banking sector [3]. With RBI removing the transaction limit of USD 745 for mobile payments and permitting banks to set their own limits, it is expected that the role electronic/online payments will increase still further. With India's smartphone users as well as internet users being the second highest in the world and rural India also adopting internet use in a big way, it is inevitable that smartphones and electronic payments will play an increasingly important role in the banking sector [7]. Banks in India offer a very wide range of services that include: (i) payment and remittance services; (ii) overdraft; (iii) currency exchange; (iv) consulting services; (v) mobile banking; (vi) home banking; (vii) online banking; (viii) locker services; (ix) debit and credit cards; (x) investment banking; (xi) money transfers; and (xii) wealth management [8]. With such a wide range of services being offered by modern banks, the

expectations of customers have also increased. Customer satisfaction can be viewed as percentage of customers that reported experience exceeding expectations. Its dimensions include service quality, physical aspects security leading to higher satisfaction and customer loyalty. One of the ways banks can enhance customer satisfaction and customer retention is by increasing the range of products and services offered [4]. A time-tested approach to measure service quality is to use the SERQUAL model proposed by Zeithaml, Parasuraman and Berry in 1988 or its modified versions as extensively used by different industries retaining the five dimensions of service quality, namely, assurance, empathy, reliability, responsiveness and tangibles. Some of the important factors that facilitate higher service quality are technology. Though gaps between service quality and expectations vary from bank to bank, with no single area being the most frequent cause of gap, service reliability and security of information are beginning to have enhanced importance for bank customers [11]. Irrespective of the range of products and services offered or enablers like technology used for internal or customer-based processes, it is ensuring favourable customer experience that helps attain high levels of customer satisfaction and retention [10]. It is seen that service quality is a very important factor in determining customer satisfaction in Indian banks and was found to have a strong association with the propensity to recommend the bank to other prospective customers [2]. While governments and private sector banks have made great advances in improving the customer experience at banks, it is as regards tangibles and behavioural aspects where there still exists scope for improvements. Considering tangibles and behaviour of employees to address customer concerns for these would certainly help improve customer satisfaction [1]. The view is different when one considers banks in Jammu where it is found that there existed a wide difference between the perception of what public sector banks thought they were offering and what their customers perceived. This difference was found to be narrower in private sector banks suggesting that private sector banks had a better understanding of customer perception and steps required to close any perceptual gaps [9]. Such finds, however can not be generalized as there can be local factors causing the differences.

DATA COLLECTION AND ANALYSIS

The study was carried out using primary data collected through a structured questionnaire from a hundred respondents. Data collected was tabulated and summarized as given below. Statistical analysis was carried out for a level of significance (α) of 5 percent. The data collected included parameters like:

1. Choice of bank for opening an account, Private or Government;
2. Key factor that forms the basis of choice of bank for opening an account;
3. Factors of importance to customers in continued usage of bank services;
4. Main satisfiers and dis-satisfiers as regards banking services;
5. Propensity among bank customers to recommend the bank to others; and
6. Comfort and extent of usage of digital payments among bank customers.

The study was designed to test the following hypotheses:

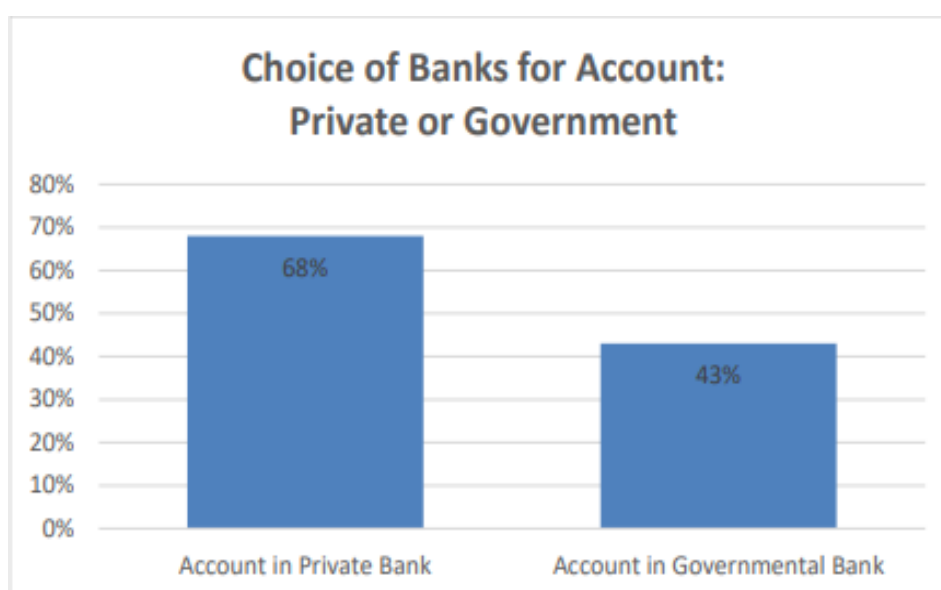
1. The market is shared equally by government and private sector banks; H01:
Preference for Government Banks = Preference for Private Banks
2. Preference for banks is driven by perception of service quality at the bank H02:
Probability of service quality as basis of choice of bank > 0.5
3. Majority of customers are dissatisfied with bank services so considering changing the bank H03: Fraction of customers considering changing the bank > 0.5
4. Customer service is the primary factor contributing to customer retention
H04: Fraction of customers stating customer service as reason to continue with bank > 0.5
5. Majority of customer are reluctant to recommend their own bank to others H05:
Fraction of customers stating they will not recommend their bank > 0.5
6. Digital payments are sparingly used by customers
H06: Fraction of customers that avoid using digital payments < 0.5

Given below is the statistical analysis for each of the hypotheses above:

1. The market is shared equally by government and private sector banks; H01: Preference for Government Banks = Preference for Private Banks

Since 68 percent of respondents had accounts in private banks and 43 percent in government banks, the p value approximates to 0 i.e. less than 0.05. The null hypotheses is, therefore, rejected that present day market is evenly distributed between government and private sector banks. Further, it can be said with 95 percent confidence that the percentage of account holders in private sector banks falls within the range of 59 to 77 percent with the lower estimate exceeding 50 percent.

Fig. 1: Choice of bank for opening an account



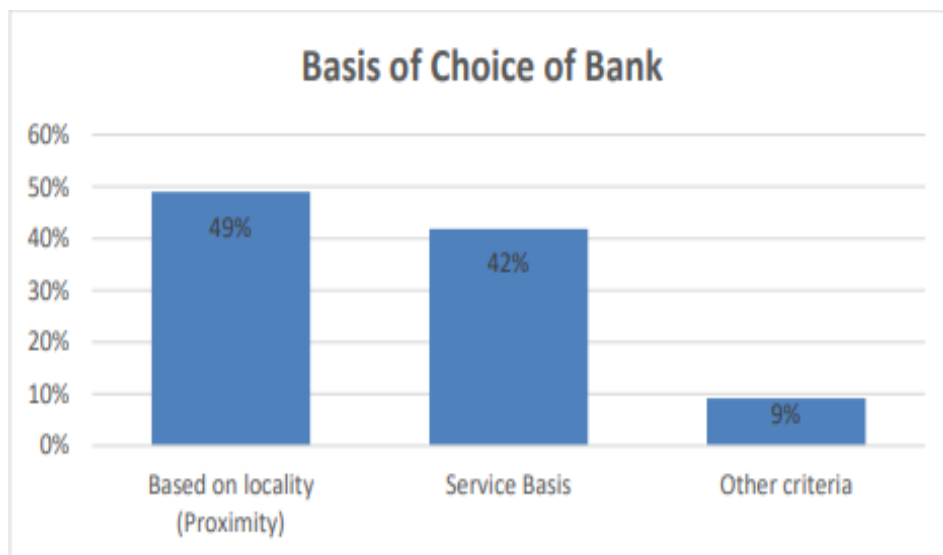
The total percentage exceeding 100 percent is on account of customers having accounts in private as well as government banks. That percentage is 11 percent for the respondents. Quite clearly private banks have overtaken government banks in being preferred choice. This could be, partly, because government banks are often much larger banks and, possibly, slower in responding to needs though that was not within the scope of the study and, therefore, cannot be concluded based on data collected here. Government banks should consider an assessment of the factors that drove customers to private banks so they can remain competitive in the years to come.

2. Preference for banks is driven by perception of service quality at the bank

H02: Probability of service quality as basis of choice of bank > 0.5

The data collected shows that 49 percent customers choose a bank based on locality (proximity) while the choice of bank based on perception of service is 42 percent. The p value of the hypotheses 5.26 percent that is marginally higher than the level of significance of 5 percent. The null hypotheses cannot be rejected that service quality is the basis of customers choosing a bank. The predominant factor however remains locality (proximity) with service quality being an important factor in customers choosing a bank. Further, it can be stated with 95 percent confidence that the percentage of customers who choose a bank based on locality (proximity) ranges from 44 percent to 54 percent clearly indicating the predominant importance of locality (proximity) in choice of a bank. Banks wanting to increase their customer base may be well advised to set up more branches so that the branch is closer to the place where potential customer reside besides ensuring high quality service.

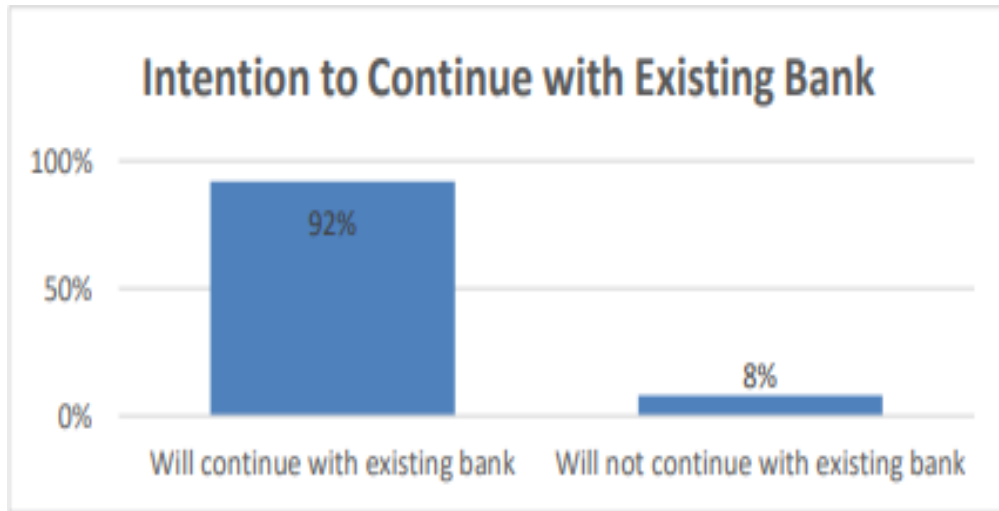
Fig. 2: Basis for choosing a bank



3. Majority of customers are dissatisfied with bank services so considering changing the bank H03: Fraction of customers considering changing the bank > 0.5

As the data collected shows 92 percent customers plan to continue with the existing bank, the p value comes very close to zero i.e. much less than a level of significance (α) of 5 percent.

Fig. 3: Percentage customers intending continuing with existing bank

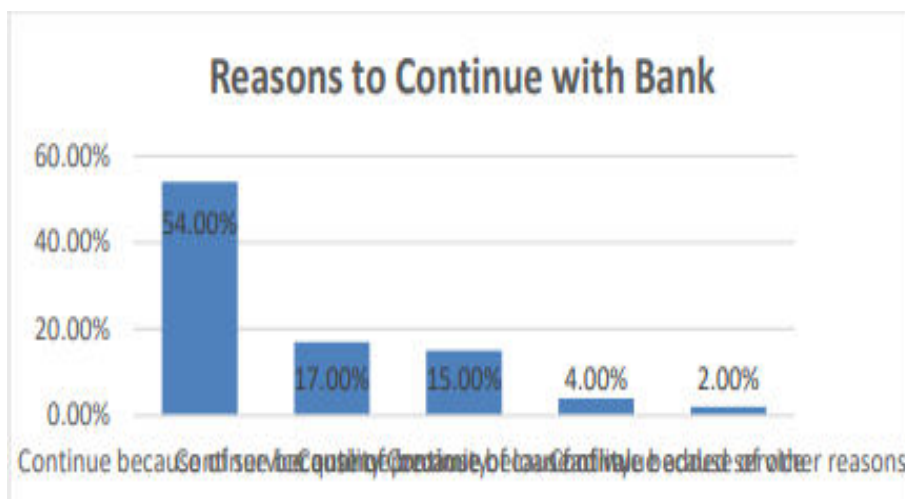


The big benefit of reduced churn among customers cannot be over emphasized since it saves the bank all the spending required to get a new customer. Yet another important measure of loyalty is customers recommending their bank to other potential customers. This measure is considered in the following section to tests hypotheses H05.

4. Customer service is the primary factor contributing to customer retention

H04: Fraction of customers stating customer service as reason to continue with bank > 0.5

Fig. 4: Reasons among Customers to Continue with existing bank



The p value here above 0.05, the level of significance. We are, therefore, unable to reject the null hypotheses suggesting that while choice of the bank to open an account may be largely decided by locality i.e. proximity, service quality is an important factor that determines wanting to continue with a bank. This result only supports earlier findings of the immense importance of locality (proximity) and service quality in acquiring and retaining customers.

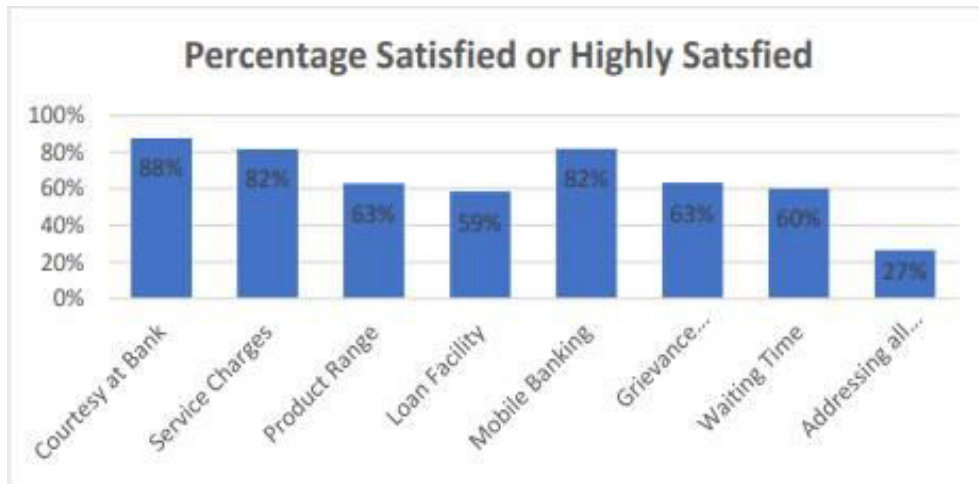
5. Majority of customer are reluctant to recommend their own bank to others H05:
Fraction of customers stating they will not recommend their bank > 0.5

55 percent customers responded with certainty that they would recommend their bank to others while another 30 percent 'said' they would consider recommending with those doubtful or sure of not recommending being only about 15 percent. The p value is very close to zero leading to rejection of the null hypotheses that majority of the customers are reluctant to recommend their bank to others. The picture that begins to emerge is one where customers are largely satisfied with banking services with a desire to continue with the same bank and are not averse to recommending their bank to others.

Fig. 5: Customer Response on Recommending Bank to Others



In a competitive scenario where private sector banks have overtaken government banks as the preferred 'supplier' of banking services, it is only natural for banks to continue assessing areas for improvement.

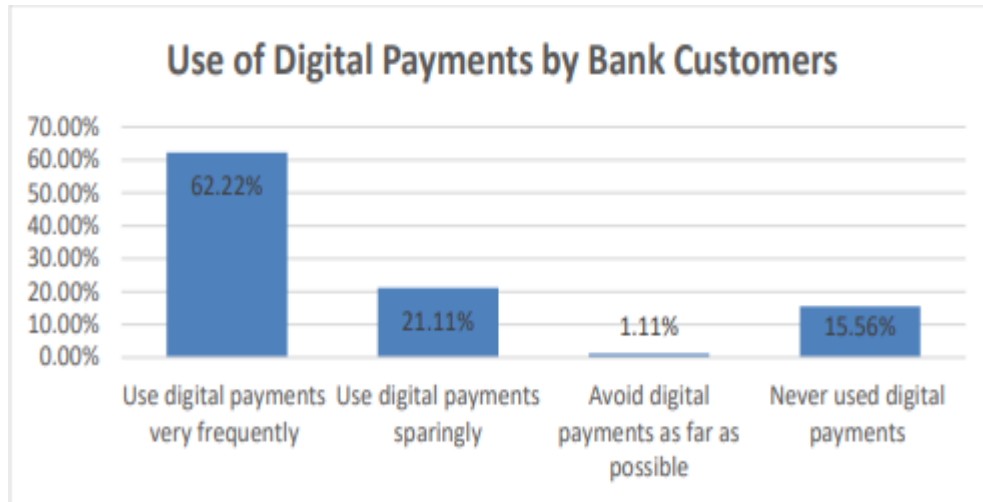
Fig. 6: Identifying Areas for Improvement in Banking Services

The figure clearly above shows the there are areas where customers are relatively less satisfied. These include (i) Addressing all customer requirements; (ii) Loan Facility; (iii) Waiting time at the bank; and (iv) Range of financial services offered among their range of products as well as Grievance handling. Banks can consider formulating action planning for these areas for further improvement and see customer satisfaction improve.

6. Digital payments are sparingly used by customers

H06: Fraction of customers that avoid using digital payments < 0.5

The data shows that about 62.2 percent respondents use digital payments frequently. The corresponding p value is approximate to 0.01 that is much less than the level of significance of 1.5. We can, therefore, reject the null hypotheses and conclude that bank customers are adopting digital payments with relative ease. This data is presented below graphically.

Fig. 7: Comfort and Frequency of Digital Payments by Bank Customers

CONCLUSIONS AND RECOMMENDATIONS

The data collected and its analysis show a well developed and evolved banking sector as well as customers in Udaipur, Rajasthan. It is seen that government banks would do well to work towards adding to their customer base given the high degree of acceptance and preference for private banks. This may require reassessing the financial services and products they are offerings to see if there is a need to augment them further. Also, considering that locality (proximity) plays a very important role in choice of the bank, government banks may want to consider opening more branches or shifting their branches to points that are closer and more convenient for customers. Next, all banks need to focus on improving the quality of service and customer experience so as to retain existing customers. While courtesy at the bank, service charges and digital banking emerge as areas of strength, the areas where some more work may be required include (i) cultivating the skills and culture to address all customer requirements and grievance handling; (ii) making improvements to the process of giving loans; (iii) minimizing waiting time for customers; and (iv) adding to the range of financial services offered.

LIMITATIONS OF THE STUDY AND SCOPE FOR FURHER STUDIES

While this study examines the relative popularity of private and government banks, it does not examine the causes for high popularity and acceptance of private sector banks. That represents an area for further study. Another area for further study is understanding

how some high performing banks have addressed the areas of improvement identified in this study so other banks could benefit from that learning.

REFERENCES

1. Ali A and L.S. Bisht (2018). Customers' satisfaction in public and private sector banks in India: A comparative study. *J Fin Mark.* 2018; 2 (3):27-133. Retrieved from: <https://www.alliedacademies.org/articles/customers-satisfaction-in-public-and-private-sector-banks-in-india-a-comparative-study-10882.html>
2. Bedi, M. (2018). "An Integrated Framework for Service Quality, Customer Satisfaction and Behavioral Responses in Indian Banking Industry— A Comparison of Public And Private Sector Banks". Retrieved from: <https://www.vedatya.ac.in/research/blog/customer-satisfaction-and-behavioral-responses-in-indian-banking-industry/>
3. Indian Brand Equity Foundation (2022). "Banking Sector in India", last updated in December 2022. Retrieved from: <https://www.ibef.org/industry/banking-india#:~:text=The%20Indian%20banking%20system%20consists,India%20reached%2013%2C145%20out%20of>
4. Kumar, T.S. And Vinothini S.V. (2020). "A Study On Customer Satisfaction Towards Banking Services Of Indusind Bank In Vadalur Town", *Jour Of Emerging Tech. And Innovative Res.*, 7(4), April 2020, Pp 252-268. Retrieved From: https://www.researchgate.net/publication/345238018_A_Study_On_Customer_Satisfaction_Towards_Banking_Services_of_Indusind_Bank_in_Vadalur_Town
5. RBI 2022. Report on Trends and Progress of Banking in India: 2021-22. Retrieved from: <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/ORTP20212225730A6FC708454BB270AC1705CCF178.PDF>
6. RBI Document (n.d.) from: <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/86727.pdf>

7. Mankotia, A. (2022). “BFSI – Banking”, last updated on 26th December 2022. Retrieved from: <https://www.investindia.gov.in/sector/bfsi-banking>
8. Ryan, N. (2019). “11 Types of Banking Services Provided by Banks in India”, *Enterprise Edges*, 26 May, 2019. Retrieved from: <https://www.enterpriseedges.com/list-of-banking-services-india>
9. Sanson, V (2013). “Customer Satisfaction in Indian Banking Services (a Study in Jammu Region)”, *Ind. J of Res.*, 3 (4), May2013, pp 251-254. Retrieved from: https://www.worldwidejournals.com/paripex/recent_issues_pdf/2013/May/customer-satisfaction-in-indian-banking-services-a-study-in-jammu-region_May_2013_1938990694_9108346.pdf
10. Sarvanan, K. and Muthu Lakshmi K (2016). “A Study of Banking Services of New Generation Banking in the Indian Banking Sector”, *Jour. of Financial Serv. and Management*, 7 (4), December 2016, pp 15-23. Retrieved from: https://www.researchgate.net/publication/331354892_A_Study_on_Banking_Services_of_New_Generation_Banking_in_the_Indian_Banking_Sector
11. Sudhamani, A.R. and Kalyanaraman N. (2013). “Literature Review on Customer Perception on Service Quality in Banking Sector”, *Indian Jour. Of App. Res.*, 3(7), July 2013, pp 359-361. Retrieved from: [https://www.worldwidejournals.com/indian-journal-of-applied-research-\(IJAR\)/recent_issues_pdf/2013/July/July_2013_1372685389_7f787_109.pdf](https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2013/July/July_2013_1372685389_7f787_109.pdf)

THE ECONOMIC CHALLENGES FACED BY HOUSEHOLD SECTOR IN MOVING FROM FOSSIL FUELS TO ENVIRONMENTALLY FRIENDLY SOLAR POWER WITH SPECIAL REFERENCE TO UDAIPUR, RAJASTHAN

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ABSTRACT

At a time when national as well as household economies are struggling to emerge from the severe impact of Covid-19, saving on power costs assumes immense importance. The Paris Agreement is nudging nations towards use of eco-friendly renewable energy sources with solar energy showing immense potential to reduce further damage to environment and added strain on household expenses. This study aimed at understanding factors that facilitate households adopting solar energy and highlights factors that are responsible for the rather low levels of adoption of solar energy by households despite the obvious rewards. Primary data was collected through a structured questionnaire from households of different income groups and the data analysed. The study emphasizes the continued need for subsidies to enhance usage of solar panels along with greater publicity of its benefits along with guidance/assistance on installation of solar panels. Low levels of publicity of benefits and associated costs along with inadequate support on installation are the primary causes for prevailing low levels of adoption of solar panels in the city of Udaipur, Rajasthan.

Keywords: Solar Panels, Economy, Electric power, Environmental damage, Covid-19.

1. INTRODUCTION

We live in times when the world is witnessing a very big change as regards the way industry operates. With Covid-19 having caused very severe damage to global economy as well as the income levels of households all over the world as also in India, saving on recurring energy costs could be a way to alleviate the challenges households face. Further, the Paris Agreement, a legally binding international treaty

adopted by 196 parties in December 2015 aims to limit global warming by getting countries to work towards reducing emission of greenhouse gases. It represents a comprehensive approach that provides financial, technical as well as capacity building support to countries requiring such support [19]. The impact of pollution is particularly severe in South Asia with close to forty four percent of the world's pollution since 2013 coming from India, the second most polluted country in the world. India witnessed an increase in particulate pollution by over 61 percent since 1998, yet another fact that underlines the need for urgent change and addressing the cause of pollution [5]. The main cause of pollution in Indian cities in 2017 included: (i) vehicular exhaust gases and suspended dust due to vehicular movement; (ii) thermal power plants; (iii) use of inefficient technology by small scale industries (eg. brick kilns) and open waste burning besides others [15]. The same year, air pollution was considered to be the cause of over a million premature deaths in India with a little over half the deaths caused by exposure to outdoor PM2.5 concentration while less than half being due to household air pollution. A continuously rising population inevitably causes increase on pollution due to added strain on energy requirements and transportation infrastructure, thus bringing power generation and vehicular movement to the very centre of efforts to reduce pollution. Other sources of air pollution include agriculture and biomass burning, waste treatment and demolition waste, besides others [4].

Such high levels of pollution have been an important driving force for focus on renewable energy besides the international commitments. Extensive research has contributed to lowering the cost of solar power and enhancing cell efficiency to bring about close to 85 percent cost reduction in the last decade. Micro level usage of Photovoltaic cells has further found a push thanks to support from Governments through net-metering, generation-based incentives and accelerated depreciation mechanism [18]. Solar power has the potential to meet the entire needs of our nation but the technology needs to develop a lot more. Therefore, till technology growth and economic costs justify use of solar power for industrial purposes with the capacity to

handle surges in demand, it is necessary that solar power meets the relatively smaller requirement of household sector. This study aims at examining the challenges faced by households as well as users of small dwellings in adopting solar energy for household purposes with focus on those residing in Udaipur, Rajasthan and examines factors that drive people to using solar energy.

2. LITERATURE REVIEW

The need for energy, be it for industry or for vehicles is fundamental to a nation's economy. Traditionally energy sources have not necessarily been renewable with carbon-based fuels providing the largest chunk of energy. However, the binding targets emanating from Paris Agreement along with the need to optimize household expenditure on power and a general awareness that the present pattern of life may not be sustainable has brought focus to renewable energy. India could well emerge as one of the most attractive renewable energy markets in the world, having been ranked fourth in wind power and renewable power installed capacity and fifth in solar power as of 2020. The allocation of about Rs.20000 crores by Indian Government in the Union budget of 2022-23 for a PLI scheme for high efficiency solar photo-voltaic modules shows the immense support solar energy has from governmental sources and Indian Government's commitment to reduce dependence on imports [6]. Added to this is the fact that the solar energy potential of India is vast indeed. Most parts of India receive from four to seven KWh per sq. mtr. a day of solar energy bring the total incident energy per year close to an estimated 5000 trillion KWh. Since the energy is widely distributed, the need is for low cost, decentralized energy capture devices that support household needs in rural and urban areas [12]. India's total electric energy consumption in 2020 was over 1.1 trillion KWh [21] with Industry being the biggest consumer of electric power. The percentage consumption of electric power in 2021 was 41 percent by industry, 26 percent by the domestic (household) sector and 18 percent for agriculture with the remaining 15 percent being utilized by commercial and other sectors [9].

While rising income since 2000 and urbanization have led to doubling of total energy required, the per capita consumption of energy in India, in 2019, was less than 40

percent of the world average. Again, the large population means that despite the low per capita energy consumed, India is the third largest emitter of CO₂ in the world. The electricity demand is expected to rise faster than overall energy demand with household demand for electricity being driven by increased ownership of air conditioners [22]. India's energy needs are very challenging and the binding targets for pollution level make increasing petro-fuel based power generation unviable leaving renewable energy as the preferred option for energy generation. That is the approach the world over and industrialized countries are moving to solar energy rapidly with India producing 38 GW making it the fifth largest producer of solar energy in 2019 after China (205 GW), USA (76 GW), Japan (63.2 GW) and Germany (49.2 GW) [17]. Though India's production of solar power generation continues to grow, India's target for 2030 is 450 Gigawatt of installed renewable energy capacity with solar industry contributing over 60 percent i.e 280 Gigawatt. As the solar power capacity in February 2022 was 50 Gigawatt, the addition required to meet the target is over 25 Gigawatt every year. The areas of concern that could hinder achieving this demanding target include a poorly developed domestic manufacturing industry for solar photo- voltaic cells, inadequate land to permit installing large scale ground-mount solar systems, poor financing support, low solar power tariff making it less attractive as a business proposition and huge waste generation [2, 11]. Other challenges include the high cost of setting up solar plans, variation in incident solar energy as one moves away from the equator, transmission difficulties due to intermittent nature of solar power generation, cost of storing solar energy, need for research to raise the efficiency of solar panels and reducing the overall environmental impact of using solar panels [1, 3].

Despite the immense potential of solar power in India, actual household usage suffers on account of procedural delays in metering solar power, delays in subsidy payments, policies benefitting Discoms (Distribution companies) more than those who produce solar power and lack of awareness of innovative options like DC solar [16]. Other reasons include inadequate space available on rooftops for solar panels, high cost of installation, dependence upon energy storage devices and batteries can be rather expensive and limited financial support to bear the high cost of installation and

maintenance of solar panels [13]. The Government of India as well as state governments are trying hard to encourage use of solar power with the actual subsidy percentage varying from state-to-state. It can be 30-70 percent of the benchmarked installation cost for rooftop Photo-Voltaic systems. Subsidies are also provided to enterprises promoting growth through solar parts and ultra-mega solar power projects and for grid-connected rooftops besides others to make it more attractive to adopt solar power [20]. While it is certainly a great encouragement, one of the demerits of governmental subsidy schemes from the perspective of customers i.e. end users had constraints imposed in terms of what brands to they could choose from to supply solar panels/inverter from. This has recently been relaxed and households can now provide a photograph of the installed system to avail benefits or subsidy from government schemes. The demerits from the perspective of channel partners include the need for large investments without a certainty of when will the subsidy amount be returned by the Discoms despite the fact that the amount involved can be a substantial sum for the channel partner [14].

The high cost of solar panels in India is, at least, partly due to the high reliance on imports of components (eg. solar cells, wafers, modules and inverters) with the 2019-20 imports being worth USD 2.5 Billion. The installed capacity in India is so low that there is no option but to continue with imports, at least, in the short term as India added, in the five years preceding 2022, about 34 GW capacity while the target for the next eight years is 25 GW/year. This increase would require about 75 Million solar modules every year (at an average of 3000 modules/MW of power capacity) with 80 percent of Indian imports for solar Photo Voltaic cells/modules coming from China [8]. Despite these factors, on account of sustained efforts by the Government of India and the success of the PPP (Public-Private Partnership) model, the cost of setting up a solar PV project in India dropped by about 80 percent from 2010 to 2018 making India among the lowest cost producers of solar power, if not the lowest. The other factors that have enabled this include low labour cost in India, facilitation of land acquisition for solar parks and incentives provided to people for use of solar power [10].

Innovative solutions like setting up canal-top solar power projects can provide multiple benefits like water conservation along with providing required space available for solar panels besides saving large areas of land. For example, the state of Gujarat has about 80000 km of canals. Even if 30 percent of it were used for solar power, it would save close to 90000 acres of land and produce 18000 MW of power [7].

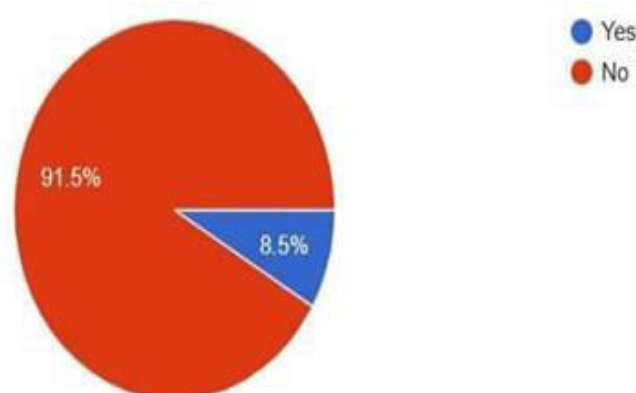
3. RESEARCH METHODOLOGY

The present research is based on statistical analysis of primary data collected through a structured questionnaire to ascertain: (i) Factors that encourage people to adopt solar energy; and Factors that have an adverse impact on usage of solar energy i.e. require addressing for increased usage of solar energy. Purposive sampling is used for collecting data. Given the relatively lower understanding of solar energy in the households in Udaipur, data collection was a challenge and a sample size of 50 was aimed for. The literate section of the population were selected for responding to get a better understanding of issues in usage of solar energy.

4. DATA AND ANALYSIS

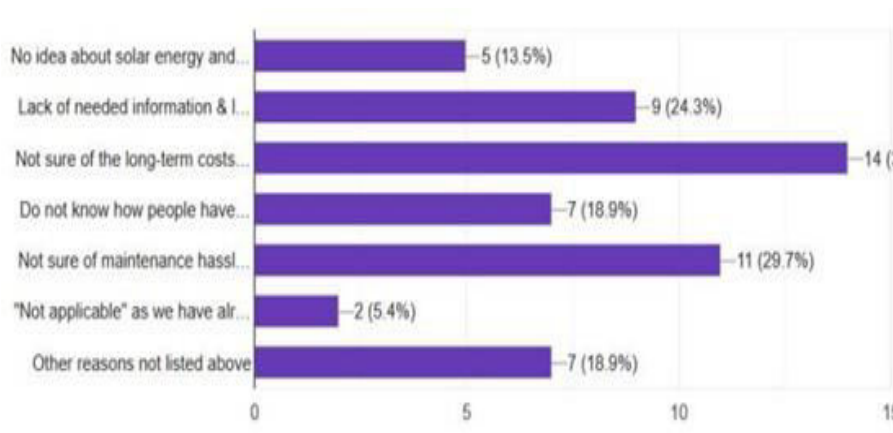
- a. There is a growing acceptance of solar energy with over 50 percent respondents claiming that they are planning to install solar panels. However, the actual installation of solar panels is lagging behind with barely nine percent having done so. Thus, it appears that while solar energy is making headway, much more needs to be done before its increasing acceptance will find expression through actions.

Fig.1: Actual Household Installation of Solar Panels



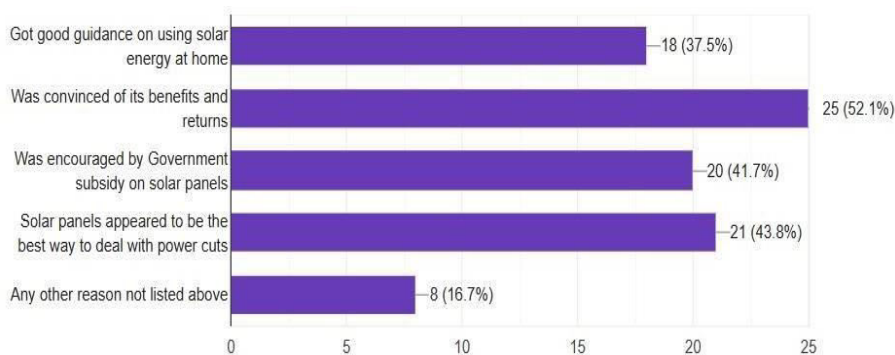
b. The real challenge in increasing utilization of solar energy is lack of information/guidance on using solar energy and unanswered questions of the benefits of solar energy or maintenance cost of solar panels. Even those who are keen on and considering using solar energy are troubled by lack of information on its benefits, how to go about using it and maintenance issues. Over 95% of those who have not installed solar panels have reported that their reasons are lack of awareness of benefits versus long term costs, inadequate information about how to go about using solar energy and lack of logistic support for installation.

Fig.2: Factors Preventing Increased Use of Solar Panels



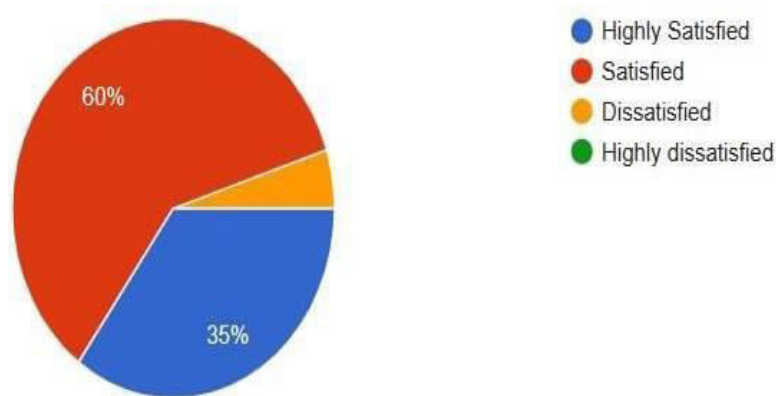
c. The other side of the coin is understanding reasons why people have installed solar panels. This presents a similar picture as before where households have installed solar panels when they got good guidance on using solar energy at home, were convinced of its benefits and returns including benefits from subsidies and saw it as a way to get respite from power cuts.

Fig.3: Factors Facilitating Use of Solar Panels



d. The level of satisfaction from use of solar panels and solar energy is quite high in Udaipur with about 95% reporting that they are either satisfied or highly satisfied.

Fig.4: Satisfaction with Use of Solar Panels



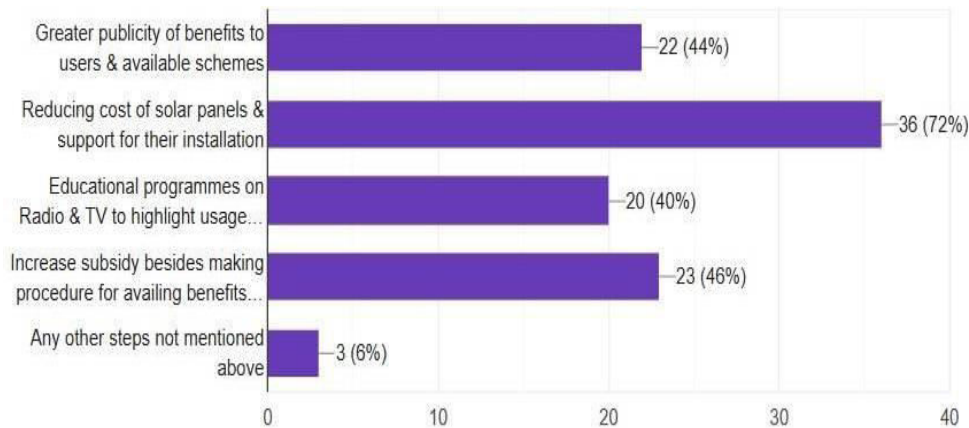
5. CONCLUSIONS AND RECOMMENDATIONS

The study carried out for households in Udaipur points to an urgent need to publicize the immense benefits of solar energy and make necessary guidance/assistance easily available for installation of solar panels rather than expect people to do all this themselves. Given the dual factors of low percentage of household installation presently and high satisfaction with use of solar panels, it is expected that enhanced publicity of benefits and making guidance/assistance for actual installation and use easily will provide a big boost to use of solar panels and reduce the household spending on electric power. Reduced use of power from the grid has a dual benefit to society with income saved for households and environmental benefits resulting from reduced pressure on power grids. Use of electronic media and social networking could be considered given their immense reach. While enhanced publicity and making guidance/assistance available would have an immediate pay-off, in the long run reducing the cost of solar panels could also be an area of focus for companies and the government.

The benefits of increased publicity and making guidance/assistance available is further corroborated by respondents felt the steps that will enhance use of solar panels, in decreasing order of importance are:

(i) Reduced cost of solar panel and support for installation; (ii) Increased subsidy along with simpler procedure to avail subsidy; (iii) Enhanced publicity for benefits and available schemes; and (iv) Educational programmes on TV and Radio.

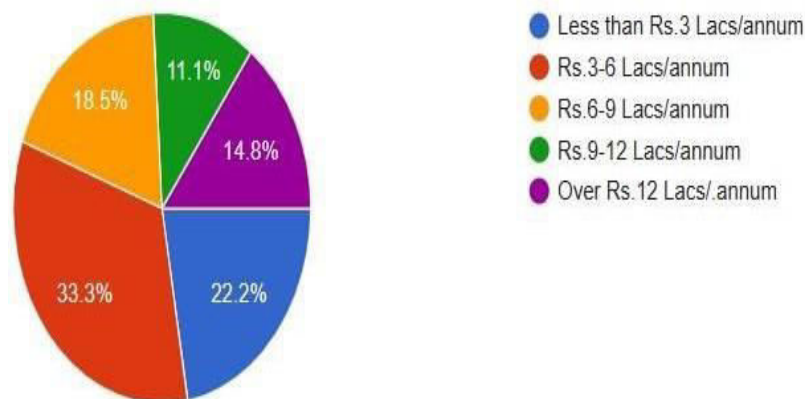
Fig.5: Increasing Usage of Solar Energy



6. Limitations of the Study and Areas of Further Research

This study being qualitative in nature provides very useful pointers to factors that matter to present and prospective users from different income groups. While the sample included respondents from income groups 0-3 lacs/annum to over 12 lacs/annum, the representation of lowest income group (0-3 lacs/annum) was only about 22 percent. A separate study may be required if the focus is to study the economic benefits and challenges to use of solar panels by low-income households as these are the households that need economic relief more than the high-income groups.

Fig. 6: Breakup of Annual Income of Respondent Households



Yet another area of further study could be the perceptions in areas where power cuts are more frequent as only 12.5 percent respondents reported very frequent power cuts in this study.

Fig. 7: Frequency of Power Cuts among respondent Households



Since the benefits of solar energy only increase with increasing power cuts, a separate study in areas of frequent power cuts or poor power supply may provide different results/findings.

REFERENCES

- [1] A.Hossain, “Challenges Facing the Large-Scale Solar Energy Industry”, 2020. Retrieved from: <https://www.linkedin.com/pulse/challenges-facing-large-scale-solar-energy-industry- hossain-aca/>
- [2] A.Saxena, “Challenges in Indian Solar Industry in 2022”, 2022. Retrieved from: <https://www.bisinfotech.com/solar-energy-challenges-in-india/#:~:text=Some%20of%20the%20most%20notable,and%20high%20cost%20of%20product ion.>
- [3] A.Vourvoulas, “Pros and Cons of Solar Energy: What are the Advantages and Disadvantages?”, 2022. Retrieved from: <https://www.greenmatch.co.uk/blog/2014/08/5- advantages-and-5-disadvantages-of-solar-energy>
- [4] B.R.Gurjar, “Air Pollution in India: Major Issues and Challenges”, 2021, The Energy and Resources Institute, April 2021. Retrieved from: <https://www.teriin.org/article/air-pollution- india-major-issues-and-challenges>
- [5] Energy Policy Institute, University of Chicago, “Most of the World Breathes Unsafe Air, Taking More Than 2 Years Off Global Life Expectancy”, New AQLI

- Analysis, 2022. Retrieved from: <https://epic.uchicago.in/most-of-the-world-breathes-unsafe-air-taking-more-than-2-years-off-global-life-expectancy/>
- [6] India Brand Equity Foundation, Renewable Energy Industry in India. Retrieved from <https://www.ibef.org/industry/renewable-energy>
- [7] K.Sunder, “The ‘solar canals’ making smart use of India’s space”, 2020, Future Planet, BBC. Retrieved from: <https://www.bbc.com/future/article/20200803-the-solar-canals-revolutionising-indias-renewable-energy>
- [8] M.Aggarwal, “Charted: The biggest hurdles for Narendra Modi’s solar power ambitions for India”, 2022. Retrieved from: <https://qz.com/india/2013255/the-hurdles-for-narendra-modis-solar-power-ambitions-for-india/>
- [9] M.Jaganmohan, “Share of electricity consumption FY 2021, by sector”, 2022. Retrieved from: <https://www.statista.com/statistics/1130112/india-electricity-consumption-share-by-sector/#:~:text=The%20industry%20sector%20accounted%20for,total%20electricity%20consumption%20in%20India.>
- [10] M.Karan, “How India in a short period of time has become the cheapest producer of solar power”, 2019, The Economic Times dated 22 July 2019. Retrieved from: <https://economictimes.indiatimes.com/small-biz/productline/power-generation/how-india-in-a-short-period-of-time-has-become-the-cheapest-producer-of-solar-power/articleshow/70325301.cms?from=mdr>
- [11] M. Susten, “Opportunities and Challenges in Solar Energy”, 2021. Retrieved from: <https://www.mahindrasusten.com/blog/opportunities-and-challenges-in-the-solar-industry/>
- [12] Ministry of New and Renewable Energy website (as per site updated on 12th August 2022). Retrieved from: <https://mnre.gov.in/solar/current-status/#:~:text=India%20is%20endowed%20with%20vast,providing%20huge%20scalability%20in%20India.>
- [13] N.Chandra, “Top 5 Reasons Behind People Aren't Installing Solar Panels in India?”, 2020. Retrieved from <https://www.loomsolar.com/blogs/collections/top-5-reasons-behind-people-not-installing-solar-panels>

- [14] N.Chandra, “Solar Panel Subsidy in India, 2022”, 2022. Retrieved from: <https://www.loomsolar.com/blogs/collections/solar-panel-subsidy-in-india>
- [15] N.K.Dubash, “Air pollution in Indian cities: Understanding the causes and the knowledge gaps”, 2017, Centre for Policy Research. Retrieved from: <https://cprindia.org/air-pollution-in-indian-cities-understanding-the/#:~:text=However%2C%20the%20main%20sources%20contributing,movement%20and%20construction%20activities%2C%20open>
- [16] N.Khandekar, “How Rooftop Solar Struggles in India’s Most Sunny Cities”, 2021. Retrieved from <https://www.indiaspend.com/development/rooftop-solar-energy-inconsistent-regulatory-policies-high-costs-patchy-implementation-subsidy-scheme-763796>
- [17] NS Energy Staff Writer, “Top five countries with largest installed solar power capacity”, 2021. Retrieved from: <https://www.nsenergybusiness.com/features/solar-power-countries-installed-capacity/>
- [18] S.Shetty, “India Solar Energy Market Outlook 2022”, 2021. Retrieved from: <https://solarquarter.com/2021/12/31/india-solar-energy-market-outlook-2022/>
- [19] United Nations Climate Change, 2022, “The Paris Agreement”. Retrieved from: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
- [20] Website of Citizen Solar: Solarising the nation: [https://www.citizensolar.com/subsidy-on-solar-panel/#:~:text=The%20Ministry%20of%20New%20and%20Renewable%20Energy%20\(MNRE\)%20says%20that,which%20are%20Uttarakhand%2C%20Himachal%20Pradesh](https://www.citizensolar.com/subsidy-on-solar-panel/#:~:text=The%20Ministry%20of%20New%20and%20Renewable%20Energy%20(MNRE)%20says%20that,which%20are%20Uttarakhand%2C%20Himachal%20Pradesh)
- [21] Worlddata.info on “Energy consumption in India”. Retrieved from: <https://www.worlddata.info/asia/india/energy-consumption.php>
- [22] World Energy Outlook Special Report, “India Energy Outlook 2021”, International Energy Agency, 2021. Retrieved from: https://iea.blob.core.windows.net/assets/1de6d91e-e23f-4e02-b1fb-51fdd6283b22/India_Energy_Outlook_2021.pdf

IMPACT OF ARTIFICIAL INTELLIGENCE ON MANAGEMENT**Kapil Sevak**

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ABSTRACT

This study focuses on the impact of advancing Artificial Intelligence systems on management during the next decade. Much of the attention around Artificial Intelligence and work revolves around the replacement versus augmentation debate. According to previous literature, rather than simply replacing tasks, machine learning tools can complement human decision making. Based on semi-structured expert interviews, this study provides tentative evidence that this may be true for managers on the highest level of organisations, but perhaps less so for operational and middle managers who may find a larger number of their tasks replaced. As routine tasks of supervision and administration can be automated, the shift towards interpersonal tasks of leadership could continue for many managers. Two possible future scenarios are formed to illustrate how Artificial Intelligence may possibly impact management. In addition, algorithmic management is recognised as an important factor in the next decade as platform economy keeps growing. Having potential to replace tasks of the operative managers, it is important to continue research on fairer algorithmic management. Also for further studies it is recommended to evaluate AI's impact on each level of managers separately, because of the disparate work tasks of operative, middle and senior managers.

Keywords: Management, Leadership, Artificial Intelligence, Algorithmic Management,

INTRODUCTION

The research problem of this study is to empirically evaluate Artificial Intelligence's (AI) impact on managers. The impact is evaluated on the different aspects managers' work tasks may include, such as administration, supervision and leadership. In this study all people whose occupation is to lead people or manage operations are referred to as managers, despite the varying ratios they perform these tasks. Rather than evaluating managers as a homogeneous group, they are divided to operative,

middle and senior levels for a more precise evaluation. The aim is not to provide a certain forecast, but to compare possible future scenarios to better understand the phenomenon.

Brynjolfsson & Mitchell (2017) state that most sectors of work and economy are at the beginning of a large transformation caused by recent advances in machine learning. Unlike previous forms of technology, the most recent breakthroughs in AI can also affect multiple highly skilled and highly paid occupations (Frank et al., 2019). Naturally a lot of debate and polar opinions exist about what this means for different professions and for the future of work. According to Makridakis (2017, 57) some technology experts claim that this AI revolution could change society even more than industrial revolution did. At the same time, others argue that the impact of AI is widely overestimated.

While the dialogue on AI and work has mainly focused on the potentially replacing effect it may have on different occupations, its impact on management has received less attention. Frey and Osborne (2013, 44-45) label managers' occupation in the category of low risk for automation. Authors such as Autor (2015) and Jarrahi (2018) have also claimed that AI offers augmented decision making rather than job replacement for managers. However, there seems to be evidence that management and leadership may be at the start of a transformation. Algorithmic management in platform and gig economy has introduced a new way of supervising workforce (Rosenblat and Stark, 2015). Meanwhile, Auvinen (2017, 42) states that this wave of digitalisation is at a point where its first impacts on leadership can also be identified, for example with the concept of a virtual leader.

LITERATURE REVIEW

AI – About the history and definitions

In this study the original definition by McCarthy, Minsky, Rochester and Shannon (1955, 11) is used to broadly describe Artificial Intelligence as action performed by a machine that would be considered intelligent if done by human. AI is considered a hypernym to developments within it, such as machine learning and deep learning.

Many more narrow definitions exist, but for the purposes of this study, if a machine is able to perform a task previously done by a human manager, it is considered as artificial intelligence.

In its history of over 60 years, AI has seen multiple cycles of initial excitement followed by eventual disappointment (Pan, 2016, 410). In the beginning of these cycles, recent advancements led to claims such as that effectively every single human task could be performed by a machine in just a few years. As these hopes proved overoptimistic, a period of “AI winter” would follow, with less outside funding and enthusiasm for research in the field. (Kaplan, 2016, 15-16.)

Still throughout the years, the AI field has given numerous demonstrations of advancement. From Arthur’s (1959) checkers program to AlphaZero’s (Silver et al., 2017) chess and Go mastering reinforcement learning algorithm, many of the mainstream milestones have been beating human players in games. At the same time AI has increasingly been used to tackle numerous real world problems, such as cyber-attack detection and credit card transaction reviews (Kaplan, 2016, 39).

According to Remes (2018, 32-39) the rapid adaptation of AI programs in various industries during the last ten years has happened because programmers now have enough data and computing power to develop deep learning systems, based on the neural network research of previous decades. As it stands though, even the most sophisticated deep learning software can be incredibly efficient in the task it is trained to do, but completely clueless when assigned a different task. Still, even as the coveted artificial general intelligence may be years away, these learning systems do have demonstrated benefits in the growing number of tasks they are assigned to (Frank et al., 2019).

AI in Organisations

The role of technology in leadership and management has been recognised for some time. E- leadership is defined by Avolio, Kahai and Dodge (2001, 617) as IT-mediated means to produce change in organisations. Reviewing the theory, Avolio, Sosik, Kahai and Baker (2014, 106) state that both the science and practice of leadership has

dragged behind the adoption of advancing technology in organisations. They argue that rather than focusing on predicting the most desirable practices, the leadership field has reactively studied the impact technology already has had.

According to Auvinen (2017, 37) leadership is shifting from the scientific management of the last century towards structures of lower hierarchy in order to enhance creativity, participation and digital innovations. Also Auvinen et al. (2019) claim that there has been an epoch change in leadership as the embodied presence of the leader has seemed to transform into digital platforms. The need for actual leadership has not disappeared, but the methods of communication and presence of the leader have been somewhat digitalised.

Another example of digitalisation is in the area of platform economy, where algorithmic management is used to connect customers and workers. Lee et al. (2015) define algorithmic management as managerial functions performed by software algorithms and their supportive devices. Lee et al. point that in addition to the newer companies in the platform economy, algorithmic management has been increasingly introduced to optimise, allocate and evaluate work in traditional occupations from warehouses to coffee shops.

This arrangement between the worker and the digital manager raises a completely new dynamic. Algorithmic management has been praised for the potential freedom it provides workers, but it has faced criticism for the exploitative information asymmetries that favour the company (Rosenblat and Stark, 2015, 3758). In her thesis, Tammissalo (2019, 63-64) concludes that while employees in a financial institution prefer the more emotionally intelligent feedback of human managers, they also see the value of the instant input that AI can enable as a part of the feedback. There has been some conversation about what the advent of novel technology means for managers. A study by Frey and Osborne (2013, 40-45) claims that while workers in many fields are in a high risk of automation, managers are less likely to be replaced as their work consists of tasks demanding social intelligence. Similarly as Pulliainen (2019, 84) states in her thesis, many senior level managers are not worried about replacement as they see AI as a complementary tool they can use to be more efficient.

Other studies support this augmenting view as well. Jarrahi (2018, 577) highlights the potential of an AI system with vast computational capability paired with the more holistic intuition of a human manager. Autor (2015, 5) claims that historically scholars and journalists alike have overstated the labour replacing power of advancing technology, while missing that automation also augments human skills, creates new work tasks and increases productivity and demand.

Still according to Makridakis (2017) some people in the field of AI claim that this time it is different, as task after task can be replaced. People supporting this revolutionary view of AI maintain that as far as demand for their labour, most workers of today are comparable to horses at the end of the 19th century. While optimists among this group believe that in the end this increased productivity will create a utopia for all, pessimists fear that it will lead to a dystopia for most. (Makridakis, 2017.)

As Arntz, Gregory and Zierahn (2016, 4) point, it is quite unlikely that in the near future every single task performed in an occupation could be automated. For example even if one day self-driving trucks replace drivers, human drivers may still be needed for other tasks such as loading and offloading goods. Therefore a task based approach is used in this study.

Based on the literature, AI can impact managers directly by replacing or augmenting certain work tasks. AI can also affect managers indirectly by causing changes in their working environment. Therefore the effects of AI can be divided to four levels: global level, level of society, level of organisational structure and level of managers' work tasks.

In this hierarchy, changes can trickle up or down the levels. For example, if a country has a goal of being a global leader in AI technology, it may allocate funds of the society to empower AI development and education, which in turn could change the way organisations and their managers operate.

Furthermore, for more precise inspection, managers are split into three groups: operative managers, middle managers and senior managers. Operative managers are considered the leaders of the workforce, middle managers are the leaders of

operational management and the highest level senior managers are the leaders of middle management.

METHODOLOGY

Research strategy in this study is qualitative and interpretative (Eskola and Suoranta, 1998). The empirical data consists of six semi-structured thematic interviews (Kovalainen and Eriksson, 2008). The interviewees have been chosen using purposeful sampling (Patton, 2002). Using knowledge and expertise of AI as the requirement for participation, a high ranking group of authorities in research, data science and consultancy were selected.

As part of the ethical guidelines, the participants were asked for the permission to record and transcribe the interviews. The interviewees were also granted anonymity to allow the expression of personal opinions independent of affiliation. Therefore the informants' identities are codified and in the analysis section they are referred to as Experts 1-6. The more detailed overview on the empirical data is represented in the figure 1.

A similar set of questions were given to each expert, still providing freedom for the interviewee to focus on the aspects they saw most important on each topic. The questions are based on 1. How AI can replace managers' work tasks during the next decade and 2. How much AI can replace managers' work tasks during the next decade. Because of the difficulty of the topic, the main questions were sent to each participant for familiarisation before the interview. For practical purposes, the interviews were conducted on Skype.

Before the actual interviews, two practice interviews were conducted to adjust the questions to better focus on the relevant themes.

Content analysis was used to group the data and to search for repetitive themes and patterns in it (Eskola and Suoranta, 1998). In expert interviews data collection and analysis often merge together, because the interview questions are customised for the expert group (Alastalo and Åkerman, 2010, 377-381). In this case it means that the divisions used in this study (as laid out at the end of chapter "AI in organisations")

largely shaped the structure of the questions in the interviews and the data analysis that followed. The interview tapes were transcribed and listened to carefully, to ensure correct understanding of the experts' ideas. Because of the nature of expert interview, no hidden meanings were searched for within the interviewees' speech, instead their answers were taken at face value. Experts' opinions were grouped and colour coded based on each topic to make analysis easier and more direct. Within these themes the answers were examined for similarities and differences.

Informants	Job title	Duration of interview	Transcribed pages
Expert 1	Director of Research	33:39	7
Expert 2	Consultant	44:53	9
Expert 3	Principal Software Architect	24:51	5
Expert 4	Research Professor	42:56	8
Expert 5	Data Scientist	42:26	10
Expert 6	Consultant	43:04	9

Using the empirical data as a guide, two possible futures scenarios were formed to illustrate AI's possible impact on management. According to Godet (1994, 44) a scenario is a basic concept of futures studies that tells what logical chain of events leads to a plausible situation in the future. Scenarios can be divided to possible, probable and desirable scenarios. Possible scenarios are all the futures that can be envisioned as possible. Unlike probable and desirable scenarios, possible scenarios don't have to be as rigorously tested, because the function is to expand understanding of the potential events. Possible scenarios are evaluated by the logicity and plausibility of the events depicted. (Amara, 1991, 646-647.) As with any study regarding future, the three principles of futures studies apply: future cannot be perfectly foreseen, future is not predetermined and future can be influenced with acts and choices (Rubin, 2004).

As a limitation of this study, a relatively small sample size was used to gather the data. This study deals only with possible future scenarios, and does not make any statement of their probability. For probable or desirable scenarios, a Delphi method could be

used. It is also important to remember that this study tries to chart out the impact of AI on managers' work tasks, from which is not possible to draw straightforward conclusions on what it might mean for their employment. For more extensive scrutiny on the topic, more research is needed.

ANALYSIS

Revolutionary view

Based on the empirical evidence, the expert opinion on the impact of AI on management can be roughly split into two groups: revolutionary and evolutionary. The revolutionary group believes that due to the unforeseen capabilities of AI technology, managers' work tasks will be greatly affected on all levels.

These experts believe machine learning systems can be used in various white collar work tasks previously thought too difficult to replicate by machines. After decades of comparatively slow AI development for practical applications, the possibilities set by computing power have finally caught up with the neural network algorithms of old, leading to the breakthroughs of the last decade (Remes, 2018, 32-39). Some of the experts expect that the rate of change starts to grow exponentially in the coming years.

Expert 3: It is all about training. The pace of training the learning models starts to grow exponentially. In ten years I believe AI can teach AI and the exponential curve gets steeper. Based on human managers' history it is possible to make good conclusions, forecasts and finally decisions. That's why I believe management as it is now understood can be quite light when it comes to humans. Machines will be able to do almost all decisions and can make more logical insights based on better algorithms than humans can alone.

The growing capabilities of processing units indeed set the limits for AI development. Big datasets need a lot of computing power to fine tune the models, making it energy intensive and expensive. Therefore the most ambitious projects are mostly limited to the biggest players. Novel methods specifically built for AI, such as Cerebra's AI chip, may however change the landscape and make it possible for smaller organisations to develop models swiftly (Freund, 2019).

As the capabilities of AI systems grow larger, some of the experts suggest that managers should focus more on understanding the technology. Many of them also suggest that positions such as Chief Technological Officer will become more important in the future.

Expert 1: Managers must increasingly think on how they use their time. Managers should probably be some in AI courses learning those tools more, instead of getting involved with routine or detail management. They should focus more on the big picture and focus on mastering A.I and robotics technology.

Evolutionary view

The evolutionary group believes that even though AI may impact managers in many ways, even replace some tasks, it will not cause any unforeseen changes in managers' work. They believe that while machine learning systems can automate some repetitive managerial tasks, the focus will merely shift to softer leadership skills. These tasks of motivation and encouragement are arguably harder to automate.

Expert 6: You don't have to manage routines and processes. Instead it will be managing human capacity, interaction and empathy. In the narratives there's been a lot about soft leadership skills. This I believe will be more common, leading individuals.

This view of the second group is consistent with Laitinen's (2018, 45) claim that we live in a society of work, in which political, cultural, social and economic factors define the meaning of work for the individual – while technology only defines what work is done within these parameters.

Similarly Autor (2015, 5-7) points that technological change also complements labour, raising the demand for non-automated tasks. Autor claims that workers in tasks complemented by automation benefit more than workers in tasks that are replaced. Based on the expert interviews, it thus seems likely that the impact of AI may be kinder for managers competent in interpersonal tasks such as communication, employee motivating and creative decision making, as the skills can be used to complement automated tasks. On the other hand, technological change may not be as welcome for managers whose skills are based on routine administrative tasks such as

reporting, work supervision and synchronisation.

In his book Graeber (2018) defines a bullshit job as employment that is so unnecessary that even the employee cannot justify its existence – yet they have to pretend this is not the case to keep receiving their salary. Why this is a matter for this paper is because among the anecdotal evidence gathered for Graeber’s book is a number of testimonies by middle managers, HR managers and administrators, who confess that their work lack any meaning. Some middle managers claim that as their subordinates are mostly completely fine without their supervision, they perhaps have to invent unnecessary tasks to justify their existence, while their own bosses don’t know what they do. Naturally this is not a claim that all middle managers are unnecessary. Too many conclusions can’t be drawn from these personal stories, but it does make analysing changes in work more complicated. We tend to assume that other people are doing something useful, but who really knows what other people do at their jobs? Can a manager be replaced if their work was not needed in the first place?

AI’s impact on different levels of management

Perhaps unsurprisingly, most of the interviewed experts believe that AI’s impact is higher on operative and middle managers than on senior managers. On average the experts estimate that during the next ten years a third of the work tasks of operative and middle managers can be automated. For the senior managers the assumption is that slightly less than a quarter of the work tasks can be replaced by different AI methods. The interviewees explain that the two lowest levels of management contain more repetitive tasks of supervision that are easier to automate.

Expert 2: Automating operative tasks, such as administration, synchronising timetables, filling out work sheets and checking whether somebody did their work, is a very straightforward process. Expert 5: The tasks that can be replaced are administrative, for example if you have a factory manager that uses a lot of time to adjusting duty schedules. And usually you should as it’s not very difficult. And if it saves half of a managers working hours, it is quite a valuable thing. I think that type of administration, excel optimisation and managing different matters will decline radically. How much it can replace a manager depends obviously on how much their

work consists of that type of tasks.

The experts view that the amount of work for middle managers is connected to the number of operative managers they supervise. Along with the tasks of managers themselves, the overall demand of managers' work may also fluctuate if the number of workers they supervise increases or decreases. For example, if a large number of workers are replaced because of automation or another reason, the amount of managerial tasks needed could also drop.

This potential shift to less managers may be desired by some. While Auvinen, Riivari and Sajasalo (2018) highlight the need for the emotionally intelligent embodied leader, they also note that traditional leadership theories have been contested in favour of new-age approaches emphasising self-leadership, digitalisation and flexibility in a time of constant change. To enhance productivity, some organisations have chosen to ditch middle management, giving more freedom and responsibility to the employees. According to one of the experts, some professionals prefer lower levels of hierarchy and more shared governance. Expert 6: In a study young managers in expert organisations thought that the flatter the organisation the better. In a sense the number of managers or middle managers goes down and there will be smaller team structures, in which leadership is shared between people.

Meanwhile it seems that the complementary aspects of AI benefit senior management the most. Many of the foreseeable advancements in AI seem to make senior managers jobs easier. For example high level decision making can be facilitated with dashboard systems giving real time information and suggestions of action.

Expert 4: There may be these dashboard systems that condense information and extend it in a sense. And they make some recommendations that in this situation you should proceed like this: before we have proceeded like this, and this way of operating has created these types of results.

Unlike the others, one of the experts believes that in the future, the impact of AI may be greater on the highest level of management. This is based on the idea of automated decision making: with enough data on human managers' decisions and their consequences, machine learning programs can be trained to select the most desirable

decision for each situation. Meanwhile this expert believes that when dealing with the challenges of leading the workforce, an algorithm may not be enough.

Expert 3: In operative management you need things that a computer cannot re-place. Hands-on teaching, especially in human resource management. AI can't analyse a person in ten years as well as another human being.

Most of the other experts also believe that while the repetitive tasks can be replaced, managers can use more of their time to focus on tasks demanding softer leadership skills. Even though many tasks can be replaced, leadership is still necessary.

Shifts in the working environment also affect managers' work. Between both countries and companies, global competition for AI supremacy may further accelerate the adaptation of new technologies. On national level experts believe that data protection legislation may decelerate the development and adaptation of AI systems, especially in public organisations. On the other hand, increased government funding can hasten AI development and provide more opportunities for organisations. As the experts point out, companies may be encouraged to utilize bold approaches to digitalisation as they seek the gains of the first player on the market, as Uber, Netflix and Spotify have done in their respective industries. Perhaps most crucially regarding this study, algorithmic management can make operative management redundant in companies using the methods of platform economy.

Algorithmic management in platform economy

Most experts identify platform economy as a factor that can cause disruption to the way organisations manage their workers. According to the opinions of the interviewees, it seems likely that the platform economy model will be-come more common in various industries. One can claim that with processes of algorithmic management, organisations are able to replace a large chunk of the tasks of operative management.

Expert 2: I guess that platform economy type thing – organising operations, which operative management is – will become more common. Certain tasks can be automated completely. For example in Uber, taxi automation is automated now. You don't need managers for that.

Expert 3: I would say there will be more of this in different industries. Energy sector, insurance sector, these traditional industries will have more of these which will change the way of operating quite radically.

As the interviewed experts note, the ways of platform economy may not only change organisation structures, but the relation of employment and leadership as well.

Expert 6: When talking about AI and work, the influence is not just on work or tasks, because as AI enables larger and better systems of platform economy, it also transforms employment relationships. This allows the development of shorter, fixed-term employment resembling freelancing, which changes leadership away from leading teams. For example in Uber they don't really have (the drivers as) employees. Then there is the question of does it change motivation and commitment, potentially having multiple employers.

Since its initial boom a decade ago, this sharing economy was met with wide-spread enthusiasm as it has been portrayed of creating the flexible jobs of the modern age, where workers can become their own bosses (Rosenblat, 2018). However, studies such as Lee et al. (2015) and Schneider (2018) have demonstrated some of the problems arising in platform companies such as Uber and TaskRabbit. According to Rosenblat and Stark (2015) Uber's algorithmic management creates power asymmetries, which has led to cases of worker and customer exploitation.

Based on the workers' cries of exploitation under their algorithmic managers it seems that it has been harder to optimise for worker satisfaction than for the creation of monetary value for shareholders (Rosenblat and Stark, 2015). These examples point to a call for more research on how to make these platforms more just. After some initial disappointments in the platform economy there still exists hope for more shared governance and ownership – for example with platform cooperatives, as suggested by Schneider (2018).

DISCUSSION

In light of the data, it seems that the impact AI may have on operative and middle management during the next decade may be somewhat understated. For senior managers however, the impact may be one of augmentation.

With technology such as automated decision making and dashboards that provide real time information, a smaller number of managers may be needed for supervisory and administrative tasks. Still, most of the interviewed experts stress the increasing importance of interpersonal leadership. Managers of any level excelling in soft leadership skills may be in higher demand in the near future, which corresponds to the longer progression of leadership shifting away from the scientific management of last century, demonstrated by Auvinen (2017).

Algorithmic management is interesting in the sense that it seems to be heading in opposite direction of this long time trend of leadership. Many companies operating in platform economy are implementing methods that could be described as scientific management, with clearly defined specific tasks, roles and objectives. In a sense the platforms are often designed to make workers operate as reliably as machines. One way to explain this phenomenon is that some of these platform economy jobs are precursors for further automation. For example in the future, more rides may be conducted by self-driving cars instead of Uber drivers and restaurant takeout orders may be delivered by drones instead of Deliveroo riders.

The nature of this virtual manager poses some interesting questions. According to Sintonen and Auvinen (2009) the ownership of leadership power is ambiguous and blurred. As they claim (Sintonen and Auvinen, 2009, 107) it is the story rather than the leader as a person who leads. In other words, the members of an organisation follow the meaning integrated in the story rather than the leader as a person. When leadership integrates into digital platforms, the question of who is actually leading can become even more blurred. One could argue that in principle a leader can have more direct control and exact orders than before by using algorithmic management. But at the same time it is not always clear how a machine learning algorithm makes decisions, even to the programmer in charge of optimising it – let alone for the person who commissioned it. Indeed, the responsibility of programmers seems to be growing as these platforms control the work of millions of people around the world. In these situations the goals and values that are directly or indirectly affecting the algorithm are essential in shaping how it operates.

Even with the concerns raised in this study, it is good to remember that the recent and future breakthroughs of AI are part of the technological progress that has arguably raised the quality of life and increased productivity during the last centuries. The main issue remains the same: what actions to take to make sure the spoils are evenly shared between people.

CONCLUSION

Previous literature (Frey and Osborne, 2013; Autor, 2015; Jarrahi, 2018) recognise the potential of advancing AI technologies, but estimate that for managers the impact will be one of automation rather than replacement. Based on the expert interviews conducted for this study, it seems that AI may augment highest level senior managers more than operative and middle managers, whose work tasks could be more prone for automation. The methods of platform economy may also affect operative management the most.

The findings implicate the importance of just algorithmic management systems as the model of platform economy seems to spread. More research is still needed on the various aspects necessary for a solid algorithmic management system. Leadership and management scholars could surely have valuable insight on this matter.

In addition, two groups could be distinguished of the experts – revolutionary and evolutionary. The former believe AI has transformational potential for most occupations, including managers. On the other hand, the evolutionary view stresses that new technology mainly complements managers' skills. While other tasks may be automated, the skills that are harder to replace become more important. As routine administrative tasks may be automated, interpersonal leadership skills could become even more crucial in the future.

Based on the revolutionary and evolutionary views as well as the indications by Amara (1991, 646-647), two possible scenarios can be mapped out for management in the next decade or so. The extensive forecast of advancing technologies by Kuusi and Linturi (2018) is used as a loose guideline for this author's imagination. The aim is to provide two opposing scenarios to broaden the understanding of how AI can possibly impact management - not to speculate which one is more likely to happen.

In the revolutionary scenario, the continuing AI development sweeps across industries, transforming societies with unprecedented velocity. AI enhanced technological breakthroughs keep lowering the marginal costs of goods – most importantly food and energy production become largely automated. A large percentage of permanent workforce from cashiers to radiologists switch to freelance work in gig economy. The need for operative and middle managers plummets as their administrative tasks are automated, and old and new companies alike adopt the ways of platform economy. In companies with expert workers, employees prefer lower hierarchy and shared governance. People get used to the reliable, sincere and immediate feedback in their fine-tuned algorithmic management platforms. From Jürgen Klopp to Gandhi and Gandalf, organisations can perhaps choose as their leader a virtual version of a football manager, a historical figure or a fictional leader that matches their mission and story. In addition to human relations management, most of the human managers' tasks left can be performed mainly by the senior management. A smaller group of leaders is able to choose the direction their organisation takes, augmented with automated decision making systems and dashboards that provide real time information. As an organisation is able to change its whole operating model for each day of the week if the algorithms so suggest, leadership and management theories of old have to be rewritten.

In the evolutionary scenario, AI continues to develop and disrupt industries, although not as widely as in the revolutionary scenario. Industries keep adopting the new possibilities of automation, but for the managers the impact is not as strong as for some of the workers. As societies are built around working individuals, people whose tasks were automated are retrained for new tasks created by AI, such as supervisors of automated road and drone traffic. Platform economy doesn't transform industries as much as originally expected, mainly impacting some of the new companies and industries only. Algorithmic management becomes more common, but human administration and oversight is still preferred, especially in more traditional organisations. Even though some of the repetitive supervisory and administrative tasks are automated, the complementary effects of AI help operative, middle and senior managers to better focus on interpersonal leadership skills. Operative and middle

management are impacted slightly more than senior management after the adoption of slightly flatter organisational structures. As the shift from management to leadership continues, much of the responsibility of leaders contain tasks of employee motivation, engagement and satisfaction. Even though technological breakthroughs in AI and other fields continue, the role and tasks of leaders and managers evolve gradually, but do not transform into something completely different.

Even though the rate of change in these scenarios is different, what is common is that in both changes caused by AI are not predetermined. Just like a hammer, AI can either be used as a tool for creation or destruction. Technological progress cannot and should not be stopped, but to make sure it is headed in a preferred direction, good leadership is needed – maybe now more than ever. Some suggestions for further research can be recommended based on this study, as leadership and management seem to be entering some uncharted digital waters. First, in further studies on AI's impact on management, it is recommended to specify the level of managers considered. AI impacts each level differently because each group consists of widely different tasks. Therefore, instead of referring to managers as a homogeneous group, analysing each group separately could provide more accurate results.

Secondly, the conversation of the embodied leader in an organisation, by Sintonen and Auvinen (2009) for example, could be revisited in the age of the virtual leader. Because programmers have an increasing amount of power and responsibility, it may be interesting to study who is actually in charge in the creation and operation of a digital management platform – the programmer, the supervisor, the story or perhaps the shareholder.

Finally, algorithmic management changes how organisations are able to guide and control their workers. Many of the previous studies (Rosenblat and Stark, 2015; Schneider, 2018), have rightly focused on the workers' point of view, but more research is needed to study how algorithmic management is currently changing leadership and management and what direction it should be taken in the future.

REFERENCES

- Alastalo, M. and Åkerman, M. (2010) Asiantuntijahaastattelun analyysi: faktojen jäljillä. Teoksessa Ruusuvoori J. Nikander P. & Hyvärinen, M. (toim.) Haastattelun analyysi. Tampere: Vastapaino. Available at: <https://jyu.finna.fi/Record/jykdok.1159091> (Accessed: 16 January 2019).
- Amara, R. (1991) 'Views on futures research methodology', *Futures*, 23(6), pp. 645–649. Available at: https://jyu.finna.fi/PrimoRecord/pci.sciversesciencedirect_elsevier 0016-3287(91)90085-G.
- Arntz, M., Gregory, T. and Zierahn, U. (2016) 'The Risk of Automation for Jobs in OECD Countries: A COMPARATIVE ANALYSIS', *OECD Social, Employment, and Migration Working Papers*, (189), p. 34. Available at: <https://jyu.finna.fi/PrimoRecord/pci.proquest1790436902>.
- Autor, D. H. (2015) 'Why Are There Still So Many Jobs? The History and Future of Workplace Automation', *The Journal of Economic Perspectives*, 29(3), pp. 3–30. doi: 10.1257/jep.29.3.3.
- Auvinen, T. (2017) Johtaminen ja Tarinankerronta Organisaatioissa Digitaalisessa Vallankumouksessa, *Electronic Journal of Business Ethics and Organization Studies*. Available at: <http://ejbo.jyu.fi/> (Accessed: 22 April 2019).
- Auvinen, T. et al. (2019) 'Evolution of strategy narration and leadership work in the digital era', *Leadership*, 15(2), pp. 205–225. doi: 10.1177/1742715019826426.
- Auvinen, T., Riivari, E. and Sajasalo, P. (2018) 'Lessons learned from traditional and "new-age" leadership', in Eskola, A. (ed.) *Navigating Through Changing Times: Knowledge Work in Complex Environments*. New York: Routledge, pp. 95–112. Available at: <https://>

books.google.pt/books?hl=en&lr=&id=h3o4DwAAQB
 AJ&oi=fnd&pg=PT128&dq=Auvinen+T,+Riivari+ E+and+Saj
 asalo+P+(2018)+Lessons+learned+from+traditional+and+“new-
 age”+leadership.+In:+ Eskola+A+(ed)+Navigating+through+Chan-
 ging+Times.+New+ York:+ Routledge ,+pp.+.

- Avolio, B. J. et al. (2014) ‘E-leadership: Re-examining transformations in leadership source and transmission’, *Leadership Quarterly*, pp. 105–131. doi: 10.1016/j.leaqua.2013.11.003.
- Avolio, B. J., Kahai, S. and Dodge, G. E. (2001) ‘E-leadership: Implications for theory, research, and practice’, *The Leadership Quarterly*, 11(4), pp. 615–668. doi: 10.1016/S1048-9843(00)00062-X.
- Brynjolfsson, E. and Mitchell, T. (2017) ‘What can machine learning do? Workforce implications: Profound change is coming, but roles for humans remain’, *Science*. American Association for the Advancement of Science, pp. 1530–1534. doi: 10.1126/science.aap8062.
- Eskola, J. and Suoranta, J. (1998) *Johdatus laadulliseen tutkimukseen*. Tampere: Vastapaino. Available at: <https://jyu.finna.fi/Record/jykdok.747009> (Accessed: 8 October 2018).
- Frank, M. R. et al. (2019) ‘Toward understanding the impact of artificial intelligence on labor’, *Proceedings of the National Academy of Sciences of the United States of America*. National Academy of Sciences, pp. 6531–6539. doi: 10.1073/pnas.1900949116.
- Freund, K. (2019) *Cerebras Unveils AI Supercomputer-On-A-Chip*, *Forbes*. Available at: <https://www.forbes.com/sites/moorinsights/2019/08/19/cerebras-unveils-ai-supercomputer-on-a-chip/#63dbc812fe8a>.
- Frey, C. B. and Osborne, M. A. (2013) *The future of employment: How susceptible are jobs to computerisation?* Oxford: Oxford Martin School. Available at: <https://www.oxfordmartin.ox.ac>.

uk/downloads/academic/The_Future_of_Employment.pdf (Accessed: 21 February 2019).

- Godet, M. (1994) *From anticipation to action a handbook of strategic prospective*. Paris: Unesco Publishing. Available at: <https://jyu.finna.fi/PrimoRecord/pci.gbv257210202>.
- Graeber, D. (2018) *Bullshit Jobs: A Theory*. New York: Simon & Schuster.
- Jarrahi, M. H. (2018) 'Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making', *Business Horizons*. Elsevier Ltd, 61(4), pp. 577–586. doi: 10.1016/j.bushor.2018.03.007.
- Kaplan, J. (2016) *Artificial Intelligence*. Oxford: Oxford University Press. Available at: <https://jyu.finna.fi/Record/jykdok.1692732>.
- Kovalainen, A. and Eriksson, P. (2008) 'Qualitative Methods in Business Research: Narrative Research', in Sage Publications Inc. 1 Oliver's Yard, 55 City Road, London England EC1Y 1SP United Kingdom: SAGE Publications Ltd, pp. 210–227. doi: 10.4135/9780857028044.
- Laitinen, A. (2018) 'Kuinka suhtautua työn lopun myyttiin?', *Tiedepolitiikka*, 43(4), pp. 44–49. Lee, M. K. et al. (2015) 'Working with Machines', in *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. 1603-1612. New York: ACM Press. doi: 10.1145/2702123.2702548.
- Linturi, R. and Kuusi, O. (2018) *Suomen sata uutta mahdollisuutta Yhteiskunnan toimintamallit uudistava radikaali teknologia*. Helsinki: Tulevaisuusvaliokunta. Available at: <https://eduskunnankirjasto.finna.fi/Record/selma.416167> (Accessed: 7 March 2019).
- Makridakis, S. (2017) 'The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms', *Futures*, 90, pp. 46–60. Available at: [https://jyu.finna.fi/PrimoRecord/pci.sciversesciencedirect_elsevierS0016-3287\(17\)30004-6](https://jyu.finna.fi/PrimoRecord/pci.sciversesciencedirect_elsevierS0016-3287(17)30004-6).

- McCarthy, J. et al. (1955) 'A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence. Dartmouth College', in. Available at: <http://jmc.stanford.edu/articles/dartmouth/dartmouth.pdf> (Accessed: 11 March 2019).
- Pan, Y. (2016) 'Heading toward Artificial Intelligence 2.0', Engineering, pp. 409–413. doi: //doi-org.ezproxy.jyu.fi/10.1016/J. ENG.2016.04.018.
- Patton, M. Q. (2002) Qualitative research and evaluation methods. Thousand Oaks: Sage Publications. Available at: https://books.google.pt/books/about/Qualitative_Research_Evaluation_Methods.html?id=FjBw2oi8El4C&redir_esc=y (Accessed: 21 September 2018).
- Pulliainen, I. (2019) Tekoäly haastaa johtajuuden – oletko valmis? University of Jyväskylä. Available at: <https://jyx.jyu.fi/handle/123456789/64691>.
- Remes, J. (2018) 'Mutta mistä tekoäly tulee - kuka sen kehittäisi ja millä voimin?', Tiedepolitiikka, 43(4), pp. 32–39.
- Rosenblat, A. (2018) Uberland: How Algorithms Are Rewriting the Rules of Work. Oakland, California: University of California Press. Available at: <https://www.jstor.org/stable/10.1525/j.ctv5cgbm3> (Accessed: 24 October 2019).
- Rosenblat, A. and Stark, L. (2015) 'Uber's Drivers: Information Asymmetries and Control in Dynamic Work', SSRN Electronic Journal. doi: 10.2139/ssrn.2686227.
- Rubin, A. (2004) 'Tulevaisuudentutkimus tieteenalana. TOPI – Tulevaisuudentutkimuksen oppimateriaalit. Tulevaisuuden tutkimuskeskus, Turun yliopisto.' Available at: <https://tulevaisuus.fi/perusteet/tulevaisuudentutkimus-tiedonalana/>.
- Samuel, A. (1959) 'Some studies in machine learning using the game of checkers', IBM Journal of Research and Development, 44(1.2), pp. 211–229. doi: 10.1147/rd.441.0206.

THE INFLUENCE OF COVID-19 ON CONSUMER DIGITAL BUYING BEHAVIOR IN INDIA

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ABSTRACT

The goal of this paper is to review the current literature on the impact of COVID-19 on consumer buying behavior in India – to assess the progress of work that has been made to date. Numerous journal repositories were checked and 12 peer-reviewed journal articles from different disciplines were reviewed. Key attributes of each paper were recorded, and a content analysis was carried out. A literature survey showed that not much academic content has been published on the impact as the pandemic has been fairly new, globally. Majority of the researches that are published is by the industry experts. By reviewing a wide body of literature on a relatively new and timely topic, this research offers a concise overview of consumer behavior during the times of COVID-19. This information will assist industry practitioners and academicians in adapting to the recent change in the behavior of the consumers. The academic significance of this research is to extend and advance current research and to fill the void in literature. The practical significance of this study can be very significant and influential for all industries. In industry, understanding the consumer behavior is a priority for many companies. Organizations can use this research for coming up with ideas about how to best target the consumers in the times of COVID-19 spread. It is the first paper to review the current literature directly on the effect of COVID-19 on the consumer behavior, in India.

Keywords: Consumer behavior, Digital Marketing, COVID-19, Marketing strategy.

INTRODUCTION

The current pandemic of coronavirus presents a significant risk not only to our health and economic well-being, but even to the fundamental structures of social stability in

our society and also to our democracy. But the pandemic alone is not what brings our society to its knees. A longstanding anti-human, anti-science, anti-democratic, individualistic, racism and prejudice narrative are in conflict with the reality of a pandemic that can only be overcome by humanity, science, equity, collective effort and trust in democratic institutions that coordinate and deliver health services and economic relief. In spite of fear and anxiety, the counter-narrative of human compassion, social solidarity and government responsibility for all of us is played out in the daily stories of neighbors helping neighbors, state and local governments to take decisive action, and brave first responders and medical staff risking their lives to save those who have been struck by the virus.

With the confusion surrounding lockdown measures in India last month, the burning question on most people's minds was whether it would be extended. In fact, this was the most up-to-date query related to the novel coronavirus on Google in April. When the pandemic spreads, so do the worries and uncertainty around it. Most have turned to Google for answers, "What are the signs of coronavirus? Others turned to Google for life-hacks to survive the pandemic and endure the lockdown. One of the most asked questions was, "How to: make a mask? Can you make a hand sanitizer? Do you use Zoom? "And like never before, how can you cut your own hair?" Worldwide, online mask searches (protective, medical, surgical, n95) were four times more than those for hand sanitizers. Searches for social distancing has increased (Livemint, 2020).

Infectious diseases have become more difficult and more difficult to control. For example, the outbreak of Ebola in West Africa, one of the deadliest outbreaks of the epidemic, has killed more than 11,000 people in six countries since the first report in March 2014[1], and SARS, which emerged in China in 2002, has infected more than 2,700 people and launched an unprecedented nation-wide campaign for preventing the spread [2]. Covid-19 has killed 312,000 people globally and 2872, as of now in India (Google, 2020).

Inevitably, aside from the direct medical costs of treating patients and introducing various disease controls, epidemics have detrimental effects on the economy. Restrictions on the transport of people and goods, usually placed in areas where the risk

of contamination is high, dramatically disrupt production and exports, and seeds of potential development are also hampered by undercuts in Investors lose their trust in the market as investors. Apart from the effect of the outbreak on production and expenditure, there is a significant negative impact to remember that the extreme occurrence also triggers adverse shocks to consumer spending at the other end. In particular, customers frequently delay travel and delay public places in an effort to minimize the risk of infection, and this disturbance in consumption affects the economy.

Consistently, common wisdom about the influence of a macro-economic factor, such as oil prices and market cycles, is that the main mechanism by which a macro-economic factor affects the economy is the disruption of goods and services (Hamilton, 2009). Understanding the indirect but strong effects of epidemics on consumer willingness to buy would therefore have important implications and guidance for policy makers as well as practitioners seeking to counteract economic disruption. Studies have generally been conducted on the total burden of epidemics on populations based on aggregate data (Bloom, 1997, Gubler, 2002, Kalia, 2002).

The attention paid to individual consumer behaviors has been limited in large part because microdata that would allow the measurement of indirect and behavioral effects of epidemics are not widely available to academics. Extensive studies of extreme events relied heavily on aggregate expenditure statistics, which are usually calculated at low frequencies, such as on a monthly or quarterly basis, and are often subject to revision. Due to the limited availability of data, the development of an evaluation of the economic impact of epidemics without knowing the actions of individual consumers may have limited consequences, because shifts in these microeconomic variables are at the root of these individual behaviors (Deleersnyder, et al, 2004).

In this paper, we explore the impact of the outbreak of the epidemic on consumer behavior discussing, how epidemic outbreaks impact the consumption and shopping behaviors of consumers. Consumers, in particular, have significantly reduced spending on conventional shopping outlets, but have seen a large rise in spending on e-commerce. The results are especially important in that the reaction of consumers to the outbreak was due to a psychological element, fear of contagion, rather than budgetary constraints.

In view of the growing challenges presented by infectious diseases due to improvements in transport capacity, our paper sets out important consequences for policies and strategies designed to support the economy when epidemics occur. For example, an improved policy climate for developing and sustaining an e-commerce platform would mitigate customer concerns of contagion from the purchase of goods and services and may enable producers and retailers to sustain their sales. In order to achieve sustainable economic growth with increasing concerns about more complicated outbreaks of the disease, the establishment and acceptance of e-commerce as an alternative shopping platform is of vital importance.

The position and impact of marketing departments has received a great deal of coverage in both mainstream press and academic literature in recent years (Gummeson et al., 2013). These articles commonly state that the marketing purpose has decreased (Verhoef and Leeflang, 2009; Webster et al . , 2005), that marketing has lost its strategic position (Murphy, 2005; Groenross et al . , 2013), and that marketing has lost its strategic role (Sheth and Sisodia, 2005; Klaus et al., 2013).

In Wuhan City, China, first human cases of COVID-19, was reported in December 2019 (WHO, 2020). Since then, it has spread across the globe causing many casualties. A rich body of literature on economics and marketing examines the effect of macroeconomic factors. For example, researchers explain how companies adjust their decisions on innovation and advertisement during a recession with a specific emphasis on the efficacy of these constructive actions (Deleersnyder,2004, Frankenberger et al., 2003, Srinivasan, 2005) Examine the impact of market cycles on consumer trust in the sense of the selling of durable goods and private labels (Deleersnyder, 2004, Allenby, 1996, Lamey, 2007). As of now there isn't much academic literature present which guides the organizations about the current consumer behavior and the steps that needs to be taken next, to easily sail through this time.

This article is intended to partly fill this gap and therefore, the main purpose of the article is to study in detail the consumer behavior at an overall level, in India.

OBJECTIVES

1. To understand the recent trends in the consumer behavior in India, amidst COVID-19 pandemic.
2. To fill the gap in the academic literature where no research paper as of now focusses on understanding the behavior of consumer at the time of pandemic.
3. To assess the consumer behavior pre covid and post covid.

RESEARCH METHODOLOGY

This study aimed to look into articles from every peer-reviewed journal published in English by May 2020, when a literature search was performed. In order to be as systematic as possible, this review pursued industry papers published in all disciplines. As the pandemic is fairly new, not much literature was available online and therefore other publications such as conference proceedings and industry reports were included.

REVIEW OF LITERATURE**Marketing**

In addition, 64 per cent of "marketer-unhappy" CEOs indicated that they had eliminated essential roles from conventional core marketing functions, including product creation, pricing and channel management (Lukovitz, 2012). Nevertheless, as Verhoef et al. (2011, p. 59) state, "... discussion remains largely normative, without clear empirical evidence in multiple countries." Studies have empirically shown that strong marketing departments contribute to superior business success, irrespective of the general market orientation of the product (Moorman and Rust, 1999). Götz et al. (2009, p. 29) further argue that "marketing plays a key role in the implementation and effective management of market orientation." In other words, consumer-driven conduct in an organization can be improved when marketing function champions the customer's voice internally, and is often also responsible for gathering, analyzing and communicating internally relevant market, customer and competitor insights (Lovell and Wirtz, 2011, p. 393-394).

The former study does not cover Asia, and the latter study does not investigate the impact of the marketing department on firm performance. This difference in cross-cultural research motivates us to compare the context and implications (i.e. firm

performance) of the Western marketing department (i.e. North America and Western Europe) with that of the East (i.e. Asia). This comparison could provide interesting insights, as most Eastern companies, with the exception of a few such as Singapore Airlines (c.f., Heracleous and Wirtz, 2010), have been less advanced in their marketing efforts. Second, we are contributing to a growing body of literature reviewing a decrease in the role of marketing departments due to their perceived lack of added value over and above a firm's overall market orientation.

Beginning of the virus causing COVID-19 by WHO.

In Wuhan City, China, first human cases of COVID-19, was reported in December 2019 (WHO, 2020). Retrospective inquiries undertaken by Chinese authorities reported human cases with symptoms at the beginning of December 2019. While some of the earliest known cases were linked to a wholesale food market in Wuhan, some did not. Many of the initial patients were either stall owners, market staff or regular visitors to the market. In December, 2019, biological samples taken from that market and they have been tested + for SARS-CoV-2, further concluding that the market in Wuhan City was the origin of the outbreak. The market has been closed since 1 January 2020. SARS-CoV-2 was identified in early January and its genetic sequence shared publicly on 11-12 January.

All the reported gene sequences of SARS-CoV-2 isolated from human cases are quite similar. This indicates that the epidemic arose from a single point of introduction in the human population around the time the virus was first reported in humans in Wuhan, China, in December 2019. A good number of studies for understanding the origin of the pandemic outbreak in China are currently being planned, including the study of human with symptoms, environmental sampling from markets and farms in areas where first human cases have been reported, and detailed records of the types of animals sold in the market. The results of these studies are important to prevent further zoonotic introduction of SARS-CoV-2 into the human population.

Overall impact of Covid-19

The planet is facing the greatest human tragedy since the Second World War. Almost every country has been affected by the crippling Coronavirus disease (COVID-19). The

outbreak from China has gone all over the world. In the last few months, Corona's epicenter has moved from China to Europe to the United States. To date, more than 1.5 million people have been infected by COVID19, and about 80,000 people have died worldwide. Indirectly, billions of people have suffered as a result of the global pandemic of COVID-19. Undoubtedly, this Coronavirus has put the world economy at a significant risk. Coronavirus is undermining the economic pillars of world trade. Commentators described this epidemic as the result of hyper-globalization or the beginning of de-globalization. Nonetheless, the world is going to face a recession; and, according to some analysts, global losses may surpass the combined First and Second World Wars.

Pandemic Popularity Quadrant (Apptopia and Moengage, 2020): This is a quadrant which is designed for explaining the different types of apps which are growing /slowing based on the number of active users and the number of downloads. In this quadrant there are four major categories i.e.: explosion, growth, slowdown and emergence.

Explosion: This quadrant mostly includes industries which have seen an increasing demand in terms of both new users and maximum downloads. Industries that fall under this quadrant are Video Chat and Online Conference, Online shopping, Healthcare management and Media & Entertainment.

GROWTH: In this quadrant only, those industries are included in which the number of active users has increased but there is not a considerable rise in the number of downloads. Industries that fall under this quadrant are Food Delivery and Social Media.

SLOWDOWN: In this quadrant only, those industries are included that have seen decline in the number of active users and new application downloads. Industries that fall under this quadrant are Mobility, Real Estate and Travel & Hospitality.

EMERGENCE: In this the only industry that has been included is Health care (South East Asia), it includes only that industry that has shown promise of getting new users downloads but it does not have much active users. Accenture (2020), has come up with a list of impacts that COVID -19 had on people in India.

In the below mentioned figure, it can be seen the changes in the behavior because of COVID-19:

Postponing of the purchase decisions. People are postponing purchase decisions in many categories due to uncertainty. This will continue after the immediate threat has dissipated. In China, sales of gold and silver, for example, dropped by 41.1 per cent in January and February 2020, year on year.² There will be a waiting-and-see mentality. It will have an effect on many sectors.

Noise is a problem. There's a lot of information about COVID-19, and speculation — everybody has something to say, but should they say it? A mail from a hotel that you stayed at ten years ago asking you how to handle the situation is less than helpful. Those just virtue signaling in their brand communication about COVID-19 would pay a fee.

Flights during crisis. Some airlines, for example, were already providing May / June flight deals during the crisis without any confusion. In the face of difficult memes, the silence of Corona Beer was a model of good behavior.

Familiarity has an advantage. Familiar is going to be more useful. Known brands that manage the crisis well should increase in stature and value.

Less tolerance for risk. Danger would be less tolerable for most citizens. New social groups that emerge on the basis of risk attitudes — for example, some people may choose to socialize with those who have the same cautious or intrepid attitudes. Brands need to take notice of these affiliations and determine where to stand.

Insurance has gained importance — both with a small and a large 'i'—will be quite necessary, but only if it is trusted to deliver. Individualism may rise with more people adopting a policy of self-seeking.

Digital is growing.

It is already clear that many users who have yet to fully adopt digital technology now have to do so. COVID-19 is a catalyst that is now gradually moving the laggards online and, having made an investment in effort and developed new patterns and interfaces, many will not go anywhere. It is more important than ever to streamline the virtual obstacles of any kind Sustainable Management Practices and Economic Slowdown in

India, June 2020 6 | Page of experience — banking, curbside collection, online shopping. Retail capacity constraints are a real issue — the result of the "digital shelf" not yet ready for this level of demand, because companies have repeatedly deferred the prioritization of full-scale e-commerce. There is also a lot to know about in-store positioning in the modern world across a range of categories. On top of that, with the last mile delivery of the lynchpin of any online shopping brand, the question is: how much can you monitor the experience? Some, perhaps many, will feel discomfort at being virtual. Home job is not a habit for the majority of people. Not everybody is going to work virtually — for starters, farmers, delivery drivers and factory workers.

Internet usage has increased. Broadband and 5 G will be life-essential for most of them after their usefulness has been checked, hard, at the height of the pandemic when the world began to quarantine mass. At just one day in mid-March, the use of the internet in locked Italy grew by 30%.

Digital gaming, live streams and video apps have gained popularity. Disney's decision to stream Frozen 2 three months early and Universal putting its film releases onto Sky TV underlines the central role of entertainment, and it will now carry higher market value.

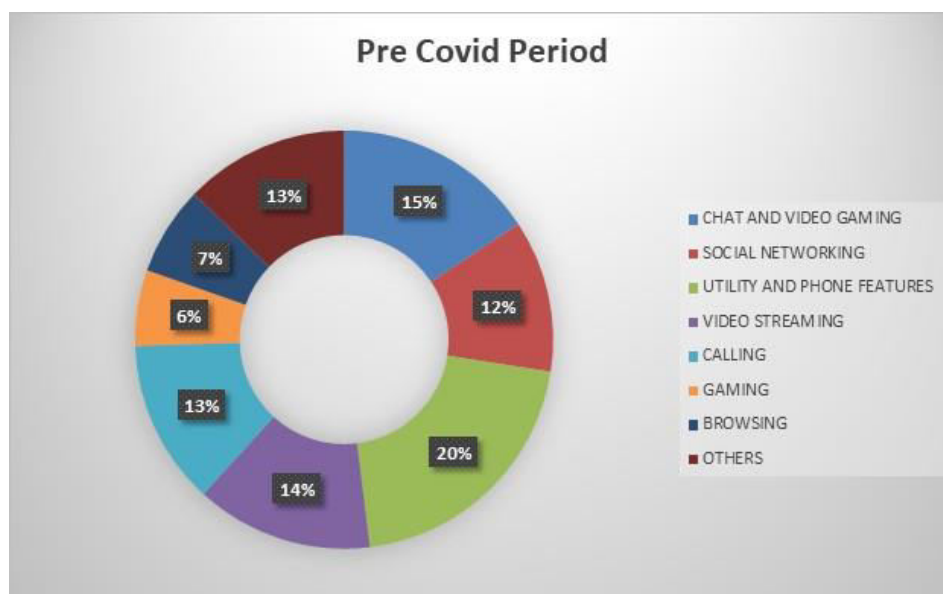


Figure: 1. Share of time spent on various activities on smart phone in pre covid period.

Usage of phone is approx. 3 hours and 22 minutes per day.

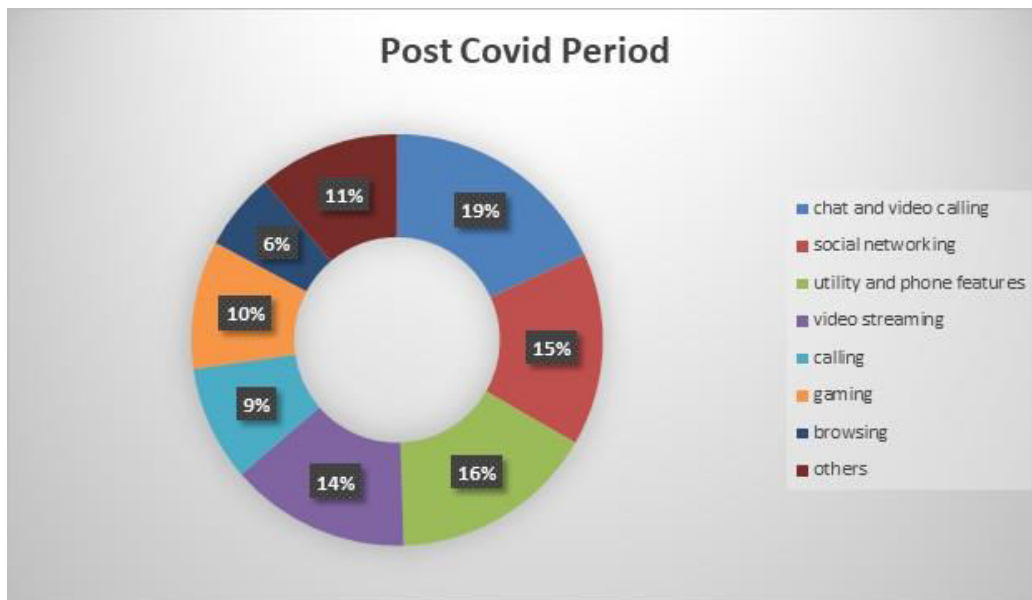


Figure: 2. Share of time spent on various activities on smart phone during post covid period. Usage of phone is approx. 4 hours per day. Source: Nielsen and BARC. (2020, May, 14th)

Social intimacy. Might "social distance" lead to a separate, more frequent "social intimacy" People will naturally turn to existing social platforms to meet the most basic human needs. But the craving for "real" will also build up — fueled by an explosion of culture and activity when greater freedom and opportunities for fun return as restrictions are finally lifted. Conversely, the meaning and notion of "true" can shift or alter dramatically. Will "true" material or experience – virtual arts, for example, or virtual commerce – increase value over physical? Will virtual "routines"—exercise online, for example — develop additional physical routines, such as gym visits? At the height of the epidemic in Italy, yoga classes went online, and Google and Facebook moved fast to enable mass demand for this mode of virtual interaction at scale.

Impact on the TV viewership in India

In the figure shared below, it could be seen that the total TV viewership has increased 24% when compared to the Pre-COVID period.

TV Homes in India increased by 6.9% to 210 million from previous 197 million in 2018. TV viewing Individuals grew by 6.7%, effectively an increase of 56 million (Figure 3, Figure 4)

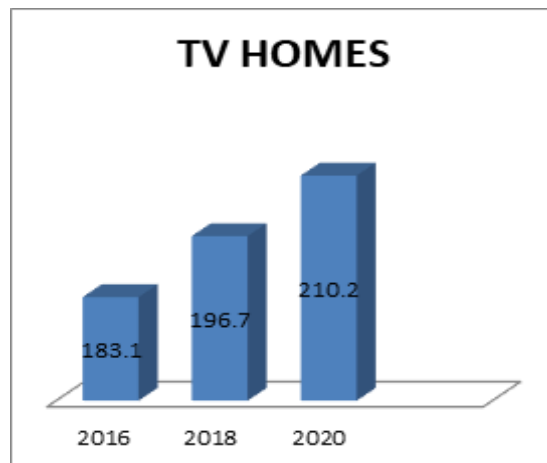


Figure 3. TV Households in India (in Millions)

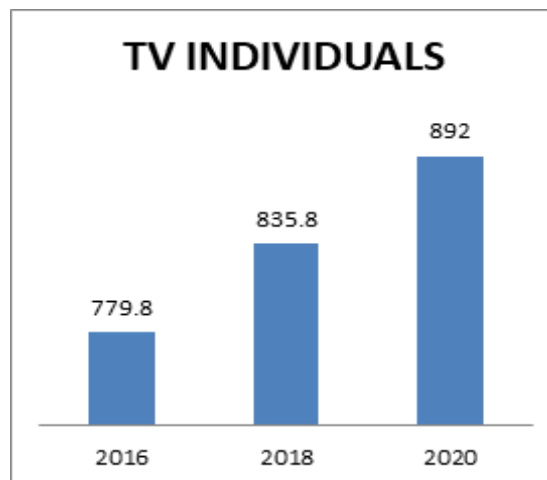


Figure 4. TV Individuals in India (in Millions)

TV households have increased in Urban and Rural markets by 4% and 9% respectively. In absolute terms, there is an increase in TV households of nearly 3.2 M in Urban India and 10.3 M in Rural India. TV households grew in all town classes of Urban markets with megacities growing by 6%.

Review of literature clearly highlighted that there is progressive growth in Digital in India, and therefore studies were conducted that touched different aspects of digital. A study was conducted by Global Web Index that aimed on understanding the shopping behavior of Indians at the time of COVID-19. Some of the important findings of these study are: 47% of the respondents agreed that they buy products digitally for getting a home delivery, 47% people also agreed that they spend time online researching about the products before paying a visit to the store, 43% people visit stores less frequently,

38% said that they spend less time inside stores. b). Another study was conducted by Global Web Index, that aimed on understanding that which digital feature is considered more important by Internet users in India. Here 60% of the respondents mentioned that for them most important feature is Free delivery, 52% opted for digital shopping because of reliable delivery, 47% respondents opted for digital shopping because of free return policy, 45% agreed for digital shopping because the website was reliable and 36% of the respondents mentioned that they shop online because of same or next day delivery. c). Global Web Index conducted another research for understanding that which items would the internet users in buy more in India once the Pandemic is over. 42% of the people mentioned that they would order groceries online, followed by 37% of the respondents who will order personal care products online, 35% of the respondent mentioned that they would buy clothes online, and 35% respondents mentioned that they will buy household products online. 31% respondents agreed that they would buy smartphones online, followed by 27% people who would buy other electronic products online, 26% of the people mentioned that they will buy cosmetics online with only 11% people who mentioned that they would buy alcohol online.

SUGGESTIONS

COVID-19 has changed life as we know it – and as we do everything, we can to keep each other safe, our routines have radically changed. The required steps to control the pandemic have affected the global economy and altered consumer preferences, behaviors and purchasing behavior. This has resulted in new problems for supply chains, distribution, retail stores, and workers (Google, 2020). Google has seen businesses around the globe – including our own – adapt to these new realities. Although these are extraordinary times, we have seen companies begin to think about the road to economic recovery in three phases – reacting, repairing, and reframing – each with distinct goals. Businesses, industry verticals and markets are affected differently at each stage – with some shifting speed than others – but we’ve observed that the vast majority remain focused on responding (Google, 2020). Implement marketing lessons from the crisis to your long-term business strategy to drive sustainable growth. The nature of this crisis requires us to move beyond business as usual. This could be an incentive for marketers to try out new tactics, think outside the

box, and re-invent the way we communicate with consumers. And when we get through this, the creative and caring solutions we have put in place have the potential to get us closer to our consumers and communities. Some of the other suggestions are (Deloitte, 2020):

Be true to your brand and to your intent. In times like these, every interaction with your customers and partners is an opportunity to demonstrate what your company is all about and to be true to your brand and your intent. People pay attention to how organizations respond, and purpose-based businesses that display compassion are likely to emerge as leaders. For example, the famous US-based retailer has just implemented a new sick leave policy that allows all staff, both full-time and part-time, to work from home with pay. Another example is how airlines shared their recommendations on cabin sanitization and the use of state-of-the-art HEPA filters with a viral and bacterial elimination efficiency of 99.99 per cent. These filters have been in use long before the current crisis, but it was a good time to inform customers about the sanitation measures that airlines have already had in place to help create trust and confidence.

Communicate to your clients. Stay in touch with your customers. Let them know how much you love and care for them—even if they're buying fewer goods and services from you. This should be seen as concept in your ads too. Know that all of your clients have friends, too, so that what you share will reach an even wider audience. In addition, working even more closely with your customers in tough times like this would have the added benefit of helping to build deeper partnerships and create bonds that are likely to last for years.

Find new ways to communicate with your customers. Travel and in-person meetings are a huge concern for employees' minds. In view of the fact that sales and support companies are often the biggest travelers, the travel plans should be focused on risk reduction for affected areas. It is first and foremost training the workers who need to fly on ways to reduce the spread of the virus. This is also likely that COVID-19 will have a profound effect on how businesses work even after the crisis has ended. Consumers are likely to choose to work from home more, so businesses would have to step up switching to remote jobs. Educational institutions will also enhance their online.

teaching and collaboration platforms. As the world joins hands to combat the current crisis of COVID-19, companies are concerned with consumer optimism. The two pillars of consumer loyalty and confidence are being put to the test. Although it is hoped that this is a temporary case, there is a high degree of anxiety and people are scared. This global crisis is really about the moments of the consumer that matter. IN putting the needs of your customers first, this could be a time for the brand of your business to lead. Even if you may be making a short-term effect on your bottom line, placing flexible discounts, pricing, and policy adjustments in place, and finding other ways to support your customers through this crisis, would be beneficial to your company's long-term health.

REFERENCES

- Accenture, 2020, retrieved from https://www.accenture.com/_acnmedia/Thought-Leadership-Assets/PDF-2/Accenture-COVID-19-New-Human-Truths-That-Experiences-Need-To-Address.pdf
- Allenby, G.M.; Jen, L.; Leone, R.P. (1996). Economic trends and being trendy: The influence of consumer confidence on retail fashion sales. *J. Bus. Econ. Stat.* 14, 103–111.
- Apptopia and Moengage, 2020. Retrieved from <https://www.moengage.com/coronavirus-business-impact-worldwide/>
- Bhatia, S. Dantewadia, P. (2020). ‘How covid-19 has changed what we search online’. Retrieved from Livemint: <https://www.livemint.com/news/india/how-covid-19-has-changed-what-we-search-online-11589361813014.html>
- Bloom, D.E.; Mahal, A.S. (1997). Does the AIDS epidemic threaten economic growth? *J. Econ.*, 77, 105–124.
- Bolton, R.N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., Loureiro, Y.K., and Solnet, D. (2013, forthcoming), “Understanding Generation Y and their use of social media: A review and research agenda,” *Journal of Service Management*, Vol. 24 No.3.

- Day, G.S. (2011), “Closing the marketing capabilities gap”, *Journal of Marketing*, Vol. 75, pp. 183-195.
- Deleersnyder, B.; Dekimpe, M.G.; Sarvary, M.; Parker, P.M. (2004) Weathering tight economic times: The sales evolution of consumer durables over the business cycle. *Quantit. Mark. Econ.* 2, 347–383.
- Deloitte. 2020.' Maintaining Customer Loyalty and trust during times of uncertainty'. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/covid19/gx-coronavirus-customer-loyalty.pdf>
- Engelen, A. and Brettel, M. (2011), “A Cross-Cultural Perspective of Marketing Departments' Influence Tactics”, *Journal of International Marketing*, Vol. 19 No. 2, pp. 73-94.
- Frankenberger, K.D.; Graham, R.C. (2003). Should firms increase advertising expenditures during recessions? *MSI Rep.* 3, 65–85.
- Global web index, 2020.' Coronavirus Research: Multi-Market Research Wave 3. Retrieved from: <https://www.globalwebindex.com/coronavirus> Sustainable Management Practices and Economic Slowdown in India, June 2020.
- Google.2020.'Navigating the road ahead'. Retrieved from:[www. Think with google. com/ 2020_ covidads playbook_en-us](http://www.Thinkwithgoogle.com/2020_covidads_playbook_en-us).
- Google. (2020). Retrieved from Google: [https:// www. google. com/ search? q=covid+ death+ india&rlz= 1C1GCEB_enIN856IN856&oq=covid+death+india&aqs=chrome..69i57j0l6.7074j0j7&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=covid+death+india&rlz=1C1GCEB_enIN856IN856&oq=covid+death+india&aqs=chrome..69i57j0l6.7074j0j7&sourceid=chrome&ie=UTF-8)
- Götz, O., Hansen, A.K., Jo, A.R. and Krafft, M. (2009), “The role of marketing and sales in organizations and its impact on performance”, *MSI Working Paper Series*, Marketing Science Institute, Cambridge, MA, pp. 29-48.

- Groenross, C., Strandvik, T. and Holmlund, M. (2013, forthcoming), “How companies can offer something customers will buy”, *Journal of Service Management*.
- Gubler, D.J. (2002). Epidemic dengue/dengue hemorrhagic fever as a public health, social and economic problem in the 21st century. *Trends Microbiol.* , 10, 100–103.
- Gummesson, E, Kuusela, H. and Närvänen, E. (2013), “Reinventing marketing strategy by recasting supplier/customer roles”, *Journal of Service Management*.
- Hamilton, J.D. (2009). ‘Causes and Consequences of the Oil Shock of 2007–08; National Bureau of Economic Research: New York, NY, USA, 2009’.
- Heracleous, L. and Wirtz, J. (2010), “Singapore Airlines’ balancing act – Asia’s premier carrier successfully executes a dual strategy: it offers world-class service and is a cost leader”, *Harvard Business Review*, Vol. 88 No. 7/8, pp. 145-149.
- Kalia, M. (2002). Assessing the economic impact of stress [mdash] The modern day hidden epidemic. *Metabolism*. 51, 49–53.
- Klaus, P., Edvardsson, B., Gruber, T., Maklan, S. and Keiningham T. (2013), “Putting marketing back on the CEO’s agenda – an empirical investigation and roadmap”, *Journal of Service Management*.
- Kumar, V., Chattaraman, V., Neghina, C., Skiera, B., Aksoy, L., Buoye, A., and Henseler, J. (2013), “Data-driven services marketing in a connected world,” *Journal of Service Management*, Vol. 24 No.3.
- Lamey, L.; Deleersnyder, B.; Dekimpe, M.G.; Steenkamp, J.-B.E. (2007). How business cycles contribute to private-label success: Evidence from the United States and Europe. *J. Mark.* 71, 1–15.
- Lee, R.P., Naylor, G. and Chen, Q. (2011), “Linking customer resources to firm success: the role of marketing program implementation”. *Journal of Business Research*, Vol. 64 No.4, pp. 394-400.

- Local circles. (2020). Retrieved from: <https://www.localcircles.com/a/press/page/covid19-lockdown-essential-goods-availability#.XsDoPhozY2w>
- Lovelock, C. and Wirtz, J. (2011), *Services Marketing: People, Technology, Strategy*. 7th ed., Prentice Hall, Upper Saddle River, New Jersey.
- Lukovitz, K. (2012), "Survey probes the 'CEO-marketer divide'", *Marketing Daily*, 15 November 2012, available at: <http://www.mediapost.com/publications/article/187276/survey-probes-the-ceomarketer-divide.html#axzz2JrKI2jwn> (accessed 30 November 2019). Sustainable Management Practices and Economic Slowdown in India, June 2020
- McKinsey & company, 2020. ' COVID_19 India Consumer Pulse Survey'. Retrieved from: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/survey-indian-consumer-sentiment-during-the-coronavirus-crisis>
- Merlo, O. (2011), "The influence of marketing from a power perspective", *European Journal of Marketing*, Vol. 45 No. 7/8, pp. 1152-1171.
- Moorman, C. and Rust, R.T. (1999), "The role of marketing", *Journal of Marketing*, Vol. 63 No. 4, pp. 180-197.
- Moorman, C. (2012), *The CMO Survey Blog*, available at: <http://www.cmosurvey.org> (accessed 12 September 2019).
- Murphy, D. (2005), "The click in the bricks", *Research World*, (November), pp. 29-30.
- Nielsen and BARC. (2020, May, 14th). 'HOW ARE MEDIA HABITS CHANGING AS INDIA ENTERS WEEK 7 OF THE LOCKDOWN'. Retrieved from: https://images.assettype.com/afaqs/2020-05/ff474595-8b81-4ae3-b852-6229deea5e2d/Edition_8__COVID_19__TV_Smartphone_Consumption_During_Crisis.pdf

- Sarkees, M. (2011), “Understanding the links between technological opportunism, marketing emphasis and firm performance: implications for B2B”, *Industrial Marketing Management*, Vol. 40 No. 5, pp. 785-795.
- Sheth, J.N. and Sisodia, R.S. (2005), “A dangerous divergence: marketing and society” *Journal of Public Policy and Marketing*, Vol. 24 (Spring), pp. 160-162.
- Srinivasan, R.; Rangaswamy, A.; Lilien, G.L. (2005) Turning adversity into advantage: Does proactive marketing during a recession pay off? *Int. J. Res. Mark.* 22, 109–125. [CrossRef]
- Verhoef, P.C. and Leeflang, P.S.H. (2009), “Understanding the marketing department's influence within the firm”, *Journal of Marketing*, Vol. 73 No. 2, pp. 14-37.
- Verhoef, P.C., Leeflang, P.S.H., Reiner, J., Natter, M., Baker, W., Grinstein, A., Gustafsson, A., Morrison, P. and Saunders, J. (2011), “A Cross-National Investigation into the Marketing Department’s Influence within the Firm: Toward Initial Empirical Generalizations”, *Journal of International Marketing*, Vol. 19 No 3, pp. 59-86.
- Webster, F.E., Malter, A.J. and Ganesan, S. (2005), “The decline and dispersion of marketing competence”, *MIT Sloan Management Review*, Vol. 46 No. 4, pp. 35-43
- Sood sapna 2020 Impact of COVID-19 on Consumer Behavior in India Sustainable Management Practices and Economic Slowdown in India, June <https://www.researchgate.net/publication/343153169>

**THINK BIG, START SMALL, SCALE FAST: EXPLORING AI INNOVATIONS
AND TECHNOLOGIES FOR SMALL BUSINESS**

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ABSTRACT

The era of AI technologies where every human cannot ignore its existence has paved way for numerous applications in every field and sector. The application of AI in small businesses remains underexplored and needs attention. This paper attempts to propose a framework that will positively provide insight into AI-based technologies and their distinct application in small businesses, which can be adopted by small business owners and gain competitive advantages. Every business needs to adapt to the ever-changing technological advancement and its intelligence to change within the right time with the right AI-powered technologies. AI-based customer relationship management, predictive analytics, customer intelligent solution through AI, Chatbot, etc provide competitive advantages to the small business. AI technologies have so much to offer and here the paper attempt is made to address the opportunities offered by AI-powered technologies for small businesses. The paper also attempts to explore the application of AI-powered technologies in small business and its implication to relevant stakeholders.

Keywords: Artificial Intelligence, Technology, Chatbot, Predictive Analytics, Customer Relationship Management, Customer Intelligence, Small Business, AI – winter.

INTRODUCTION

“Intelligence is the ability to adapt change”

Stephen Hawking

In the era of technology and advancement, AI has paved way for numerous applications in every field and sector to enable work smarter and faster. AI describes a machine's ability to stimulate human intelligence. Technology and society continue to progress towards advancement and businesses are looking forward to becoming more powerful

with sophisticated products and solutions that will enhance and improve the overall business program and operations. AI is a wider and broad umbrella under which machine learning, deep learning, computer vision, cognitive computer learning, natural language processing, knowledge, and robotics reside and are the important subsystem of AI. Micro, Small and Medium enterprises play a speculative role in contributing to the economic development of the country. There are around 26 million MSME units in India, of which 13 million are SMEs. SMEs contribute nearly 45% share of manufactured output, accounting for 40% in overall exports of the country and providing employment to about 30 million people as per the report of Mathur, A. (2018). According to the report of Hero fin corp. (2017), SMEs employ around 40% of the Indian workforce and provide an opportunity for livelihood and employment via low skilled jobs. India has the second-largest number of (48 million approx) SMEs in the world close to China, which has around 50 million SMEs. Hence it can be concluded that SMEs are the backbone of the Indian economy. Despite employing 40% of India's workforce SMEs are exposed to many challenges and one of the major challenges is related to technological advancement and innovativeness. In the words of Gartner, 70% of MNCs will be empowered with Artificial Intelligence by the year ending 2021 and affixed that 270% more organizations have been added in the AI-empowered umbrella within the last four years. The figures have doubled in the past 12 months. Figures depict that 52% of the Telecom Industry employ chatbots and 38% of diagnose centers depend on automatic diagnostics. No area or business is in any capacity resistant to the effect of AI. The right approach towards AI in new businesses and the new venture is important as these businesses positively contribute towards economic development and are often a source of job creation and economic growth.

Associations ought not to disregard the robust effect of AI innovation as there will probably not be another "AI - winter", the period where ventures and energies were frustrated and withdraw. The years 1970 & 1980 encountered AI - winters where AI could not meet the desires, consequently prompting a fall in venture and significance.

In conclusion, there are currently many discouraging factors that threaten SMEs in competitive environments where AI could have more presence in the years to come. As

AI is most likely here to stay, the authors of this study encourage SMEs to seek out more probable benefits that would outweigh the perceived barriers highlighted in this thesis to get started on the AI journey.

LITERATURE REVIEW

Aarstad et al., 2019 stated SMEs to be laggards in the adoption of Artificial intelligence, only 5% of SMEs have integrated business with AI and researchers here tried to probe the reasons behind these slow followers, helping them to overcome the challenges and making the way forward. Chatterjee et al., 2019 studied the readiness of CRM mechanisms towards AI assimilation and acknowledged the need for multiple techniques to handle different sorts of client information for proper use of AI calculations to encourage business achievement. It has been recognized that various methodologies are expected to handle the integration of CRM with Artificial Intelligence that is robust. Latest CRM mechanisms relentlessly gauge the client's diverse details but it becomes difficult for associations to best utilize these details to attain client satisfaction. The solution to the problem is AI-enhanced customer relationship management leading towards better dynamics, precise determination, legitimate suggestions that improve deals. Luo et al., 2018 stated the swift expansion of AI with its broad usage all around, the pattern of human work supplanted with robotics heightened. The association of man-made consciousness in the bookkeeping business will influence and sabotage the customary advancement mode and carry development to the bookkeeping business. As of now, innovation monsters, for example, Apple, Google, and Microsoft are contributing an ever-increasing number of assets to hold onto the computerized reasoning business sector. Singh, 2018 stated that independent ventures and little new businesses by and large have high clients to the representatives where personal attention is impossible. The solution is robotization in their client assistance framework where Chatbot can do wonders by computerizing the client service part; build the benefits by diminishing the assets strain. The researcher demonstrated the technique of making such chatbots that a little organization can make with modest assets viz colleges and schools.

Regular client care chatbots were on human speech; Cui et al., 2017 presented Super Agent, a client support Chabot that uses the enormous scope and freely accessible online business information. Being diverse from on hand, Super Agent exploits information from in page item portrayals, and from internet business sites, and reply to monotonous inquiries, opening up human uphold staff to answer a lot higher worth questions. Super Agent is an extra augmentation to standard web programs and helpfulness in the client's internet shopping experience.

Megahed, (2015) disused the odds of captivating profoundly esteemed IT contracts by spotting major elements, either winning or losing such deals, having huge business benefits. The researcher in his paper, build up a methodology that utilizes business experiences what's more, space information in the characterization of a few of the credits affecting the result and showed how Bayes predictive analytics system can incomprehensibly improve the expectation exactness. Guarda et al., 2013 identified Artificial Intelligence as a Competitive Edge to the small businesses but the Business Intelligence proposals for SMEs has not many other options because the intended interest group of providers of business insight arrangements stays to be huge organizations, because of their more noteworthy openness to having tasks of this nature, and as a result of its budgetary capacity.

Bai, (2011) revealed AI is advancing once more into the standard of corporate innovation and intended to use the capacities of people instead of supplanting them, the present AI innovation empowers a phenomenal cluster of uses that produce new associations among individuals, PCs, information, and the actual world. AI advances assist undertakings in business choices, limit deceptions, and improve income openings.

Eckerson, (2007) stated that predictive analytics is not just clicking and achieving rather it is a matter of making progress in little rates says a specialized lead in an eminent telecommunication association. Predictive analytics is just a "gentle move with the string" and analyzing occasions each in turn to locate the main qualities that have the most prescient force. It restores the 'gut feel' incorporates dynamics on an endeavor scale.

RESEARCH METHODOLOGY

Research Objectives

1. To examine the current state of AI in small businesses.
2. To explore AI applications in small business.

Research Approach

The research approach is descriptive and conceptual. Let us understand descriptive and conceptual research in brief. Descriptive research is defined as a method of research that describes the population characteristics or phenomenon that is being studied. This strategy concentrates more on the "what" of the research subject as opposed to the "why" of the research subject. Conceptual research is defined as research that is used for developing new concepts or reinterpretation of existing ones by intellectuals. Herein, no practical experiments are conducted.

Type of Data

Secondary data has been opted to complete the study. Secondary data refers to data that has been already collected and analyzed by someone else.

Sources of Data

Secondary data has been collected from the various journal, articles, websites, E – libraries. Resources that have been accessed are IEEE Xplore, Procedia, Jstor, Springer link, Google scholar, etc have been accessed to gain quality journals, articles. E-Libraries like Wiley online Library, ACM Digital Library, and NDL

The Current State of AI

AI can understand human patterns and manual processes and makes it a valuable business tool when combined with other branches of AI like natural language processing, machine learning, deep learning, etc,. Small business owners are most ambitious when it comes to implementing new and innovative ideas and strategies that keep them ahead of other businesses. Small business n runs their business with limited resources and dream to grow and expand their business within these constraint resources. The small business even today hesitate to use AI-empowered tools as they think it to be useful tools for large organizations. But AI tools can be applied in small businesses and thus can prove to be very cost-effective, reduce operational cost,

improves the quality of services and goods offered, and many more. AI enables businesses in work automation of the repeated process and helps them to work faster and smarter by reducing their operational cost, increase productivity, growth in revenue and sales, and customer experience. Many industries have seen a positive impact on their business due to the diversified application of AI as they gain the ability to save time and cost by the automation process and task. AI can be applied in the decision-making process by vast data handling, make marketing strategies by knowing customer preferences and taste by the chatbot, and lots more. Small Business Administration (SBA) estimates that a majority of small business fails due to lack of management ability, lack of accounting knowledge, marketing, and many other functional areas. Thus the survival of small businesses purely depends on the management ability, quality desirability of goods, and services offered. AI's application in large businesses is widely accepted but the question arises whether AI is only for a large organization or small organizations can also be widely benefitted from the AI and can it be an opportunity for small businesses too? India has stepped forward towards digital India and introduced digital technologies widely in every major industry be it education, Tourism, banking, and insurance, consumer goods, health care, etc. thus it's the right time and opportunity for small businesses to implement AI-powered tool in the business to gain a competitive advantage. AI can be widely applied in small businesses to increase productivity and to improve operational efficiency, enhance market knowledge, reduce operational cost, etc. AI is the science of developing computer system which can accomplish the tasks which are usually solved with the use of human intelligence for instance understanding of language, memory, learning, ability to solve mathematical and logical problems, ability to recognize, etc.

Human beings are different from other beings as they possess the ability to think, rethink, reason, and apply logic and have the ability to choose the best from the available alternatives. AI is regarded as the sciences of artificial sciences of designing and building computer-based artifacts performing various human tasks and relatively can be linked with the decision making process.

With innovative advancements, industry 4.0 has given lots of advantages to a large organization but still, small businesses face many complexities due to the perpetual

development in technologies. Small businesses are considered to be the major industrial players and major contributors in the economy; therefore they must focus on improving their efficiency in operations and management, to meet the customer demands effectively. Small businesses are known for short term flexible strategies and are very mcg closer to the customers and are ever ready to easily respond to the changes in demand to the flexibility and small in size ease.

Many small businesses are still figuring out the use and effective application of AI in their business. AI no doubt can add value to their small business by understanding the customer behavior, competitors, and other stakeholder's activities. AI has brought a drastic change in the life of businesses be it ordering pizza and food online to booking tickets to appointments to complaint generation and lots more. AI can interact verbally making machines smarter in the future. Small businesses can considerably gain a competitive edge by adopting virtual persona assistants VPAs, chatbot, or automation AI, machine learning to improve their efficiency in productivity, improve sales and customers relation, HR functions, marketing functions, etc,. The common myth that usually revolves in the minds of small business owners is that AI technologies are suitable only for large organizations and are not feasible for small businesses or start-ups. This paper attempts to break the misconception about the applicability of AIs in only large organizations. AI technology open ups the doors for small business. According to a survey conducted by Vistage, the role of AI in small to medium businesses is 13.6% and the majority of small business does not implement AI technologies in their business.

APPLICATION OF AI IN SMALL BUSINESS

Predictive Analytics and small business

Predictive analytics are paving way for customer-centric data that can boost sales and generate leads and enhance customer satisfaction. Predictive analytics analyses the historic data into a mathematical model to predict important and significant trends. Businesses use big data obtained through transactions, complaints, market information, sales result, etc., and make the decision based on the data and make future prediction and forecasting. Predictive analytics process data through statistics and machine

learning, data mining modeling, and AI technologies and techniques and create quantitative predictions depending on the currently available data. Big data can be analyzed effectively through predictive analytic to evaluate and identify the risks and opportunities for the future. Predictive analytics revolves around the collecting of data and analysis of data, constructing statistical models to validate assumptions, and finally get a predictive model. Predictive analytics is widely used in different industries like banking and insurance, financial services, retail, travel and tourism, health care and the list is endless. Small businesses can apply predictive analytics for gaining insight on customer's behavior, purchase behavior, most purchased items, and also help in market segmentation as one size does not fit all. Predictive analytics help in understanding customer's preferences and taste and enables person based marketing as a small business is very much close to their customers. Thus predictive analytics will help them design marketing campaigns, according to the customer's likes and dislikes. Predictive analytics use different algorithms to uncover complex behavior of customer like 'flock by leader' is algorithms that are applied to identify the spectacular behavior of birds flocking to large data set to identify clusters in cluster behavior, uplifting modeling predicts the influence of customer buying behavior that results from marketing contact. Predictive analytic can also be effectively applied to retain loyal customers, forecast sales demand, and expand customers' base product recommendations. For small businesses, before applying predictive analytic the foremost thing that is to be considered is to identify the objective of the business whether they want popularity, retain loyal customers, expand the customer base, demand prediction, or recommending products and the list is endless. Once the strategic objectives are been identified the small business should source the potential and relevant data that would help them to gain insight on the ways to achieve objectives through big data. With predictive analytics, the future of small business will fortunately be bright. IBM Board, SAS advanced analytics, Q Alteryx, etc., are the pools of software are available in the market that provides complete predictive analytic based solution along with machine learning solutions. Thus small business can fulfill their dreams of growing and expanding their business through gaining deeper knowledge about their customer's tastes preferences, likes, and dislikes through predictive analytics.

CRM and Small Business

Artificial intelligence is a perceptive notion capable of emulating human equivalent thoughts and learning needs. AI-supported mechanisms are proficient in learning, sketching, and comprehending languages exclusive to human intrusion. The intellect following AI is AI, algorithms that cycle information, gains from information, and use the information to settle on all around educated choices. This cycle delivers our positions simpler and quicker (Maxwell et al., 2011). In light of these handling capacities, AI is rated a compelling gadget to improve client relationship exercises(CRM) (San-Martína et al., 2016).

CRM is viewed as a successful device in identifying clients efficiently by 'distinguishing an organization's top clients; boosting the incentive from them by fulfilling and holding them' (Kennedy, 2006). For instance: a client's behavioral study and resulting administration personalization fall under the umbrella of CRM.

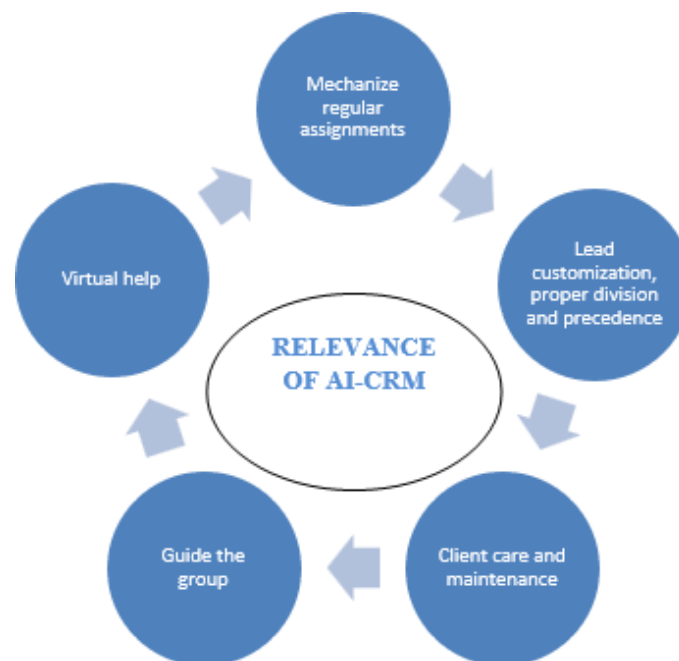
Hub Spot is another CRM tool grown with Motion AI, a product stage that empowered organizations to handily construct and convey chatbots, filled by computerized reasoning to collaborate with clients. Before releasing boot building innovation towards Business to Business clients, Hub Spot first expected to build up some prescribed procedures for the utilization of chatbots for CRM. To start with, one needed to evaluate the compromises among adequacy and productivity-related with the utilization of bots against people to make, sustain, and cope with client connections. Second, they needed to choose how much to humanize the chatbots. Will humans alike would it be advisable for them? Truly, Hub Spot had "tried to do what said others should do," utilizing its items to fabricate its business (Avery et al., 2018).

Few other AI-enhanced CRM by the prominent establishment is **ZOHO** software in the name of **ZIA**, Sugar CRM in the name of **HINT**, Salesforce in the name of **Einstein**.

- AI assist with robotizing ordinary errands, viably decrease time. Artificial intelligence enhanced CRM framework help the associations by exact suggestions and focusing on the specific client; fabricating a relationship and eventually close the arrangements.

- An Artificial intelligence enhanced CRM framework assists with learning authentic examples, propensities history of clients.
- AI–CRM mix, assemble suitable bits of knowledge from gigantic information assisting the association with building proper objective profiles.
- AI–CRM mix is a practical guide for the associations, and stepwise approach from start to end.
- An AI–CRM framework is a remote helper, robotize clients' reactions, and evaluate the customer's Web conduct and socioeconomics.

Fig1: Relevance of Artificial Intelligence enhanced Customer Relationship Management in Business Operations



Source: Researcher Self

We can conclude the integration of CRM with Artificial Intelligence is robust. Latest CRM mechanisms relentlessly gauge the client's diverse details but it becomes difficult for associations to best utilize these details to attain client satisfaction. The solution to the problem is AI-enhanced customer relationship management leading towards better dynamics, precise determination, legitimate suggestions that improve deals.

Customer intelligent solutions through AI

In an ongoing PWC study, 72% of Chief Executive Officers' view Artificial Intelligence as an "upper hand" towards sustainability in the digitalized epoch. From attaining bearings to the venue to inquisitive climate forecast for the end of the week escape, advanced voice assistants rapidly entering into our lives. The instruments from Siri, Alexa to Google Home, and Cortana, Google Duplex utilize common language handling generators driven by Artificial Intelligence to restore our queries. An association of Amazon with Marriott International Inc. whereby two Amazon platforms viz flywheel and Alexa Voice are serving patrons in the Hotels. Further integration of Artificial Intelligence can be seen with Automobile colossal Mercedes MBUX upgrading driving knowledge through Artificial Intelligence empowered voice colleague and wellbeing (Etherington, 2018). Further integration of Artificial Intelligence can be seen with Automobile colossal Mercedes MBUX upgrading driving knowledge through Artificial Intelligence empowered voice colleague and wellbeing (Etherington, 2018).

Human living is progressively turning out to be smarter day by day, with "smart" indoor regulators, for example, the Nest which identifies warming/cooling inclinations and every day propensities to change the temperature as we would prefer as expected for our get back. A smart fridge in the kitchen makes records for what we need depends on what's no longer in your ice chest, just as offer wine suggestions that would go with the supper. Smart apparatuses will keep on being more normal. AI is making the rest time smoother by providing streaming facilities like Netflix, as per the viewer's choice and preferences Netflix proposes. Statistics state that Netflix suggestions comprise 80% of what one watches.

G-maps and other travel applications employ Artificial Intelligence to screen traffic to give live traffic and climate conditions and recommend approaches to evade gridlock. The vehicle we drive to work may have driver-help innovation, and in spots, for example, Mountain View, California, we could avail self-driving vehicle through Google's sister concern Waymo to drive to and fro from the workplace. As per the news

by Wired Magazine, America's largest aerospace Company Boeing is manufacturing pilotless jetliners integrated with AI.

Artificial Intelligence has occupied the newsroom in composing sports stories and in an editorial piece of writing, and in the workplace, it is creating budgetary reports and executive-level summaries. AI is filtering court reports and lawful records for case-applicable data in courts, and for online protection firms, AI offers a method of perceiving bizarre examples of conduct in an organization (Baldwin, 1948)

AI isn't a substitution, or substitute for human insight, a unique method of arriving at resolutions. AI can supplement or surpass our capacities, it can work close by us, show us better approaches for the deduction.

Chabot and Small Business

Chabot is one of the most influential and innovative tools that enable the business to improve customer relations and entertain multiple customer questions. Chabot is software that can converse with customers as humans do and engage customers through various messaging platforms. The chatbot can be installed by a small business with minimal programming skills. The chatbot is like employing an employee who is ready to take up queries 24/7 and most preferred platform by customers. If the business involves frequently repeated tasks then it's smarter to automate and incorporate with an intelligent bot for the effective working of the business. Chatbot helps in serving customers effectively as they are enabled to understand natural language. A chatbot is an intelligent software that works on predefined programs and data that enables to do multiple tasks simultaneously. The chatbot can resolve multiple customers queries faster than a human with minimal or zero error as compared to humans. For instance, a finance chatbot can help business in organizing finances effectively. Chatbots are well programmed and thus can save and remember customer conversations and help in predicting future customer base and target customers. Customers' likes, dislikes, preferences, tastes can be better understood through the chatbot. The chatbot can also be used for setting up marketing strategies according to customers. The chatbot can easily evaluate important data from a conversation with customers and provide effective marketing strategies concerning market segmentation, branding, customer engagement,

etc. Chatbot need not be downloaded as they are installed within messaging apps and thus can be instantly used.

The chatbot is majorly divided into two categories. The first is an AI-powered chatbot that majorly uses AI to learn and gain data from customer's communication and draw connections and respond instantly within that connection. These Chabot interact as humans do. The second is a script-based chatbot that follows predefined programmed protocols and specific flow designed for the specific purpose for instance customer service to boost sales and to frame marketing strategies. Customized bots can also be built as per the requirement of the business and are the most cost-effective compared to building apps and websites. A chatbot will provide many business opportunities to a small business as they are very effective in overcoming the workload of customer related queries. The most frequent and popular chatbot in Facebook messenger. Millions of people use Facebook and messenger around the world and many small businesses nowadays are active on Facebook and thus can effectively use the messenger bots to gather information regarding the user and further use this information for making marketing strategies according to the customer's likes, and dislikes. A Facebook chatbot can be effectively used for interacting with customers directly and gain knowledge regarding their preferences and tastes.

Therefore chatbot is a good opportunity for small businesses as it effectively helps in serving and resolving customer's queries quickly and instantly. Chatbots are used widely for boosting sales, improving customer support, lead generation, and many more. The potential benefit of a chatbot are it can be used 24/7, helps in getting an instant response, easiest ways to communicate and interact, help in resolving customers queries directly, provides good customer experience.

Impact of Innovations on Client Expectations

Clients expect customized, human encounters, and amusingly, AI will be vital. Organizations who don't adjust to these progressions are powerless against their rivals gobbling up their piece of the overall industry. "Computer-based intelligence at its center is truly about perception, and utilizing those perceptions to make human

encounters simply that simply more human," in the words of Chief Executive Officer Nick Edwards; Boomtrain, Zeta Global Company.

In the words of Paul Chong, head of International Business Machines Corporation Europe figures SMEs ought to progressively observe voice, as opposed to applications or website pages, as the most ideal approach to interface with clients. "In future individuals, won't have to go to sites, it will all be about the discussion."

IMPLICATIONS OF THE STUDY

Implication to the Small Business Owners

A small business should explore the opportunities and innovativeness offered by AI-powered technologies to enhance the business experiences, growth, and expansion. Small businesses need to work on strategies and adopt diverse approaches as to how AI can help their respective business and how AI can be effectively implemented in their businesses. AI has the capabilities to observe, deduce, learn, and assist businesses in complex decision making and solve complex problems. AI-powered software and apps can be easily developed or outsourced to enhance and improve business operations, customer relations, productivity, customer queries and enhance customer experiences, and lots more. Its time for small businesses to break the myth and misconception that AI is feasible only for a large organization. Small businesses can also gain a competitive advantage by implementing AI-based technologies to improve their overall business experience. AI-powered technologies offer Virtual Personal Assistants, CRM, Legal Advice, Cyber Security, HR solutions, Chatbots, data analytics, predictive analytics, and the list is endless. These all AI-based tools will surely empower small business owners in automating their repetitive business operations, helps in decision making, framing policies and marketing strategies, speeding up operations, improve productivity, and the most important cost-effectiveness.

Its the right time as well as an exciting time for small business to opt for AI-based technologies for business as the world businesses have shifted from offline to online mode, its time for the small business owner to embrace AI-powered technologies.

Implication To The Students

The 60-year-old AI technology has so much to offer and the demand for AI-powered technologies is increasing every moment. It has open immense job opportunities in the worldwide market. To fulfill the growing demand of the AI sector there is a need to build, develop, and train a labor force to compete with the AI-based technologies. Thus it's a very good opportunity for students to explore AI technologies and get a good job in the field of AI. NASSCOM predicts that by 2022, a startling 46% of the Indian workforce will be engaged in entirely new jobs that do not exist today or jobs that have radically changed skill set. Some other sources estimate that the demand for AI and machine learning specialists in India is expected to see a 60% rise by 2018. In the data domain as well, an independent study estimated that India will face a demand-supply gap of 2,00,000 data analytics professionals by 2020 according to the report presented by NITI Aayog. Students need to gain knowledge and train themselves in data mining, business intelligence, big data, machine learning, analytics, and the list goes endless. Common job openings in the field of AI are that of Business analytic, data scientists, machine learning engineers, solution consultants, cloud architects, software developers, App developer, etc. Students aspiring to become entrepreneurs can also try their luck in developing AI-based customized solutions for small businesses like developing websites with chatbots, virtual personal assistants, cybersecurity, automation of operations, HR-related Solutions, and the list goes on. Thus AI has endless career options and opportunities for students all they need to do is build and develop skills and competencies and explore the AI sector and see what fits the best.

Implication To Government And Relevant Stakeholders

India is the second-largest in population has a significant stake in the emerging AI revolution. AI has been recognized as an important and potential technology that can transform India's economy, all that is needed is the right approach and right strategies. There are many challenges faced while implementing AI for all. Some of the common challenges faced in every sector are lack of data ecosystem, low intensity of AI-based research and development, no collaborative efforts between various stakeholders, less availability of AI expertise, manpower, skilled and highly skilled labor force, lack of awareness and knowledge about the application of AI-based technologies in small

businesses. This is very important for the government and other relevant stakeholders like, institutions, colleges, organizations, and NGOs to come forward and help in overcoming these challenges effectively. Government and other relevant stakeholders need to design campaigns, workshops, seminars, and conferences where they can make SMEs aware of the opportunities hidden behind AI technologies. Collaboration with relevant stakeholders with the government playing the leading role can help in overcoming the challenges effectively. Effective collaboration of government with different research organizations, industries, trade bodies, and venture capitals is needed to spread the awareness of AI and its advantages in the businesses and other untouched sectors. India is marching towards achieving its goal #AIforAll, It time for the government and all relevant stakeholders to hold hand in hand to achieve the goal #AIforAll. It's the right time to design a roadmap to achieve the goal of #AIforAll.

CONCLUSION

All businesses sooner or later will have AI moments as every person on earth is surrounded by some of the other distinct technologies that play an inevitable part in everyone's life. Many organizations have faced the AI experience and benefitted from AI technologies and some will in near future will surely face it. AI technologies are emerging technologies which cannot be ignored and it offers something beneficial for every business. Application of AI technologies in small businesses is endless and only few application has been explored like customer relation management, chatbots, intelligence solutions for customers through AI, predictive analytics. Due to the time constraints application of AI in human resource management, accounting, cybersecurity, legal advice, and the list endless, could not be explored. Small businesses need to understand and explore the application of AI for their respective businesses as AI technologies offer competitive advantages. small businesses need to make good use of AI-powered technologies in their businesses to capture opportunities and competitive advantages.

REFERENCES

1. Abbott, D. (2014). Applied predictive analytics: Principles and techniques for the professional data analyst. John Wiley & Sons.

2. AlSheibani, S., Messom, C., & Cheung, Y. (2020,). Re-thinking the Competitive Landscape of Artificial Intelligence. In Proceedings of the 53rd Hawaii International Conference on System Sciences.
3. Aarstad, A., & Saidl, M. Barriers to Adopting AI Technology in SMEs.
4. Akhtar, M., Neidhardt, J., & Werthner, H. (2019, July). The potential of chatbots: analysis of chatbot conversations. In 2019 IEEE 21st Conference on Business Informatics (CBI) (Vol. 1, pp. 397-404). IEEE.
5. Avery, J., & Steenburgh, T. (2018). HubSpot and Motion AI: Chatbot-Enabled CRM.
6. Baldwin, H. (1948). Intelligence. *The New York Times*, 20.
7. Bai, S. A. (2011). Artificial intelligence technologies in business and engineering.
8. Bari, A., Chaouchi, M., & Jung, T. (2016). Predictive analytics for dummies. John Wiley & Sons.
9. Cahn, J. (2017). CHATBOT: Architecture, design, & development. University of Pennsylvania School of Engineering and Applied Science Department of Computer and Information Science.
10. Chatterjee, S., Ghosh, S. K., Chaudhuri, R., & Nguyen, B. (2019). Are CRM systems ready for AI integration?. *The Bottom Line*.
11. CNBC. (2018). CNBC. Retrieved from <https://www.cnbc.com:https://www.cnbc.com/2018/05/08/googles-assistant-will-soon-place-phone-calls-to-book-appointments.html>
12. Cockburn, I. M., Henderson, R., & Stern, S. (2018). The impact of artificial intelligence on innovation (No. w24449). National bureau of economic research.
13. Cui, L., Huang, S., Wei, F., Tan, C., Duan, C., & Zhou, M. (2017, July). Superagent: A customer service chatbot for e-commerce websites. In Proceedings of ACL 2017, System Demonstrations (pp. 97-102).

14. Desouza, K. C. (2001). Intelligent agents for competitive intelligence: Survey of applications. *Competitive Intelligence Review: Published in Cooperation with the Society of Competitive Intelligence Professionals*, 12(4), 57-63.
15. Eckerson, W. W. (2007). Predictive analytics. *Extending the Value of Your Data Warehousing Investment*. TDWI Best Practices Report, 1, 1-36.
16. Etherington, D. (2018,). tech crunch. Retrieved from www.techcrunch.com: <https://techcrunch.com/2018/01/11/mercedes-benzs-new-mbox-in-car-assistant-and-smart-ui-rocks/>
17. Finlay, S. (2014). *Predictive analytics, data mining, and big data: Myths, misconceptions, and methods*. Springer.
18. Guarda, T., Santos, M., Pinto, F., Augusto, M., & Silva, C. (2013). Business intelligence as a competitive advantage for SMEs. *International Journal of Trade, Economics, and Finance*, 4(4), 187.
19. Groth, R. (1998). *Data mining: a hands-on approach for business professionals* (pp. 390-399). Santa Clara: Prentice Hall PTR.
20. Halper, F. (2014). Predictive analytics for business advantage. *TDWI Research*, 1-32.
21. Heo, M., & Lee, K. J. (2018). Chatbot as a new business communication tool: The case of Naver TalkTalk. *Business Communication Research and Practice*, 1(1), 41-45.
22. Hu, T., Xu, A., Liu, Z., You, Q., Guo, Y., Sinha, V., ... & Akkiraju, R. (2018, April). Touch your heart: A tone-aware chatbot for customer care on social media. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1-12).
23. Jia, K., Kenney, M., Mattila, J., & Seppala, T. (2018). The application of artificial intelligence at Chinese digital platform giants: Baidu, Alibaba, and Tencent. *ETLA reports*, (81).

24. Johannsen, F., Leist, S., Konadl, D., & Basche, M. (2018). Comparison of commercial chatbot solutions for supporting customer interaction.
25. Kennedy, A. (2006). Electronic customer relationship management (eCRM): Opportunities and challenges in the digital world. *Irish Marketing Review*, 18(1/2), 58.
26. Kridel, D., & Dolk, D. (2013). Automated self-service modeling: predictive analytics as a service. *Information Systems and e-Business Management*, 11(1), 119-140.
27. Kiruthika, J., & Khaddaj, S. (2017). Impact and challenges of using virtual reality & artificial intelligence in businesses. In 2017 16th International Symposium on Distributed Computing and Applications to Business, Engineering, and Science (DCABES) (pp. 165-168). IEEE.
28. Klimberg, R., & McCullough, B. D. (2016). *Fundamentals of predictive analytics with JMP*. SAS Institute.
29. Liebowitz, J. (2001). Knowledge management and its link to artificial intelligence. *Expert systems with applications*, 20(1), 1-6.
30. Lee, D. K., & Na, S. Y. (2018). Designing and Implementing AI Chatbot System for Small-business Owner. *The Journal of the Korea institute of electronic communication sciences*, 13(3), 561-570.
31. Mathur, A., *Fundamentals of Entrepreneurship*. New Delhi: Taxmann Publication, 2018.
32. McDermott, M., Levenson, A., & Newton, S. (2007). What coaching can and cannot do for your organization. *People and Strategy*, 30(2), 30.
33. Megahed, A., Ren, G. J., & Firth, M. (2015, June). Modeling business insights into predictive analytics for the outcome of IT service contracts. In 2015 IEEE International Conference on Services Computing (pp. 515-521). IEEE.

34. Ogbuokiri, B. O., Udanor, C. N., & Agu, M. N. (2015). Implementing big data analytics for small and medium enterprise (SME) regional growth. *IOSR Journal of Computer Engineering*, 17(6), 35-43.
35. Salami, N. S. Human Creativity and Artificial Intelligence (AI): Two Distinct Requirements for Sustainable Competitive Advantage. *Westcliff International Journal of Applied Research*, 44.
36. San-Martín, S., Jiménez, N. H., & López-Catalán, B. (2016). The firms benefits of mobile CRM from the relationship marketing approach and the TOE model. *Spanish journal of marketing-ESIC*, 20(1), 18-29.
37. Silipo, R., & Winters, P. (2013). Big data, smart energy, and predictive analytics. *Time Series Prediction of Smart Energy Data*, 1, 37.
38. Singh, R., Shinde, N., Patel, H., & Mishra, N. (2018, April). Chatbot using TensorFlow for small Businesses. In *2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT)* (pp. 1614-1619). IEEE.
39. Srinivasan, V. R. (2012). Predictive business analytics. *The Management Accountant*, 47(2), 211-215.
40. Taylor, J. (2011). *Decision management systems: a practical guide to using business rules and predictive analytics*. Pearson Education.

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ABOUT THE BOOK

The book entitled "Contemporary Issues in Business, Management and economy" is an honest attempt to throw light on the new changes and dimensions coming in the field of business, management and economy. The book brings together various researchers in the area of business and economy. It is an attempt to mix a variety of theoretical articles with insights into the modern workplace, business, and organising along with various studies from the banking services, manufacturing and AI. This edition introduces and examines a variety of aspects of business and economy along with few studies which tried to evaluate some of the current effects of policy and economic change on business and management. Together, the authors contributed a critical viewpoint to organisational inquiries relevant to various debates. This perspective will be invaluable to those seeking both practical and philosophical insights into the nature of work and business in the current environment of uncertainty, austerity, and change.



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