

*Dr. VN Brims*

# Srujan



Vidya Prasarak Mandal's  
**Dr. V. N. Bedekar Institute of Management Studies, Thane**

## **About Vidya Prasarak Mandal, Thane**

Vidya Prasarak Mandal, Thane (VPM) established in 1935, a registered charitable educational trust, in the field of education. Since eight decades, it has been imparting quality education. Currently it caters more than 16000 students across 18 educational institutions. With the vision of expanding its horizons, VPM (Thane) has made collaborative agreements with International colleges. The trust has emerged as a dynamic and responsive global organisation under the visionary leadership of its founder, late Dr. V. N. Bedekar. His son Dr. V. V. Bedekar – Chairman, VPM (Thane), is now carrying forward the legacy.

## **About Dr. V. N. Bedekar Institute of Management Studies (DR VN BRIMS)**

Established in 1973, VPM's (Thane) Management Centre was formerly known as Department of Management Studies between 1973 and 1990 and later on as Institute of Management Studies between 1991 and 2004. In 2005, VPM (Thane) established DR VN BRIMS to launch the two year full-time Master's Degree Program in Management Studies. DR VN BRIMS now has two programmes - the Masters in Management Studies approved by AICTE and affiliated to University of Mumbai and Post Graduate Diploma in Management approved by AICTE. DR VN BRIMS has been consistently ranked amongst the top B Schools in Mumbai.

## **Vision**

To be amongst the top five management institutes in the country and become the World-class centre of excellence in learning and innovation, driven by social sensitivity and State-of-the-Art technology.

## **Mission**

- ❖ To propagate knowledge to society to the best of our ability;
- ❖ To standardise and institutionalise the academic environment;
- ❖ To develop promising managers by nurturing their skills; and
- ❖ To facilitate and empower knowledge with practical approach, while imbibing human values.

---

*Dr. VN Brims*

# Srujan

---

Vol 5 | February 2020

ISSN 2456-4079 Dr. VN Brims Srujan



Vidya Prasarak Mandal's

**Dr. V. N. Bedekar Institute of Management Studies, Thane**

### **Governing Body**

Dr. V. V. Bedekar	Chairman, Vidya Prasarak Mandal (Thane)
Shri Uttam Joshi	Secretary, Vidya Prasarak Mandal (Thane)
Shri M. Y. Gokhale	Treasurer, Vidya Prasarak Mandal (Thane)
Dr. Guruprasad Murthy	Director General, Dr. V. N. Bedekar Institute of Management Studies
Dr. S. Siddhan	Business Advisor, Arch Pharmalabs Ltd.
Dr. Vishnu Kanhere	Chartered Accountant & Management Consultant
Shri G. G. Sathe	Chartered Accountant
Shri P. S. Agwan	Thane Small Scale Industries Association
Shri Subhash Dixit	Ex-President (HR-Planning), Bharati Shipyard Pvt. Ltd.
Dr. Nitin Joshi	Director, Dr. V. N. Bedekar Institute of Management Studies

### **Published by:**

**Vidya Prasarak Mandal's Dr. V.N. Bedekar Institute of Management Studies**

“Jnanadweepa”, Chendani, Bunder Road,  
Thane (W) - 400 601.

Maharashtra

Tel.: 91-22-2536 4492

Telefax: 91-22-2544 6554

Email: surjan@vpmthane.org

Website: www.vnbrims.org / www.vpmthane.org

### **Printed at**

Perfect Prints

22, Jyoti Industrial Estate,

Nooribaba Darga Road, Thane - 400 601.

Tel.: 2534 1291 / 2541 3546

Email: perfectprints@gmail.com



## **Publication Ethics Policy**

Srujan adopts the highest international ethics policy and standards of publishing as followed by American Psychological Association (APA), Publication Manual. Srujan expects articles which are original bonafide research, duly checked for plagiarism in accordance with the AntiPlagiarism.NET software. Srujan strongly condemns any form of malpractices like fabrication or falsification of data, duplication or excessive fragmentation in accordance with the APA norms. The maximum permitted reliance on others' work is restricted to 20%.

Srujan also expects that authors must accept responsibility for their papers sent for publication. Further, authors have to base their research on “objective interpretations of evidence and unbiased interpretations of facts” in accordance with the APA Publication Manual, 6th Edition, P17.

Authors sending their papers to Srujan for publication need to validate and authenticate for the originality of their work as well as vouchsafe for their paper being free from plagiarism apart from the declaration that the paper sent has not been published before in, or submitted to, any other journal.

The Editorial Board of Srujan assures all contributors of scientific conduct and protection of their intellectual capital against any abuse or misuse to advance the research interest of any other individual or group without the prior written consent of the author.

## Aims and Scope

**Srujan** is an annual multidisciplinary management journal, published with an aim to provide a print and online platform for management researchers, students and academicians to publish their original works and refer for knowledge enrichment. It is the official journal of Dr. V. N. Bedekar Institute of Management Studies. “Srujan” means Creation. This journal was conceptualized to promote research and development in management education and become a medium through which innovative ideas evolve. These ideas can then catalyze the creation of a body of a multi-disciplinary and global management thought, which can be useful to industry, government, teaching fraternity and the student world.

**Srujan** has adopted a multi-disciplinary approach to highlight the developments, innovations and intellectual research works in the extensive field of traditional and modern management, business theory and business models, intellectual contributions in management excellence and social and economic practices that contribute to business and societal growth.

**Srujan** considers original research works, surveys, opinions, abstracts, case-studies and essays that deliberate on ideas, suggestions and works that have global, national, or regional perspective.

Substantial research content in the specific verticals include, but not limited to, domains of finance, marketing, operations management, information systems, human resource, organizational theory and behavior, design thinking, project management, quality management, sustainable business management etc. will be considered for publication.

The journal is always open to ideas and suggestions in terms of content and publication. The ultimate goal is to increase knowledge, experience and the outcome and thereby a strong emphasis is laid on the quality and authenticity of the content.

### Open Access

‘Dr. V N Brims Srujan’ (ISSN 2456-4079 Dr. VN Brims Srujan) is an open access journal which means that all content is freely available without charge to the user or his/her institution. Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International Public License.

### Publication fees

‘Dr. V N Brims Srujan’ (ISSN 2456-4079 Dr. VN Brims Srujan) charges a fee of **Rs. 1000/** for article publication in the journal.

# SRUJAN

## Editorial panel

---

### **Chief Editor**

Dr. Guruprasad Murthy – Director General, Dr. V. N. Bedekar Institute of Management Studies

### **Associate Editors**

Dr. Nitin Joshi – Director, Dr. V. N. Bedekar Institute of Management Studies

Dr. Sudhakar Agarkar – Professor, Dr. V. N. Bedekar Institute of Management Studies

### **Editorial Advisory Board**

Dr. Madhuri Pejaver – Director, VPM's Advanced Study Centre

Dr. Sunil Karve – Principal, Karmaveer Bhaurao Patil College of Arts Commerce & Science

Dr. Dilip Nayak – Principal, V.P.M's Polytechnic

Dr. H.S. Cheema – CEO, Excelssior Education Society

Dr. Suchitra Naik – Principal, Joshi Bedekar College

Dr. Vivek Sharma – Assistant Professor, Institute of Management Studies, Devi Ahilya University

Dr. Abhijeet Chaterjee – Head, Department of Management, Shri Vaishnav Institute of Management

Dr. Bharat Kulkarni – Chairman, Indo-Global SME Chamber

Dr. Yogesh Funde – Assistant Professor, Anil Surendra Modi School of Commerce, NMIMS University

Dr. Sushil Kumar Pare – Associate Professor, Thakur Institute of Management Studies & Research

**International Conference 2019-20**  
**“Edu-Future for sustainable world economic order : research, innovation  
and technology”**

The above conference will address the need for increased investment in human capital through research and development expenditure, given the challenges of industry 4.0 (shortened to 14) and education 4.0 to sustain the world economic order. The prime driver of economy in the current scenario is demand for altering traditional learning interface the altered corporate environments and markets to suit the challenges of industry. Thus, educational institutions should improve their speed of change to attain and maintain their competitive edge.

Achieving the ambitious 2030 Agenda for Sustainable Development (United Nations, 2015) requires “new innovative approaches that are socially inclusive and environmentally benign. The ambitious nature of the 2030 Agenda is aimed at, among others, ending poverty and reducing inequality in all its forms everywhere, to promote inclusive and sustainable consumption and production systems, to provide full and productive employment and decent work for all.

Research motivates innovation which in turn creates technology. The new developments like the introduction of artificial intelligence, internet of things, mechanism building and cloud computing have a lot to do with innovation and technology.

This conference would definitely provide the road map for innovation for the 21<sup>st</sup> century, that is to say, speed coupled with multiple tasks to create several platforms for growth and development with research, innovation and technology.

ording to Klwas Schwas, Engineer and Economist and founder and executive chairman of World Economic Forum, “The scale, scope and complexity of how technological” revolution influences our behavior and way of living is anything which humankind is yet to experience.

The previous industrial revolutions i.e Industry 1.0 from 1760 – 1820, industry 2.0 from 1870-2014 and industry 3.0 signifying the digital revolution of 20<sup>th</sup> century witnessed rapid pace of technological (information and communication technology - ICT) developments. The fourth Industrial Revolution (Industry 4.0) with extended technology is expected to be a driver for accelerated growth with multiplier effect for technical change. Coping with such transformation invites innovative and sustainable system as an inevitable concomitant of technological transformation.

This conference proposes a framework for interaction between technological and social innovation with sustainable strategies. The wave of opportunities created through the anticipated industrial wave would be enormous in generating fresh opportunities. This would need the coupling of technology with research and education under the umbrella of innovation for sustainability along with the impact on economic development and possible creative disruption all round which is also a great challenge for society in future.

**Dr. Vijay V. Bedekar**

Chairman

Vidya Prasarak Mandal,

Thane

**Dr. Nitin Joshi**

Director

DR VN BRIMS

**Dr. Guruprasad Murthy**

Director General

Chief Editor, Srujan

DR VN BRIMS

## Editorial...✍

It gives us immense pleasure to present the fifth volume of multi-disciplinary annual journal Srujan in the annual International conference 2020 at DR VN BRIMS. In this journey of five years, Srujan has grown in term of papers, authors, themes and shifted from national to international level.

In this issue we are presenting 14 research papers on various themes with contribution from academia, industry, research scholars and students. A brief overview of the content of articles is presented below:

Dr. Jashan Kheiva and Ms. Damanpreet Kaur in their research paper have discussed about gender difference in selection of the conflict management technique. Conflict cannot be avoided but conflict management skills can be taught, and organizations are actively putting conflict managing programs into practice.

Students Pranita Kothavade and Akshay Gaud in their article emphasized on the importance of gems and jewellery sector due to technological advances in marketing, design, polishing and cutting.

Swati Parab in her research paper outlined the importance of hybrid learning as it is student-directed. Hybrid learning makes it possible for professionals to upgrade their knowledge and skills easily.

Dr. Shebazbano Khan in her research paper has articulated that Textile Industry is a major source of employment in India. The government should provide support in terms of modernization of Textile Industry to become more cost-effective and quality-oriented.

In the research paper “Lack of Tourism Growth in India and Its Impact on Indian Economy” student authors Saurabh Chaudhary, Suyash Patil and Nandini Gupta have highlighted the growth seen in the tourism industry in the past few years. Tourism not only contributes to the GDP of the nation but also creates a lot of jobs and the tourism industry is instrumental in nation’s economic development.

Tabassum Shaikh and Prof. Deepali Manjrekar in their research paper analyzed that google does have an effect on the way we think and how we use our brains to interpret information. People tend to search on google before actual thinking.

Dr. Harpreet Singh and Ms. Savita Sarangal found that e-shopping makes the shopping simple by giving easy access of the catalogue of various products and different offers. Various factors like e-service quality, satisfaction, online store layout, security, ease of use, belief, protection, observed duality, secrecy and dimensions of service quality are part of e-Retailing.

Student Pragati Kadam in her research paper identified impact of technology factors on consumer preference towards refrigerators. Analysis shows that age group, gender and occupation do not impact consumer preference for refrigerator but income level and technology features like faster cooling, feature of dual inverter, service through mobile application, latest technology, life of compressor and power consumption have significant impact on consumer preference towards refrigerators.

Dr. Bhupesh Rane and Prof. Raj Joshi in his research paper raised a question if we are ready for the sustainable change in Education. They summarized the Edu-future based on understanding of the three online edu-companies that have recently made forays in the market i.e BYJU’s, TCS – iON and Vedantu.

A research paper on impact of technology enablers on rural marketing written by Mr. Vijay Karvande and Prof. B.V.R. Murty is predominantly conceptual and demonstrates the strategies, risks and challenges for the Indian corporate houses in developing their bases in the backdrop of the changing rural environment and markets due to the onset of technology in the recent past.

As Indian urban markets are saturating, many corporates are eyeing the big and heterogenic nature of Indian rural markets. Some companies have already made inroads into the rural markets to explore them. In this respect, it is pertinent to know how business atmosphere can be made more conducive to the corporates with the advent of technology in rural areas with certain pertinent questions and suggestions.

Deepak Agnihotri opines in his interesting article on Education in the wake of Industry 4.0, that teaching learning system needs a transformation where education institutes reconceive their competitive advantages and rebuild their service architecture. This can be facilitated by the Universities creating platform-as-a-service thus creating education-as-a-service to be delivered education in the most affordable form making student central to education. Universities will have to emerge in a new form becoming interdisciplinary, virtual and upgrading the educational experience. Evolution of Education Obtaining

skills, knowledge, developing values and habits is what education is and this teaches how to live and not just earn money to live. It trains us to think, prioritize, and understand our struggles. Education provides opportunities, gain experience and solve problems through critical thinking.

“Use of technology to develop entrepreneurial interest and initiatives’ among management students a paper written by by Col. Venkat Raman and Dr Ravindra Limaye shares their views about ‘technology entrepreneur’ as someone who has specific knowledge and expertise essential for any entrepreneur in order to carry out technology centric entrepreneurial activities effectively and efficiently. The paper explained that collaborative research and development activities, producing innovative products, evolving new resources and their attributes which leads toward progression in scientific and technological expertise basically discriminates technology entrepreneurship from other entrepreneurship domains.

Technology has been the biggest change agent in today’s fast-moving environment and it continues to make processes more effective, reduce costs and provide a platform to test creativity through experimentation. It is this quality of technology that can prove to be a big motivator to students today in trying out new ideas, experimenting with new and better ways of doing things and convert these quickly and effectively into a viable Business plan. Chetan Jagtap, in his research work done on “Impact of price factor on cigarette consumption” under guidance of Dr. Shreedharan Menon studied the impact of tobacco as the most important cause of preventable deaths all over the world including India. India is a leading country in cigarette production as well as consumption. Out of 1.1 billion smokers in the world 182 million (16.6%) live in India. The present paper analyses the impact of price factor on the consumption of cigarettes. The findings of the research revealed that price is not an important factor in cigarette consumption. The impact of higher prices, taxes on cigarette consumption is minimal. Marketers have adopted various tactical marketing tools to promote the sale of cigarettes.

Srujan 2020 thus aims at providing its readers a wide array of management research topics with interesting insights on Edu-future for all those aspiring to keep themselves abreast of research. The articles in Srujan should therefore be ‘source of wisdom’ for the readers . We hope that the learnings from the same will even help our students and young budding managers to create new horizons of thinking and emulate right actions in their practical lives as a business professional.

#### **Editorial Committee**

**Dr. Smita Jape**  
Associate Professor

**Dr. Pallavi Chandwaskar**  
Assistant Professor

**Dr. Meenakshi Malhotra**  
Assistant Professor

## Content

1.	<b>Study on Factors Affecting Effectiveness of Hybrid Learning</b> <i>Swati A. Parab, Dr. Nitin M. Joshi</i>	<b>1</b>
2.	<b>An Empirical Analysis of Gender Differences while Choosing Conflict Handling Style in Select Organizations</b> <i>Damanpreet Kaur, Dr. Jashandeep Singh</i>	<b>7</b>
3.	<b>Impact of Price Factor on Cigarette Consumption</b> <i>Chetan Jagtap, Dr. Shreedharan Menon</i>	<b>11</b>
4.	<b>Study of Correlation Among e-Service Quality, Customer Satisfaction and Customer Loyalty in Online Shopping</b> <i>Dr. Harpreet Singh, Savita Sarangal</i>	<b>17</b>
5.	<b>Impact of Technology on Consumer Preference Towards Refrigerator</b> <i>Pragati Kadam, Dr. Pallavi Chandwaskar</i>	<b>21</b>
6.	<b>Does Globalization Impact the Textile Industry: Study of Thane District</b> <i>Dr. Shebazbano Khan, Priyanka Salunke</i>	<b>27</b>
7.	<b>Impact of Technology Enablers on Rural Marketing</b> <i>Vijay Karvande, Prof. B.V.R. Murty</i>	<b>34</b>
8.	<b>Use of Technology to Develop Entrepreneurial Interest and Initiatives Among Management Students</b> <i>Col Venkat Raman, Dr. Ravindra Limaye</i>	<b>40</b>
9.	<b>A Study on Edu-Future for Sustainable World Economic Order: Research, Innovation &amp; Technology of BYJU'S, TCS-ION &amp; VEDANTU</b> <i>Dr. Bhupesh V. Rane, Prof. Raj D. Joshi</i>	<b>44</b>
10.	<b>Education in the wake of Industry 4.0</b> <i>Deepak Agnihotri</i>	<b>47</b>
11.	<b>Linkplace: Philippine Farmers Market Place System for Trading Agricultural Products</b> <i>Joey M. Suba, Philippines</i>	<b>53</b>
12.	<b>Lack of Tourism Growth In India and Its Impact on Indian Economy</b> <i>Saurabh Mohan Chaudhari, Suyash Patil, Nandini Gupta</i>	<b>54</b>
13.	<b>Shifting trends in Gems &amp; Jewellery Industry in India</b> <i>Pranita Kothavade, Akshay Gaud</i>	<b>59</b>
14.	<b>Study on Google Effecting the Creative Side of the Human Brain</b> <i>Tabassum Shaikh, Prof. Deepali Manjrekar</i>	<b>61</b>





# A Study on Factors Affecting Effectiveness of Hybrid Learning

Swati A. Parab

Research Scholar, Pacific Academy Higher Education and Research University, Udaipur

Under the guidance of

Dr. Nitin M. Joshi

Director, DR VN BRIMS

**Abstract:** In recent years Hybrid learning has slowly and steadily been adopted in quite a few institutions. The delivery method in hybrid learning is interesting. Considering the needs of the current students the courses are developed. The limited-time at the disposal of students many universities have developed their hybrid learning courses. This has become a boon to the students who faced challenges attending the traditional personal contact programs. Various factors play a vital role in the delivery of Hybrid learning courses. This paper focuses on the role of various factors that play an important role in making Hybrid learning effective.

**Keywords:** Technology, Personal contact programs, Skills, Curriculum, Pedagogy, Effectiveness.

---

## Introduction

The learning in hybrid learning becomes student-directed. Here, in the Hybrid type of learning teacher plays the role of a facilitator. The learning among the students enhances as the content is modified as per the need of every student. As the method of instruction is online too we see a reduction of resources when we compare it with traditional learning programs. Physical and virtual environments are combined in the era of Educational technology to ensure effective learning. At the same time, it does have its challenges too. Technology is one of the key factors in Hybrid learning. It makes learning possible from anywhere in the world. It acts as a boon to education management. Hybrid learning rests on the shoulder of the teacher imparting education to the students. Effectiveness of hybrid learning will majorly depend upon the skill sets present in a teacher. Hybrid learning is far different from traditional learning. The teacher has to make a lot of changes in the delivery of lessons. Unlike traditional classrooms where the lectures are face-to-face hybrid learning forces teacher to impart education as per the requirements of the individual student. The teacher needs to be familiar with the use of technology. Hybrid learning also emphasises on curriculum development. The curriculum needs to be carefully framed depending upon the course and the delivery methodology. A proper balance of traditional programmes and online programs is essential in hybrid learning.

## Objectives

1. To study the effect of demographics on the effectiveness of hybrid learning.
2. To identify the factors which make the Hybrid learning effective.
3. To understand the impact of various factors on Hybrid learning.

## Review of Literature

Elizabeth Brooke, Chief Education Officer, Lexia Learning and Rosetta Stone, mentions four key factors while selecting a hybrid learning program. Each student is a different student and each student has different needs. Thus, personalizing a blended model in a way that suffices the needs of every student is what should be the motive here. The main principle of hybrid learning is to act versatile when it comes to every student's understanding level. If methods or techniques or technology tools, for that matter, are used that follow the same principle as traditional teaching methods, the whole idea of personalization and effective learning is lost. Thus, you cannot focus on each student individually. Hence, advanced or modern students might find these "in-between" methods of teaching to be not so interesting whereas the other category of students might struggle with the advanced methods of teaching. Either way, teaching and its goal are lost.

Caulfield (2011) in his book 'How to Design and Teach a Hybrid Course' How to Design and Teach a Hybrid Course: Achieving Student-Centered Learning' mentions about aligning teaching practices with adult learning goals. There are three categories of learners. The learners in the first category are goal-oriented. They recognise their specific goals and needs through education and also achieve those through education. This group may seek education through both, formal or informal means. The learning potential of this group of learners increases if the teacher can strike a relationship between the concepts and goals. The next category of learners is the ones who are activity-oriented. Their involvement is based on the degree of interaction they are involved in and they form a relationship with these interactions. The teacher should engage the students in more social interactions during the classwork. These learners will learn more effectively in the class is based on the activities. Learning oriented learners is the third category of learners. They are life long learners. They learn because they want to or because they enjoy learning. They have no other reason

for learning. To engage these students teacher must provide information about the different available learning resources. These provide future opportunities for learners to learn more and will also help in engaging these learners.

Chen & Chiou (2012) in their study on 'Learning style, sense of community and learning effectiveness in hybrid learning environment' examined that higher learning scores and satisfaction was observed in Hybrid learning when compared the score is with the students undergoing face-to-face courses. Stronger sense of community was felt among students of hybrid learning which was not felt by traditional classroom students. Further, they stated that learning style has an impact on learning outcome. Ackerman, Amy S in their study on 'Hybrid Learning in Higher Education: Engagement Strategies' mentions 70% reported that the course fully met their expectations.

### **Research Methodology**

Both, primary and secondary data has been considered for this research. A structured questionnaire has been constructed for the collection of primary data. Objectives of the study have been considered while designing the questionnaire. The questionnaire was finalized after conducting the pilot survey. The primary data has been gathered with the help of 800 respondents (74 males, 66 females) to create a factual study. The sample respondents are in the age group of 15 years to 25 years and from various colleges in Mumbai. These respondents consist of firstly, students undergoing various programmers of the University of Mumbai and are from diverse socio-economic backgrounds. Secondly, the teachers teaching various undergraduate and postgraduate programs in different educational institutes. Thirdly, working professionals from various corporate in Mumbai. Along with primary data, Secondary data to has been collected for this study. To present the facts in a logical order, supporting and relating research material is collected. It covers research articles, reference books, Journals and online data on the subject matter.

### **Limitations of Study**

It was observed that the respondents were too careful while responding to some questions listed in the questionnaire. The findings of the study may be indicative.

### **Factors encouraging effective hybrid learning**

The success of Hybrid learning is dependent on a few factors. They are Technology, Pedagogy, Hybrid learning tools, Skills of the teacher, Curriculum etc.

### **Technology**

Using technology simply for the sake of using can be wasteful. Even by reading from a paper would be more of stress rather than a tab or a notepad.

- A project was done on paper won't help in transforming your classroom out of the old black and white print, rather is can inculcate creative ideas, save time and easy access to a variety of examples and use new links find new information. Problem-solving and spatial reasoning can be done interactively.
- Encourage kids to create own software and new ideas as it can lead to new inventions and can help prosper in the field of education or knowledge generation. This can give rise to several important abilities, like critical thinking, creativity, problem-solving and logical reasoning.
- Mastering many apps, devices and programs in addition to their regular lesson will probably make one overwhelmed as it can open its thought process to new ideas and can lead a new invention. Once they figure it out, they can teach everyone else including the teachers or any adult.
- Evaluating factors like intonation, phrasing, speed, emotion and accuracy all can be learned by themselves when students access to virtual media rather than physical classroom teaching. This can help.
- Find smart ways to use even the unorganized apps which can increase one's knowledge generally.
- A classroom is a great place for children to learn how to behave responsibly but unlike online values would create boredom and a sense of unlikeliest to emotional aspects. Life would cater more to technological upgradation and not human fondness. Create a platform to enact both aspects simultaneously so that it has a well-developed proportion.
- Cultivate their interests- Addressing new barriers and new situation can help students get a chance to embrace new technical difficulties which can put them back rather they should choose to stay well versed with the advancement and cultivate a sense of new learning. Motivation by peers and fellowmen can help them gauge new investments.

### **Learner**

Since the evolution of blended learning, the focus is on the learner. Blended learning has to be learner-centred (Watson, 2008). Discussions, collaboration and emotional support would certainly result in learner satisfaction. (So & Brush, 2008). Hybrid/blended learning should be redesigned periodically to attract the younger generation (Chen & Yao, 2016), however revamping challenges which are generally applicable to all age groups is far better (Shand, Glassett-Farerlly & Costa, 2016). Including appropriate media technology (Kim, Kwon & Cho, 2011), and protecting feedback and giving guidance to the learner (Gamer & Rouse,

2016) would be two encouraging plans to make blended learning more appealing.

### Teacher

There are some important factors in hybrid learning that can be directed by a teacher are been stated by Al-Busaidi & Al-Shihi (2012) through their study. The factors are Computer anxiety, Learning environment quality, Technical support, Management support and an incentives policy.

### Pedagogy

It has been observed that teachers need to be professionally developed to conduct online teaching (Graham, 2006) and a model should be provided to support teachers and instructors (Raphael & Mtebe, 2016). Ongoing use of blended learning environments would depend upon teachers' satisfaction which acts as a most motivating factor (Al-Busaidi & Al-Shihi, 2012). The universities and learners have shifted to blended learning for various reasons. But it is difficult to locate the incentives for teachers.

Effective Pedagogical Practices have formed a strong basis of implementing and establishing Blended Learning as a refined and much effective way of learning. The only

setback here, in the process of online learning, is an overload of information. Cognitive information is made available on a large scale making it a massive ocean of information overload (Graham, 2008). In circa 2008, Terry Anderson suggested that the essence of the online aspect of Blended Learning should be an informative mix of ideas from a wide array of pedagogical methods solely based on didactics. However, research suggests Constructivism, Constructionism, Connectivism and Problem Based Learning, as various preferred pedagogical methods. This has dawned upon the fact that the focus must shift from selecting a single pedagogical method that perfectly suits all Blended Learning implementations to an innovative combination of Instructional Design and Teacher Participation. Many studies and surveys suggest the importance of various attributes of the instructor/teacher namely attitude, teaching methods, command and responsiveness towards the students (Al Busaidi, 2012). These factors cater to the overall social presence of the student along with an authentic learning experience (Kim, Kwon & Cho, 2012). The fact that teachers' responsiveness to student concerns, assessments, constructive feedback and guidance is crucial in the process of making students feel confident about the innovative teaching methods cannot be denied (Garner & Rouse, 2016).

### Data Analysis

#### 1. There is no significant relationship between age and effectiveness of hybrid learning.

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	15.856	3	35.285	5.365	0.001
Within groups	859.144	872	0.985		
Total	875.000	875			

The P value is less than 0.05 therefore the null hypothesis is rejected. Therefore there is significant relationship between age and effectiveness of hybrid learning.

#### 2. There is no significant relationship between area and effectiveness of hybrid learning.

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	1.956	3	1.956	1.958	0.162
Within groups	873.444	874	0.999		
Total	875.000	875			

The P value is greater than 0.05 therefore the null hypothesis holds that there is no significant relationship between area and effectiveness of hybrid learning.

**3. There is no significant relationship between gender and effectiveness of hybrid learning.**

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	4.660	3	4.660	4.680	0.031
Within groups	870.340	874	0.996		
Total	875.000	875			

The P value is less than 0.05 therefore the null hypothesis is rejected. Therefore, there is significant relationship between gender and effectiveness of hybrid learning.

**4. There is no significant relationship between occupation and effectiveness of hybrid learning.**

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	8.515	5	1.730	1.670	0.139
Within groups	846.212	830	1.020		
Total	874.727	835			

The P value is greater than 0.05 therefore the null hypothesis is accepted. Therefore, there is no significant relationship between occupation and effectiveness of hybrid learning.

**5. There is no significant relationship between income and effectiveness of hybrid learning.**

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	0.825	4	0.206	0.25	0.935
Within groups	874.175	871	1.004		
Total	875.000	835			

The P value is greater than 0.05 therefore the null hypothesis is accepted. Therefore, there is no significant relationship between income and effectiveness of hybrid learning.

**6. There is no significant relationship between infrastructure (Technology) and effectiveness of hybrid learning.**

REGR factor Score 2 for Analysis 2

ANOVA					
	Sum of squares	df	Mean Square	F	Sig
Between groups	875.000	828	1.057	559779340098983 00000000000000 0000.000	0.000
Within groups	0.000	47	0.000		
Total	875.000	875			

There is significant relationship between infrastructure (Technology) and effectiveness of hybrid learning.

### **Suggestion and Recommendations**

1. Teachers should be conversant with the technology to use is conveniently in the classroom.
2. The curriculum needs to be updated periodically to maintain it at par with industry requirements.
3. Hybrid learning should keep a track of the latest technological up gradations in the field of education and timely implementation of these up gradations is essential.

### **Conclusion**

There has been a drastic change in the arena of education during the last decade. With the up-gradation of classrooms, traditional teaching tools are barely seen in the classrooms. We see a lot of modernization. Hybrid learning has taken education to the next level. Professional up-gradation needs up-gradation of qualification which is generally a challenge for the working professionals. Hybrid learning makes it possible for professionals to upgrade their knowledge and skills easily. By striking a balance between the personal contact programmes and online programs hybrid learning has acted as a boon to the working professionals. During this research, there are a set of factors which have evolved. These factors are Age, Area, Gender, Occupation, Income and Technology. Each of the factors has been tested for understanding its effectiveness in hybrid learning. During the analysis, it was observed that a few factors like Area and Income did not influence the effectiveness of hybrid learning. Whereas, factors like Age, Gender and Infrastructure (Technology) played a major role in influencing the effectiveness of hybrid learning. When Area as one of the factors considered to understand its impact on hybrid learning, it was observed that the people staying in any area made the urban or rural has no impact on the effectiveness of hybrid learning. This implies that people staying anywhere in the world is bound to go ahead with hybrid learning. The second factor that is occupation also shows no impact on the effectiveness of hybrid learning. There is no specific occupation in which it is found that people are keener on hybrid learning. People in any occupation go ahead with hybrid learning these days. The third factor which showed no influence on the effectiveness of hybrid learning is Income. Hence hybrid learning is not income specific. It is observed that people from phone income groups go ahead with hybrid learning. On the other hand, we see three factors which have a greater influence on the effectiveness of hybrid learning. They are Age, Gender and Infrastructure(Technology).

### **References**

- Bliuc, A., Goodyear, P., & Ellis, R. (2007). Research focus and methodological choices in studies into students' experiences of blended learning. *Internet and Higher Education*, 10, 231-244.
- Graham, C. (2006). Blended learning systems. Definitions, current trends and future directions. In C. Bonk & C. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs*. San Francisco: John Wiley and Sons.
- Garrison, R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7, 95-105.
- Garrison, R., & Vaughan, H. (2008). *Blended learning in higher education: Framework, principles and guidelines*. San Francisco: Jossey-Bass.
- Gerbic, P. (2006). On-campus students' learning in asynchronous environments. Unpublished doctoral thesis, Deakin University, Melbourne, Australia.
- Littlejohn, A., & Pegler, C. (2007). *Preparing for Blended e-Learning*. London: Routledge.
- Mason, R. & Rennie, F. (2006). *Elearning: The key concepts*. London: Routledge.
- Meyer, K. (2004). Evaluating online discussions: Four different frames of analysis. *Journal of Asynchronous Learning Networks*, 8(2). <http://www.aln.org/publications/jaln/index.asp>
- Sharpe, R., Benfield, G., Roberts, G., & Francis, R. (2006). The undergraduate experience of blended learning: A review of UK literature and practice. Retrieved 1 June, 2008 from [http://www.heacademy.ac.uk/projects/detail/lr\\_2006\\_sharpe](http://www.heacademy.ac.uk/projects/detail/lr_2006_sharpe)
- Stacey, E., & Gerbic, P. (2007). Teaching for blended learning - Research perspectives from on-campus and distance students. *Educational and Information Technologies*, 12(3), 165-174.
- Stacey, E., Smith, P.J. & Barty, K. (2004). Adult learners in the workplace: Online learning and communities of practice. *Distance Education*, 25(1), 107-124.
- Tabor, S. (2007). Narrowing the distance: Implementing a hybrid learning model for information security education. *The Quarterly Review of Distance Education*, 8(1), 47-57.

- Vaughan, N. (2007). Perspectives on blended learning in higher education. *International Journal on ELearning*, 6(1), 81-94.
- Wenger, E., McDermott, R. & Snyder, W.M., (2002). *Cultivating communities of practice*. Boston: Harvard University Press.
- Wenger, E. (1999). *Communities of Practice: Learning, Meaning and Identity*. New York: Cambridge University Press.



# An Empirical Analysis of Gender Differences while Choosing Conflict Handling Style in Select Organizations

**Damanpreet Kaur**

Assistant professor, RayatBahra Institute of Management, Hoshiarpur, Punjab

**Dr. Jashandeep Singh**

Assistant Professor, Chitkara Business School, Chitkara University, Punjab

**Abstract:** Conflict is a usual and obvious issue which transpire in all organizations. Spitefulness of captivating a number of initiatives it still occur. The origin of Conflict can be interpersonal relationships, change and inappropriate leadership. Everyday new employees connect with the organization, what they expect is appropriate support and positive working environment. This paper discover the concept of different conflict handling styles and also tries to find out that do different genders choose different conflict handling style. Each has diverse characteristics and effects. Additionally reciprocated admirations cultivate a more productive and effective environment to work. As conflict has direct implications for all but positive result is essential so that positive environment is formed.

**Keywords:** Conflict, Organization, Conflict handling style, Gender.

## Introduction

Conflict is certainly found in every organization primarily and also monitored in the basic political system in which it exist. (Burns and Stalker, 1961; Zald and Berger, 1978; Noon and Blyton, 2002). Understanding the best possible level of conflict, is the usual challenge for businesses. This research can help in understanding the gender difference impact on choosing the conflict handling style in the defined specific area. It is admitted by several researchers that organizational conflict should be handled in such a way which lead to the resolution of the matter and it further improve person, group, and organization and leads to extensive efficiency. While managing the organizational conflict it includes the identification and involvement in conflict at different levels such as intrapersonal, interpersonal, intragroup, and intergroup. Deep study do explain that if there is requirement of study of types of conflict or not. (Rahim, Garrett, & Buntzman, 1992).

This makes the theorist of organizational conflict and its management earn more and more popularity. The importance of the current study in organization, interpersonal conflict is common and is upsetting for managers (Putnam, 1988). While handling the conflict it is found that middle managers are usually devoting 25 percent of their time (Meyer et al., 1997) Different strategies can be used to handle the conflict such as proper planning, meditation and evaluating conflict management strategies. The conflict can be positive or negative and can be beneficial or destructive (Christopher C A Chan, Gary Monroe, Juliana Ng, 2006) Conflict can radically affect employee confidence and turnover rate. It can also lead to litigation, which lead to overall health of the organization (Hirschman, 2001; McKenzie, 2002). If rightfully handled conflict can lead to increase the creativity and productivity of individuals (Uline et al., 2003) it can also lead to improved interpersonal workforce relations (Ting-Toomey, 2012). Conflict can lead to improved efficiency, creativity and profits for the

organization if handled qualitatively (Axelrod and Johnson, 2005).

The main objective of this research paper is to find out the difference in perception of conflict handling styles over the gender.

## Definition of Conflict

The social scientists defined the term conflict in their own way and there are so many definitions. Conflict that occurs in social situation is the result of disagreement over issues of substance or emotional imbalance which further leads to friction between an individual or group (Schermerhorn, 2005). Conflict is a process in which one party assume that another party is negatively affected, or going to get affect (Robbins, 2006).

## Causes of Conflict

Communication is found to be the primary reason of conflict in personal relations and even in organizations. There can be various causes of conflict but misunderstandings, different languages, or incomplete information. Conflict can also be due to power struggle between various departments that can be reward based or due to competition for limited resources between two or more individuals or group for the achievement of goals. Conflict can also be the result of indifferent goals with the job. Different personality characteristics can also lead to conflict (Phillips & Cheston, 1979)

## Forms of Conflict in Organizations

There are different type of conflict in an organization. Following are the various types described as interpersonal, intrapersonal, intergroup, inter organizational conflicts.

### Interpersonal conflict

Interpersonal conflict emphasize the interaction of

employees in an organization. There are several reasons of conflict as different personality, attitude, perception. For instance two interviewers argue with each other in context to the hiring of an employee. It is substantive interpersonal conflict. Two interviewers when have different choice of work outfit for each other is considered as emotional interpersonal conflict.

### Intrapersonal Conflict

Intrapersonal conflict is internal to every person and also effect the functioning of the organization. It is also considered as the most difficult form of conflict when it comes to managing and controlling. It is a conflict between two different tendencies and individual is required to discriminate between the tendencies. In such situation an individual gets aggravated and it leads to absenteeism, unnecessary drinking and even undesirable behavior. If such situation is avoided then it becomes more important to study the individual perception which further work as stimuli and also increases the disturbance between individual and organization behavior. This conflict usually includes the authentic pressure from different goals.

### Intergroup conflict

This type of conflict happens between the members of different teams and groups. This can be based on substantive or emotional incongruity. Intergroup conflict usually creates a hurdle for synchronization and incorporation of activities. The usual example is conflict among cross functional teams in any organizations, such as sales and research. The increase use of cross-functional is mainly focused on minimizing conflict and inducing cooperation and creativity.

### Intragroup Conflict

Intragroup conflict takes place between the different groups or teams. There are two different. Types of intragroup conflict; Task conflict and Relationship conflict. Task conflict is an imminent of difference in group members related to indifferent decisions, thoughts and believes. Task conflict is related to allocation of resources, process, policies and analysis of facts. Relationship conflict is an insight of interpersonal unsuitability and irritation and enmity between the individuals.

### Inter-organizational Conflict

Inter-organizational conflict is such type of conflict that which takes place between two or more organizations. Competition can ignite the inter-organisational conflict. Corporate take over's, mergers and acquisition usually also encourage inter-organizational conflict.

### Conflict Handling styles

Conflict Handling styles are result of bunch of different

individual behaviors used in various conflict situations while optimizing indifferent interaction methods. Concern for self and concern for others are the fundamental elements of interpersonal conflict handling (Follet, 1940; Thomas,1976: Rahim and Bonoma, 1979). On the basis of this five different conflict handling styles been identified by (Sorenson and Hawkins (1995) as follow:

### Integrating style

It engage the evaluation of differences so that an efficient resolution can be achieved by giving creative solutions, and is satisfactory to the conflicting parties. It also connects with transparency in an organization. Integrating is such style of conflict handling in which makes an effort to utilize his skills and information of different individuals to find the solutions .It may be appropriate for dealing with the strategic issues which are concerned with objectives, policies and planning of the organization.

### Obliging Style

It is concerned with the highlighting the common things and getting the differences to please the concern and also to satisfy the needs of the other party. This style is usually used by an individual who believes that he or she may be wrong and that the issue in question is much more important to the other person involved in the same. It can also be used as a strategy when an individual is eagerly obliged with the hope of getting something in return from the other. (Afzalur, Garrett, &Buntzman, 1992)

### Compromising Style

It is concerned with the mutual relationship to make the other equally satisfactory. Compromising style is connected with the middle level of concern for both self and for the others. This style typically involves "give and take" as the name suggests where both parties give up to some extend in order to arrive at a mutually-acceptable decision for both. This style is often used when the goals of the both conflicting parties are mutually exclusive or when both are equally powerful, such as a labor union and upper management in the organization. This style is used while dealing with strategic issues.(Rahim et al., 1992)

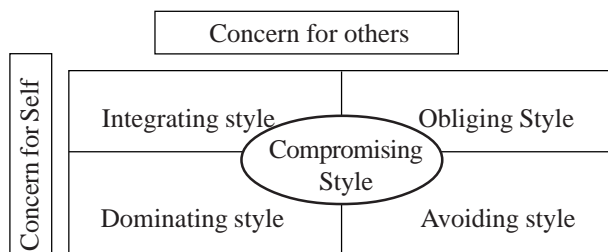


Fig 1

The current study being used is based on the concept of five styles of handling conflict by Rahim (1983) and Rahim and Bonoma (1979). The styles are shown in Figure 1 (Rahim



&Bonoma, 1979, p. 1327). Figure 1 demonstrates the Model of five such different Conflict handling styles.

### Dominating style

This style is linked with forcing behavior which is made to win the position. Herein such conflict handling style one has more concern for self and very less concern for the other. This style is identified with the win-lose standpoint or with the dynamic behavior of one which is made to dominate the other. This style is often used to give quick decision to the dispute or even when the conflict is not much important. This style is primarily used by the upper management after making the organization procedure and policies. The root cause of using this style is to influence others to follow such rules and regulations (Afzalur, Garrerr, & Buntzman, 1992)

### Avoiding style

It is connected with removal or circumvent from a situation and passing it by. This style is based on escorting the withdrawal. It's understood that here an individual is failed to satisfy his and the other party concern as well. This style is used over and over again when an individual deal with the minor issues or with some perceived strategic issues (Afzalur, Garrett, & Buntzman, 1992).

## Research Methodology

The current study examined the influence of gender while choosing the conflict handling style. Other goals of the study were to the maximum conflict handling style chosen by an employee. In this context, a questionnaire was administered to the sample including 52% Male and 48% Female in Hoshiarpur city. The convenience sampling techniques was used for collecting the data through structured questionnaire. As a data collection tool, the study utilized the questionnaire method, which is a quantitative method. The 5-point Likert scale was used. The answer categories for the statements in the scale used included (1) Strongly disagree, (2) disagree (3) Neutral (4) Agreed, and (5) Strongly Agree. The questionnaire included 15 questions. The independent t test was used for hypothesis testing.

### The study tests the following hypothesis

H<sub>0</sub>: The Gender of the employee does not make any difference while choosing the Conflict handling style.

H<sub>1</sub>: The Gender of the employee makes a difference while choosing the Conflict handling style.

Independent Samples Test						
Statements	t-test for Equality of Means					
	T	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1. I do argue my point with the other person to show my position.	0.069	0.945	0.038	0.555	-1.110	1.187
	0.070	0.945	0.038	0.553	-1.105	1.182
2. I discuss with the other person so that common solution can be found.	0.884	0.386	0.404	0.457	-0.541	1.349
	0.894	0.381	0.404	0.452	-0.532	1.340
3. I try to assure that the expectation of the person is satisfied.	-0.186	0.854	-0.071	0.379	-0.854	0.713
	-0.187	0.853	-0.071	0.377	-0.851	0.710
4. I try to examine the problem so that we can be in win-win situation	-0.132	0.896	-0.064	0.487	-1.071	0.942
	-0.133	0.895	-0.064	0.481	-1.061	0.933
5. I am good at convincing the other person that I am true.	-0.061	0.952	-0.026	0.421	-0.897	0.845
	-0.062	0.951	-0.026	0.416	-0.888	0.837
6. I try to avoid the situation by not discussing the problem.	-0.185	0.855	-0.115	0.625	-1.408	1.178
	-0.186	0.854	-0.115	0.622	-1.401	1.171
7. I stick to the words that the solution given by me is perfect.	0.897	0.379	0.487	0.543	-0.637	1.611
	0.911	0.373	0.487	0.535	-0.625	1.599
8. I believe in finding the middle ground as the solution.	-1.397	0.176	-0.590	0.422	-1.463	0.284
	-1.377	0.184	-0.590	0.428	-1.485	0.305
9. I share the correct information while solving the problem.	0.363	0.720	0.122	0.335	-0.572	0.816
	0.361	0.722	0.122	0.337	-0.578	0.822
10. I avoid open conversation of my dissimilarity with the other person	2.099	.046*	1.160	0.553	0.017	2.304
	2.100	.047*	1.160	0.553	0.017	2.304
11. I encourage the consent of the other person as well.	0.074	0.942	0.026	0.349	-0.695	0.747
	0.075	0.941	0.026	0.342	-0.688	0.739
12. I bring the correct information into notice so that the best solution is made.	-1.931	0.066	-0.603	0.312	-1.248	0.043
	-1.897	0.074	-0.603	0.318	-1.269	0.063
13. I prefer the neutral passage as the resolution so that no one is at loss.	-2.039	0.053	-0.615	0.302	-1.240	0.009
	-2.016	0.057	-0.615	0.305	-1.251	0.020
14. I listen to the suggestions of the person.	1.122	0.273	0.288	0.257	-0.243	0.820
	1.146	0.266	0.288	0.252	-0.238	0.814
15. I aim at solving the discrepancies at each level.	0.567	0.576	0.179	0.316	-0.475	0.834
	0.568	0.575	0.179	0.316	-0.474	0.833

## Results

To test the hypothesis whether different gender choose different Conflict handling style, an independent samples t-test was performed. As it can be seen in the table illustrated above. In almost every statement the null hypothesis was accepted and there was no significant difference between the conflict handling styles. The significance level for the study was 5 percent.

## Conclusion

Current research identifies several causes and types of conflict, tests that if there is any difference on the basis of gender while choosing the conflict handling style. Conflict cannot be avoided but conflict management skills can be taught, and admit that organizations are actively putting into practice conflict managing programs. If managers try and identify the conflict than the bad consequences can be controlled. On the basis of the present study, it is proved and there was no significant difference between the conflict management styles on the basis of gender. It is clear that a large amount of research indicating the importance and need for effective conflict management skills is done but the implication is far more required.

## References

- Axelrod, L. & Johnson, R. (2005). Turning conflict into profit: A roadmap for resolving personal and organizational disputes. Alberta: The University of Alberta Press.
- Cetin, M. O., Hacifazlioglu, O. (2004), "Conflict Management Styles: A Comparative Study of University Academics and High School Teachers", Journal of American Academy of Business 5(1/2), 325-332.
- Christopher C A Chan, Gary Monroe, Juliana Ng, R. T. (n.d.). *Conflict Management styles of Males and Female Junior Accountants*.
- Hirschman, C. (2001, July). Order in the hearing. HR Magazine, 46(7), 58–63.
- McKenzie, C. (2002). Developing a CCO (conflict competent organization). Management, 49(2), 34–36.
- Mistry, D., & Mistry, D. (2014). Diplomacy and Domestic Politics. *The US-India Nuclear Agreement*, 42(3), 9–32. <https://doi.org/10.1017/cbo9781139683487.003>
- Paula S Sorenson, Katherine Hawkins Ritch L Sorenson(1995) Gender, Psychological Type and Conflict Style Preference
- Phillips, E., & Cheston, R. (1979). Conflict Resolution: What Works? *California Management Review*, 21(4), 76–83. <https://doi.org/10.2307/41164837>
- Rahim, M. A., Garrett, J. E., & Buntzman, G. F. (1992). Ethics of managing interpersonal conflict in organizations. *Journal of Business Ethics*, 11(5–6), 423–432. <https://doi.org/10.1007/BF00870554>
- Ting-Toomey, S. (2012). Understanding intercultural conflict competence: Multiple theoretical insights. *The Routledge Handbook of Language and Intercultural Communication*, (May 2012), 279–295. <https://doi.org/10.4324/9780203805640>
- Uline, L. C., TschannenMoran, M., & Perez, L. (2003). Constructive conflict: How controversy can contribute to school improvement. *Teachers College Record*. 105(5) p. 782-81

# Impact of Price Factor on Cigarette Consumption

Chetan Jagtap

Research Scholar, Oriental Institute of Management, Mumbai

Under Guidance of

**Dr. Shreedharan Menon**

Professor, DR VN BRIMS

**Abstract:** Tobacco is the most important cause of preventable deaths all over the world including in India. India is a leading country in cigarette production as well as consumption out of 1.1 billion smokers in the world 182 million (16.6%) live in India. The present paper analysed the impact of price factor on the consumption of cigarette. The findings of the research revealed that price is not an important factor in cigarette consumption. The impact of higher prices, taxes on cigarette consumption is minimal. Marketers have adopted various tactical marketing tools to promote the sale of the product.

**Keywords:** Consumption, Marketing, Pricing, Tax Revenue

---

## Introduction

India is a leading country in cigarette production as well as consumption. It ranks second in tobacco production and third rank in tobacco consumption. Tobacco is the most important cause of preventable deaths all over the world including in India. Tobacco kills almost six million people every year causing huge economic loss world-wide. Most of these deaths take place in poor and developing countries. Out of 1.1 billion smokers world-wide 182 million (16.6%) live in India. Accounting for consumption of 1.2 billion cigarettes per annum. Cigarette consumed mainly by middle and upper income group people accounts for one third of total tobacco consumption. Alternative form of tobacco consumed by lower income group people including bidis, hookah, chewing or powdered tobacco, account for the remaining use.

Previous research studies have estimated that 47 to 65 % of the men and 13 to 14 % of all women consumed tobacco and 35% of men and 3% of women smoke cigarette India bears a significant proportion of this global burden.

Consumption of cigarette depends on many factors which can be classified into price factor & non price factors. Price factor include prices charged by cigarette companies while non-price factors include size of population, income of consumers, advertisement & publicity, point of sale, consumer tastes and preferences, socio economic conditions, taxes impose by government and so on. The present research has consider only one factor namely price factor as the determinants of cigarette consumption. An attempt is made to find out the impact of these factors on cigarette consumption.

**Review of Literature:** The following section presents the exiting literature review on the subject of research.

**Hana and Chaloupka Frank (2001)** analysed the impact of cigarette prices on youth smoking. The results confirmed that higher cigarette prices reduce youth smoking. However this depends on elasticity of demand which differs

widely in different age groups and income groups.

**Chaloupka F. J. et al (2002)** conducted research on the impact of rise in price and tax on cigarette consumption and found that cigarette tax or price increases reduce both adult and underage smoking. The general rule is that every 10% increase in the price of cigarette reduce smoking among the adult by adult 3.5% reduce the number of kids who smoke by 6% or 7%, reduce overall cigarette consumption by about 5%.

**Lee Jie-Min et al. (2005)** conducted research on the effect of cigarette price increase on the consumption of cigarette in Taiwan. The findings of research revealed that an increase in the price of cigarette results in a marginal decline in cigarette consumption. The value of the price elasticity of demand is less than one implying that it will reduce consumption and bring additional revenue to the government. Male smokers who had no income or who smoke light cigarette were found to be more responsive to change in cigarette price.

**Farrelly C., and Engelen Mark. (2008 April)**, studied the effect of cigarette price on the consumption of cigarette in USA. The findings of the research revealed that a 10% increase in the price of cigarette lead to 4% decline in cigarette consumption. Thus cigarette consumption can be discouraged by increasing the price of cigarette. A 25% increase lead to 5% reduction in cigarette consumption. Thus price is an important factor discouraging consumption of cigarettes.

**Vera Boadu (2012)** analysed the factors influencing buying behaviour of cigarette smokers. The findings of the study revealed that the major factors include brand of the product, brand awareness, quality of the product, and price of the product, packing, advertisement & publicity, influence of peer group, cultural and psychological factors.

**Blecher Walbeek (2014)** conducted research on the affordability of cigarettes in developed and less developed countries and how this affordability has changed over the

period of time or during the period of 1990 to 2001. The research covered 70 countries which include 28 developed and 42 less developed countries. The findings of the research revealed that despite the fact that cigarettes are more expensive in developed countries, the high level of income in these countries have made cigarettes more affordable to the people. Out of 28 countries cigarettes are more affordable in 11 countries and less affordable in 17 countries. On the other hand in case of less developed countries cigarettes have become more affordable in 24 countries and less affordable in 18 countries of the world. A one percent rise in the price of cigarettes will have negative effect of 0.49 to 0.57% in the consumption of cigarettes in these countries. As a result of higher affordability of cigarettes the consumption of cigarettes have gone up over the period of time and as a result of lower affordability the consumption of cigarettes have gone down over the period of time. The level of affordability is measured by the changes in the level of income and changes in the level of cigarette prices in these countries. For the high income group people the rise in the price of the product has no adverse effect on the demand for the product. The rise in income is measured by the change in the GDP of the country. On the other hand when people find it difficult to afford cigarettes they look for some cheaper substitutes in the market or buy in the grey market.

**Chaloupka F. J. et al (2002)** conducted research on the impact of rise in price and tax on cigarette consumption and found that cigarette tax or price increases reduce both adult and underage smoking. The general rule is that every 10% increase in the price of cigarette reduce smoking among the adult by 3.5% reduce the number of kids who smoke by 6% or 7%, reduce overall cigarette consumption by about 5%.

**Farrelly C., and Engelen Mark. (2008 April)** studied the effect of cigarette price on the consumption of cigarette in USA. The findings of the research revealed that a 10% increase in the price of cigarette lead to 4% decline in cigarette consumption. Thus cigarette consumption can be discouraged by increasing the price of cigarette. A 25% increase lead to 5% reduction in cigarette consumption. Thus price is an important factor discouraging consumption of cigarettes.

**Guillaumier Ashleigh et al (2015)** conducted research on the consumption pattern of cigarettes among the people of Australia over the period of time. The findings of the study revealed that two third of the sample smoke more than 20 cigarettes per day. The price of the cigarette is the main factor affecting the consumption of cigarettes. Smokers pointed out that price is the main factor affecting the choice of the cigarettes and they always buy the cheapest cigarettes and also purchase from the easily available sources. Thus when price rises consumer look for cheaper alternatives to overcome the impact of fall in their purchasing power.

**Lee Jie-Min et al. (2005)** conducted research on the effect

of cigarette price increase on the consumption of cigarette in Taiwan. The findings of research revealed that an increase in the price of cigarette results in a marginal decline in cigarette consumption. The value of the price elasticity of demand is less than one implying that it will reduce consumption and bring additional revenue to the government. Male smokers who had no income or who smoke light cigarette were found to be more responsive to change in cigarette price.

**Ross Hana and Chaloupka Frank J. (2001)** analysed the impact of cigarette prices on youth smoking. The results confirmed that higher cigarette prices reduce youth smoking. However this depends on elasticity of demand which differs widely in different age groups and income groups.

**Vera Boadu (2012)** analysed the factors influencing buying behaviour of cigarette smokers. The findings of the study revealed that the major factors include brand of the product, brand awareness, quality of the product, and price of the product, packing, advertisement & publicity, influence of peer group, cultural and psychological factors.

**World Health Organisation (2015)** in its publication on factors affecting consumer behaviour about buying tobacco products outlined various factors such as price of the tobacco products, disposable income of the consumers, demographic factors like age, sex, socio economic status i.e. literacy level, nature of occupation, employment pattern, urbanisation, government restriction or intervention in the control of tobacco products, consumer knowledge, about the adverse effects of the tobacco consumption etc. These factors differ from country to country and therefore consumption of tobacco differs from country to country.

**XuXin et al. (2016)** conducted research on price related to discounts offered by cigarette companies to promote the sale of the products. The findings of the study revealed that discount is common among the brands of cigarette. It is higher in the premium brand users (22%) and lower in the generic brands (13.3%). Among the premium brand smokers those who smoke 10 to 20 cigarettes per day use discount most often followed by other smoker. Hence a frequent use of the discounts varies between smokers of premium brands and generic brands.

**Yeh Chun-Yuan et al (2017)** analysed the effects of a rise in cigarette prices on cigarette consumption, tax revenue and smoking related deaths in 28 EU countries. The findings of the research revealed that a rise of 10% in the cigarette price would significantly reduce cigarette consumption as well as death toll caused by smoking in all the 28 countries though the final results vary from country to country.

#### **Research Objective:**

[1] To study the impact of pricing in cigarette consumption.

[2] To access the impact of price on cigarette consumption.



## Research Variables

The following research variables have been included in the research:

Dependent Variable

Consumption

Independent Variables

Income, Price

Formulation of Hypothesis

**Null Hypothesis(H<sub>10</sub>):** There is no significant impact of price on tobacco consumption

**Alternative Hypothesis (H<sub>1A</sub>):** There is a significant impact of price on tobacco consumption

## Research Methodology

### Research Design

Descriptive Research Design has been used to determine the attitudes of the respondents with reference to gender, age, income, education and occupation towards tobacco consumption. The impact of price on tobacco consumption has been assessed through the opinions of the respondents.

### Data Collection Methods

**Primary Data:** The survey has been administered to collect the information from the respondents by using the scaling techniques like Nominal Scale, Interval Scale and Likert Rating Scale.

**Secondary Data:** The information has been collected from various sources like Journals, Magazines, Newspapers, Websites related to the literature of tobacco consumption

### Sample Size

The survey has been designed from 100 respondents in South Mumbai

### Sampling Method

Convenience Sampling has been used to select 100 samples as the researcher contacted the respondents based on the willingness to respond for the impact of price on tobacco consumption.

### Statistical tools

The statistical tools like Simple Percentage Method and Binomial test have been used for analysing data and interpreting the results.

The hypothesis testing has been done by using Binomial Test which is a Non Parametric test of hypothesis

### Data Analysis & Interpretation

**[1] Gender Distribution of Sample :** The gender consumption of the consumers can be seen as below.

Gender	No. of Respondents	Percentage
Male	90	90
Female	10	10
Total	100	100

**Inference:** Table 1 shows that out of 100 respondents, 90 (90%) of the respondents are male and 10 (10%) are female. It shows that majority of the respondents were male. Female smokers are less talkative or they are feeling awkward to talk about tobacco use when they are given questionnaires. Comparatively males freely answered about their consumption.

**[2] Age Distribution of Sample:** The age consumption of the consumers can be seen as below.

Age	No. of Respondents	Percentage
15 to 20 years	40	40
20 to 25 years	20	20
25 to 30 years	20	20
30 to 35 years	10	10
Above 35 years	10	10
Total	100	100

**Inference:** Table 2 shows that out of 100 respondents, 40 (40%) of the respondents are in the age group between 15-20, 20 (20%) between 20-25, 20 (20%) between 25-30, 10 (10%) of the respondents are in the age group between 30-35 and the remaining 10 (10%) are between above 35 years. It depicts majority of respondents are in age group of 15-20. 15-30 these two age groups consume 80%, it shows huge gap between youth respondents and mid age respondents. Resultantly youth tobacco consumption is more than mid age respondents. Thus 80% of consumers were young i.e. less than 30 years of age.

**[3] Educational Qualification:** The details consumers can be seen as below.

Qualification	No. of Respondents	Percentage
SSC/ Non SSC	50	50
Under Graduate	20	20
Graduate	20	20
Post Graduate	05	05
Others	05	05
Total	100	100

**Inference:** Table 3 shows that out of 100 respondents, 50 (50%) of the respondents are SSC/Non SSC, 20 (20%) are under Graduates, 20 (20%) are Graduates and 5 (5%) are Post Graduates, 5 (5%) are others. Hence it is observed that increased numbers of graduates are more addicted than other qualified groups. About 70% of respondents were under graduate & only 30% were graduate & post graduate.

**[4] Occupational Distribution:** The details can be seen as below.

Occupation	No. of Respondents	Percentage
Private Services	60	60
Government Services	05	05
Own Work	10	10
Professionals	10	10
Others	20	20
Total	100	100

Table 4 shows that out of 100 respondents, 60 (60%) of the respondents were from private services, 5 (5%) were from Government Services, 10 (10%) were from Own Work, 10 (10%) were from Professionals and 20 (20%) were from others. Majority of respondents were from private services/jobs.

**[5] Income distribution:** The details regarding income distribution can be seen from following

Income	No. of Respondents	Percentage
Less than Rs.2 Lakh	50	50
Less than Rs.2 Lakh – Rs. 4 Lakh	20	20
Less than Rs.4 Lakh – Rs. 6 Lakh	20	20
Above Rs. 6 Lakh	10	10
Total	100	100

**Inference:** Table 5 shows that out of 100 respondents, 50 (50%) of the respondents belong to income level Less than Rs. 2Lakh, 20 (20%) between Rs. 2Lakh - 4Lakh, 20 (20%) between Rs. 4Lakh - 6Lakh and 10 (10%) between Above Rs. 6Lakh. It reveals that majority of respondents are in income group Less than Rs.2 Lakh. In this majority of respondents are in service group as they must be having a very stressful life with outgoings or travelling, wherein very few workers have less source of income but they still use tobacco

products.

**6) Impact of price factor** -The details regarding the impact of price factor on cigarette consumption can be seen from the table below.

No.	Description	SA	A	NA	SNA
1	Price is an important factor in consumption	05	90	-	
2	Cigarette prices are higher in India	70	20	05	05
3	Online price is cheaper	10	20	30	40
4	Foreign brands are cheaper in grey market	10	20	40	30
5	Cheaper substitutes are available in the market	20	40	20	20

**Inference:** Table 6 shows that out of 100 respondents, 90 percent of the respondents considered that price is not a factor in cigarette consumption. 70 percent considered that cigarette prices are higher in India majority pointed out that online prices are not cheaper. Even foreign brands are not cheaper. However majority pointed out that cheaper cigarettes are easily available in the market as substitute to other cigarette brands.

### Hypothesis 1

The following hypothesis has been tested by using Binomial test

**Null Hypothesis ( $H_{1_0}$ ):** There is no significant impact of price on tobacco consumption

**Alternative Hypothesis ( $H_{1_A}$ ):** There is a significant impact of price on tobacco consumption

**Table 2: Observed & Expected values to assess the impact of price on tobacco consumption**

Category	N	Observed Proportion	Test Proportion	Significance Level
Yes	80	.80	.50	.000
No	20	.20		
Total	100	1.00		

**Source: Compiled from the questionnaire**

### Inference

From the table, it shows that the significance (0.000) is less than the assumed value (0.05). So we reject  $H_{1_0}$ . This means that there is a significant impact of price on tobacco consumption.

## Summary of Findings and Conclusion

- [1] India is a leading country in the production as well as consumption of tobacco including cigarette in the world.
- [2] Out of 1.1 billion cigarette smokers 182million (16.6%) lives in India.
- [3] There are many factors affecting consumers behaviour regarding the consumption of cigarette and tobacco products such as price of the product, disposal income of consumers, demographic factors like age, income, occupation, education, marital status, urbanisation, government restrictions etc.
- [4] Various studies all over the world revealed that a 10% rise in cigarette prices can reduce cigarette consumption significantly and also reduce the number of deaths caused due to smocking. This depends on elasticity of demand for cigarette which is relatively inelastic.
- [5] The findings of the present research with respect impact to impact of price factor on cigarette consumption related that price is not an important factor in the consumption of cigarette smoker are not affected by increase in the price of the product. The hypothetical analysis revealed that there is a high impact of price on the tobacco consumption. The customers pay high price for the high quality of tobacco products. The customers those who are price conscious look for low price depending on the ability to pay and consume. Thus price can be considered as an influential parameter in the tobacco consumption.
- [6] Government efforts in controlling cigarette consumption through statutory warnings, pictorial warnings have conducted by manufacturers through innovative marketing practices like point of sale, visual display of the product and advertisement & promotion.
- [7] The study shows that out of 100 respondents, 90 (90%) of the respondents are male and 10 (10%) are female. It shows that majority of the respondents were male. Female smokers are less talkative or they are feeling awkward to talk about tobacco use when they are given questionnaires. Comparatively males freely answered about their consumption.
- [8] The research shows that out of 100 respondents, 40 (40%) of the respondents are in the age group between 15-20, 20 (20%) between 20-25, 20 (20%) between 25-30, 10 (10%) of the respondents are in the age group between 30-35 and the remaining 10 (10%) are between above 35 years. It depicts majority of respondents are in age group of 15-20. 15-30 these two age groups consume 80%, its shows huge gap between youth respondents and mid age respondents. Resultantly youth tobacco consumption is more than mid age

respondents. Thus 80% of consumers were young i.e. less than 30 years of age.

- [9] The study depicts that out of 100 respondents, 50 (50%) of the respondents are SSC/Non SSC, 20 (20%) are under Graduates, 20 (20%) are Graduates and 5 (5%) are Post Graduates, 5 (5%) are others. Hence it is observed that increased numbers of graduates are more addicted than other qualified groups. About 70% of respondents were under graduate & only 30% were graduate & post graduate.
- [10] From the opinions of 100 respondents, 60 (60%) of the respondents were from private services, 5 (5%) were from Government Services, 10 (10%) were from Own Work, 10 (10%) were from Professionals and 20 (20%) were from others. Majority of respondents were from private services/jobs.
- [11] It shows that out of 100 respondents, 50 (50%) of the respondents belong to income level Less than Rs. 2Lakh, 20 (20%) between Rs. 2Lakh - 4Lakh, 20 (20%) between Rs. 4Lakh - 6Lakh and 10 (10%) between Above Rs. 6Lakh. It reveals that majority of respondents are in income group Less than Rs. 2 Lakh. In this majority of respondents are in service group as they must be having a very stressful life with outgoings or travelling, wherein very few workers have less source of income but they still use tobacco products.

## References

- Blecher E. H., Walbeek C P van. (2004 December). An international analysis of cigarette affordability. Tobacco Control, BMJ. Volume: 13, Issue: 4, Pages: 339–346. DOI: 10.1136/tc.2003.006726/ <https://tobaccocontrol.bmj.com/content/13/4/339>
- Chaloupka F. J., Cummings K M., Morley CP., Horan J K. (2002, March). Tax, price and cigarette smoking: evidence from the tobacco documents and implications for tobacco company marketing strategies. Tobacco Control, BMJ Journals. Volume: 11, Issue: 1, Page: 62-72. DOI: 10.1136/tc.11.suppl\_1.i62/ [https://tobaccocontrol.bmj.com/content/11/suppl\\_1/i62](https://tobaccocontrol.bmj.com/content/11/suppl_1/i62)
- Farrelly C. and Engelen Mark. (2008 April). CIGARETTE PRICES, SMOKING, AND THE POOR, REVISITED. American Journal of Public Health. Volume: 98, Issue: 4, Page: 582–583. DOI: 10.2105/AJPH.2007.132647/ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2376976/>
- Guillaumier Ashleigh, Bonevski Billie, Paul Christine Louise. (August 2015). 'Cigarettes are priority': a qualitative study of how Australian socioeconomically disadvantaged smokers respond to rising cigarette prices. Health Education Research. Volume: 30, Issue:

4, Pages: 599–608, <https://doi.org/10.1093/her/cyv026/>  
<https://academic.oup.com/her/article/30/4/599/586228>

- Lee Jie-Min, Liao D-S, Ye C-Y, Liao W-Z.(2005). Effect of cigarette tax increase on cigarette consumption in Taiwan. *Tobacco Control*, bmj.com. Volume: 14, Issue: I, Page: i71–i75. DOI: 10.1136/tc.2004.008177/ <https://pdfs.semanticscholar.org/5991/0eead060c8800d1bce3ae4d2f99992eb8054.pdf>
- Ross Hana and Chaloupka Frank J. (2001). The Effect of Cigarette Prices on Youth Smoking. Impact Teen, supported by The Robert Wood Johnson Foundation. Health Research and Policy Centre, University of Illinois at Chicago. <https://impactteen.uic.edu/generalarea/PDFs/Eff-ttePrices.pdf>
- Vera Boadu. (10, August 2012). A STUDY TO INDICATE FACTORS INFLUENCING THE BUYING BEHAVIOUR OF CIGARETTE SMOKERS. University of Applied Sciences, Faculty of Media, Bachelor Thesis, 41 Pages. [https://monami.hs-mittweida.de/frontdoor/deliver/index/docId/2551/file/Bachelor\\_Thesis\\_2012.pdf](https://monami.hs-mittweida.de/frontdoor/deliver/index/docId/2551/file/Bachelor_Thesis_2012.pdf)
- World Health Organisation.(2015). Factors affecting consumer behaviour of purchasing tobacco product. [https://www.who.int/tobacco/economics/2\\_1ffactorsaffectingconsumerbehavior.pdf](https://www.who.int/tobacco/economics/2_1ffactorsaffectingconsumerbehavior.pdf)
- XinXu, Wang Xu, and Caraballo Ralph S. (2016 Jan-Feb). Is Every Smoker Interested in Price Promotions? An Evaluation of Price-Related Discounts by Cigarette Brands. *Journal Public Health Management Practice*. Volume: 22, Issue: 1, Page: 20–28. DOI: 10.1097/PHH.0000000000000223/ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5094355/>
- Yeh Chun-Yuan, Schafferer Christian, Lee Jie-Min, Ho Li-Ming, Hsieh Chi-Jung. (2017). The effects of a rise in cigarette price on cigarette consumption, tobacco taxation revenues, and of smoking-related deaths in 28 EU countries— applying threshold regression modelling. *BMC Public Health*, 2017; Volume: 17, Issue: 1, Page: 676. DOI: 10.1186/s12889-017-4685-x/ <https://europepmc.org/abstract/med/28931379>



# Study of Correlation Among E-service Quality, Customer Satisfaction and Customer Loyalty in online Shopping

**Dr. Harpreet Singh**

Principal GGNIMT, Civil Lines, Ludhiana (Pb).

**Savita Sarangal**

Research Scholar, Punjab Technical University, Jalandhar (Pb)

**Abstract:** Online shopping is the latest trend in India. People who do online shopping are increasing in an exponential rate. E-shopping or shopping online makes the shopping simple by giving easy access of the catalog of various products and different offers. Due to this the people are shifting from traditional shopping style to online shopping. Since the competition in virtual market is growing, the marketers' must have an upper hand in terms of providing quality service, satisfaction of the customer using the service or e-service and Loyalty of the customer to gain a larger market share. Current study discusses the correlation among service quality, customer satisfaction, and customer loyalty in online shopping. At present time, Increasing competition and changes in the behaviour of the customer in terms of shopping has been forcing the companies to apply a strategy that focuses the customer and which also promotes the significance of the theories that is related to customer like satisfaction of the customer, providing the customer good service quality, and gaining the loyalty of the customer in describing performance of the company. After studying literature from various experts it was found that the extent of the quality of service impacts the size of the customer satisfaction and also if the extent of customer satisfaction is higher, then the more users are willing to become loyal customer, in that sense we can find that there is a connection amid the level of the service quality and the degree of customer loyalty and their satisfaction.

**Keywords:** Online Shopping, Service Quality, E – commerce, E-S-QUAL, Electronic service quality, Customer Loyalty

---

## Introduction

When we do inclusive customer evaluation regarding the excellence and quality of online service provider who deliver services in the virtual marketplace that is online shopping we called it E-service quality. The importance of scanning as well as figuring e-service quality has provided value to the virtual world. It is a subjective measure so it is very difficult to measure it. A consumer can be unhappy even if he gets the same service as predicted by him. E-S-QUAL scale is established by Parasuraman Zeithamal to compute quality of a service. A quality product leads to the satisfaction of the customer. Customer satisfaction can be define as a measurement that determines how delighted customers are with a company's products, services, and competences. Customer satisfaction has become a main trait used for organizational competitiveness as only a satisfied customers can be converted in to loyal customers. Consequently, it is needed to measure the satisfaction of the customer in the case of online shopping, because if a customer is satisfied then he/she will do repetitive purchases and recommend the service to others also. Consequently it generates the profit for the e-commerce company. There are few factors like website service quality that influence the customer in terms of satisfaction, so there are lot of studies that shows the connectionamidservice quality provided through website and customer satisfaction. The concept and the relation between the three that is service quality, customer satisfaction and loyalty of the customer has been very well defined by various experts. The experts have not only defined the concept but also suggested various ways in which e-service quality (e-SQ) clearly impacts online businesses. According to them the positive relation between

service quality, customer satisfaction and customer loyalty results in customer's purchase intensions. Various other exporters have explained the same concept that is about the online shopper satisfaction, brand equity of website and loyalty of e-shopper. So now a day's e-satisfaction (satisfaction that customers get after shopping online) has become the important topic for research.

## e-Satisfaction

Customer satisfaction has become an important factor in meeting competition and reaching to the triumph in the virtual market (Zeglatet al.2016). It is very hard to define this concept, for of its several interactions with other variables. However, it plays very important role in affecting attitude, persuading the behavior of users and valuation of the different products and services, that controls the trust worthiness of the user. The various factors of the concept of bond have its relationships with e-Service Quality and loyalty of online service user (Gounaris et al., 2010) The bond amongst online Service Quality and satisfaction, which consist of quality of information and customer expectation, has been sculpted by different researchers. Moreover, Zeglat et al. (2016) analyses the major and progressive relationships among three.

## e-Loyalty

Online customer loyalty is similar by way of the theory of loyalty to a firm, in the intellect that loyalty towards a service provider leads to purchase of the product and regular visits to the store. Numbers of studies have been done that shows how online Service Quality effects online customer loyalty (Prougestaporn et.al 2015). But, these researches do

not segregate among the two types of customer loyalty that is attitudinal and behavioral. Attitudinal customer loyalty states that a positive attitude results in repeat purchase behavior and is deliberated to be accurate loyalty. Second is Behavioral loyalty, it may be defined as the commitment of the consumer towards the brand, so considering the emotional component the customer will change the supplier or the service provider if the supplier or service provider changes its marketing strategy or any of the loyalty program. Thus, customer loyalty does not only results in repeat purchasing behavior, and it does not only concerned with commitment, but it considers both the factors collectively, also taking in to consideration that loyalty takes place when customers psychologically get involved with service provider that is website, that consequences in a progressive attitude and an operative repeat purchasing intention .

### Relationship between Online Service quality, Customer Satisfaction and Loyalty

Not much work has been done in the field where this connection between customer satisfaction and online loyalty for e-services has been clearly addressed. For example, Anderson & Srinivasan (2003) measured: several variables affect the influence of customer satisfaction on online loyalty, like trust and the value established by customer while doing e-purchase. This relationship is stronger in doing online shopping than in brick and mortar style of shopping, and attaining customer loyalty in online shopping environments is more hard and costly than in the offline or traditional shopping. Besides, if one has to achieve online loyalty then e-Service Quality offered by his website is compulsory to fulfill the expectations of the customer (Cristóbal et al., 2007). So, the customer satisfaction plays a role of mediator among the quality and loyalty stating that if the customer would not get a satisfactory quality service then he will never become a loyal customer. This can be clearly shown in the diagram below:



Jamal & Dandis (2018) scrutinized that service quality have influence (online-service quality) on loyalty of customer with the intervening influence of customer satisfaction. They have done the primary study with questionnaire filled from around eight hundred and sixty respondents. they have proposed a model which shows that there is constructive influence of internet service quality on customer satisfaction that in turn can impact the level of customer loyalty.

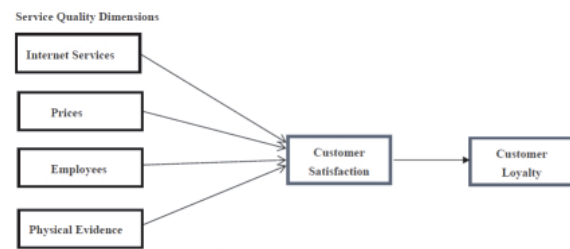


Figure 1. Conceptual framework

The outcomes of research study shows that the level of the customer satisfaction influences the level of service quality with its extents. Physical evidence is found to be the most important aspect among all the aspects. The study concludes that the service level that is given to the customer have an impact on satisfaction level in terms of enticing towards the service and satisfy them with the expected level of the service. Experts recommended that employee awareness is the best move towards customer satisfaction. If the employee is Aware he tends to pay more thought towards the idea of service quality that can leads to a customer loyalty. They have analyzed that employees has no impact on the customer satisfaction and loyalty, and so from that point it is suggested that they should be trained in a better way and should use more scientific approach while dealing with the customers and their satisfaction so that they can become loyal customer.

(Rami Mohammad Al-dweeri et al.) Also analyzed the role played by e-satisfaction and trust as intermediaries in defining the relationship between electronic service quality (e-SQ) and online loyalty, in context of e-shopping. They have used a questionnaire to collect the data from the students of the different universities of Jorden because the maximum students use internet. Moreover the target group is the major group who participate in e-shopping, because internet is easy assessable to university students, they use the internet in their routine. They have proposed a model in which it is shown that customer loyalty both behavioral and attitudinal depends on the customer's view of the quality of service for the online shopping, with efficiency, privacy and customer service being the major explanatory factors for e-Service Quality. More over, it was found that satisfaction is playing the role of a mediator in defining the relationship between e-Service Quality and behavioral and attitudinal loyalty. Efficiency and privacy have negligible or no impact on e-satisfaction. Nevertheless, important association is there between customer service and e-satisfaction and trust. So the service has an encouraging influence on e-satisfaction and trust, whereas content and simplicity of use has no impact. They have clearly given the reason about their result. They said that the findings are so because the respondents in this study were youth so they have good skills for searching the information and using that. On the basis of their results they have proposed the following model.

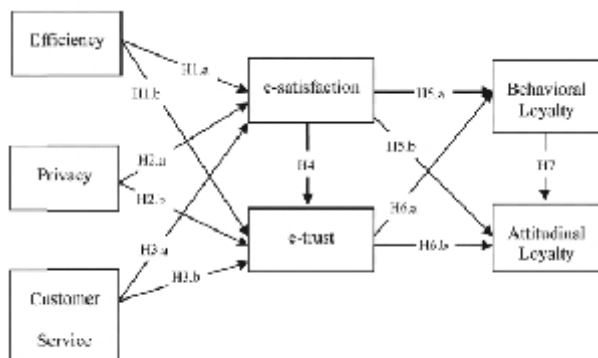


Figure 1. Proposed model

Proposed model is based on the various hypotheses taken by the researchers. Like H1 (a) stands for efficiency is completely connected to e-satisfaction. H1 (b) is efficiency is completely connected to e-trust so the experts shows that efficiency have progressive impact on creating the trust. Now the another hypothesis they have taken is H2(a) which stands for privacy is absolutely stands for satisfaction and H2(b) that shows privacy is completely connected to e-trust. Like efficiency privacy also have positive impact on creating customer trust and satisfaction. Another factor taken by researchers is customer service and they have named it as H3(a) that shows customer service is related to customer satisfaction positively and H3(b) that stands for customer service is related to trust of the online customer. Further H4 is e-satisfaction is correlated to e-trust, H5(a) is e satisfaction is positively correlated to customer behavioral loyalty online and H5(b) stands for e-satisfaction is absolutely correlated to customer attitudinal loyalty online. H6 (a) is e-trust is absolutely correlated to customer behavioral loyalty online. H6 (b) stands for e-trust is absolutely correlated to customer attitudinal loyalty online. And in the end H7 stands for customer behavioral loyalty online is absolutely correlated to customer attitudinal loyalty online. Likewise, while explaining the link between trust, satisfaction, and loyalty (attitudinal and behavioral), they found that there is positive and significant relationships between satisfaction of online customers and e-trust, and between e-trust and e-loyalty. So the researchers approved that there is a positive relationships between the main constructs of the measurement model: e-satisfaction, e-trust and two types of e-loyalty (behavioral and attitudinal). Trust of an online shopper is an originator of its satisfaction, and users will be gratified if the service provider gave them different descriptions for trusting them.

### Scope for further Research

In the above discussion various work done by different researchers in the field of e-customer satisfaction and loyalty has been discussed and it can be taken as the base for the further future research. The relationship model of customer satisfaction, service quality and customer

Loyalty model can be studied by the experts by using primary data and further various new models can be developed by the researchers. The progress of internet and online shopping will continue and with increased competition the research can be done for measuring actual purchase behaviors and level of satisfaction in the different states and cities of India.

### Conclusion

So it is concluded that in India the people are shifting from traditional way of doing shopping to online shopping. As the economic condition of the people is changing, a rise have been seen in the purchasing power of the people also, which results in rise in the demand of various goods and services. According to an estimate by the year 2020 e-commerce will be viewed as one of the leading phenomena. In the given paper an attempt has been made to provide an outline of the work related to the field of online service quality, customer satisfaction in case of online service users and Loyalty. Some of the important components of the relationship between these three have been brought to light. Although in India not much work has been done by the researchers in the area of service quality especially e service quality, Customer satisfaction and loyalty, we have attempted to bring forward some key concepts which provides ground for more wide research in the given area.

According to the different work done in this area various factors like e-service quality, satisfaction, online store layout, security, ease of use, belief, protection, observe utility, secrecy and dimensions of service quality e-SQUAL etc in e-Retailing are very important factors but not much work has been done in India, that provides scope and prospect for research in India and its various states. Online retailing sector has number of challenges to the legal system that we need to be explored. Various trade model adopted by different online retailers in India is the part that desires to be discuss in detail.

### References

- Al-dweeri Rami Mohammad, Obeidat Zaid Mohammad , Al-dwiry Mohammad Ahmad, Alshurideh Muhammad Turki , Alhorani Alaa Mohammad, *The Impact of E-Service Quality and E-Loyalty on Online Shopping: Moderating Effect of E-Satisfaction and E-Trust* *International Journal of Marketing Studies*; Vol. 9, No. 2; 2017, ISSN 1918-719X E-ISSN 1918-7203, Published by Canadian Center of Science and Education
- Anukrati Sharma, "A Study on E-Commerce and Online Shopping: Issues and influences" *Ijcet*, vol4, Issue 1, pp. 364-376 January- February (2013).
- Azam, A., Qiang, F., & Abdullah, M. I. (2012). Satisfaction in business-to-consumer electronic

commerce. The Business and Management Review, 3(1), 18-26.

- Bhatt Shahir and Bhatt Amola, *Factors Influencing online Shopping: An empirical Study in Ahmedabad*, The IUP Journal of Marketing Management, Vol. XI, No. 4, 2012
- Dahiya Monika, *Online Shopping Scenario in India: Brick to Click Journey*, International Journal of Economic and Business Review, February 2015, Vol-3, Issue 2.
- Deepali *Study on growth of Online Shopping in India*, IJCSMC, Vol. 2, Issue. 6, June 2013, pg. 65 – 68
- Dwivedi Manish, Kumawat Mahesh & Verma Sanjeev, *On-Line Retailing In India: Opportunities And Challenges* I.J.E.M.S., VOL. 3(3) 2012: 336-338
- Guang Lee-Gwo and Fen Lin-Hsiu, *Customer perceptions of e-service quality in online shopping*, international Journal of Retail and Distribution Management, Vol. 33 No. 2, 2005
- Jamal M. M. Joudeh & Ala' O. Dandis, *Service Quality, Customer Satisfaction and Loyalty in an Internet Service Providers*, International Journal of Business and Management; Vol. 13, No. 8; 2018, ISSN 1833-3850 E-ISSN 1833-8119, Published by Canadian Center of Science and Education
- Karl Markos Biswas, Mohammed Nusari, Abhijit Ghosh, *The Influence of Website Service Quality on Customer Satisfaction Towards Online Shopping: The Mediating Role of Confirmation of Expectation*, International Journal of Management Science and Business Administration, Volume 5, Issue 6, September 2019, Pages 7-14
- Mohammed Rafiq, Xiaoming Lu and Heather Fulford, *Measuring Internet retail service quality using E-S-QUAL*, Journal of Marketing Management Vol-28, No 9-10, August 2012.
- Murugavel, D.M.V., (2010), 'E-tailing market scenario in India- A Bird's eye view' Indian Journal of Marketing, August 2010.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988). *SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality*. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V., & Malhotra, A. (2005). *E-S-QUAL: A multiple-item scale for assessing electronic service quality*. *Journal of Service Research*, 7(3), 213-233. <https://doi.org/10.1177/1094670504271156>
- Sajjad Nazir, Arsalan Tayyab, "How Online Shopping Is Affecting Consumers Buying Behavior in Pakistan?" *IJCSI*, vol 9, Issue 3, pp 486-495, May 2012.
- Sandhu Vikram and Atwal Heena, *E-RETAIL: ITS GROWTH AND PROSPECTS*, Radix International Journal Of research In Social Science, February 2013 Vol-2, Issue-2
- Sarmahupakul and Sharma K Mrinmoy, *Service Quality check: Online Shopping* SCMS Journal of Indian Management, October-December 2011.
- Zehira Cemal, Narcýkarab Elif, *E-Service Quality and E-Recovery Service Quality: Effects on Value Perceptions and Loyalty Intentions*, Procedia - Social and Behavioral Sciences 229 ( 2016 ) 427 – 443.
- <http://gadgets.ndtv.com/internet/news/average-online-spending-for-indians-to-rise-67-percent-in-2015-study-641176>
- [http://www.business-standard.com/article/management/entertainment-pips-social-networking-in-online-search-114083100580\\_1.html](http://www.business-standard.com/article/management/entertainment-pips-social-networking-in-online-search-114083100580_1.html)
- [http://www.business-standard.com/article/companies/we-are-getting-closer-to-real-time-shopping-sachin-bansal-115020200037\\_1.html](http://www.business-standard.com/article/companies/we-are-getting-closer-to-real-time-shopping-sachin-bansal-115020200037_1.html)
- <http://articles.timesofindia.indiatimes.com/keyword/online-shopping>
- <http://articles.economictimes.indiatimes.com/keyword/online-shopping>
- <https://www.privacyrights.org/fs/fs23-shopping.htm#1>
- <https://researchleap.com/influence-website-service-quality-customer-satisfaction-towards-online-shopping-mediating-role-confirmation-expectation/>



# Impact of Technology on Consumer Preference Towards Refrigerators

**Ms. Pragati Kadam**

Student, MMS Second Year, DR VN BRIMS

Under Guidance of

**Dr. Pallavi Chandwaskar**

Asst. Professor, DR VN BRIMS

**Abstract:** Technology has impact almost over every aspect of consumerism today. Consumer electronics industry is also affected this and high-end technology features in products are influencing consumer preference towards products of different brands offering advanced technological features. This study aims at identifying impact of technology factors on consumer preference towards refrigerators. Study is based in Mumbai region and identifies 4 demographic variables Age group, Gender, Income level and Occupation as well as technology features of a refrigerator. Five hypothesis statements are tested based on above variables to study the impact of technology along with demographic variables on the preference for refrigerator brands. Results of the study indicate that Age group, gender and occupation do not impact consumer preference for refrigerator but income level and technology features like faster cooling, feature of dual inverter, service through mobile application, latest technology, life of compressor and power consumption have significant impact on consumer preference towards refrigerators.

**Keywords:** Technology, Refrigerator, Consumer Preference

---

## Introduction

The consumer is the main person in every business, in the company's growth, in the company's achievements. Every company's goal is to achieve the company's vision and their mission and to achieve that we need to understand the consumer's needs, their preferences and their requirements from that product. After knowing that its company's responsibility to fulfill that requirement, that need of the consumer. The customer is the individual who not only consumes the item but also provides feedback that product, to that brand. Consumer loyalty depends on the service given by the company. How the company develops that trust, that faith, that loyalty is very important. Because once the consumer trust in your brand they prefer that product again without any second thought of it. The consumer also starts using that same brand for other products because the consumer has that trust in that brand. Consumer preference is described as "individual consumers ' subjective tastes, measured by their satisfaction with those products after purchasing them."

Consumer preference is to look simple to comprehend, but understanding their requirements is very hard. Because there are only a few consumers who know what they wanted but some consumers who don't know about their requirements and what they wanted and that consumers are very difficult to tackle. When the consumer know what they wanted about their requirement it is companies job to build the trust to them and once the trust is built then the company needs to be innovative about every product at every stage of the product life cycle.

It is a notion, especially in economics, used in social science. Electronic good becomes the basic need rather than a luxury for every social class. People are living in the age of

electronic goods. To survive one day without that electronic goods is quite impossible.. There are many manufacturers are available to the consumer has the choice to select the best product and brand from this choice. In the electronic goods, there are some home appliances without that people can't live.

In any industry innovation is important but innovation in consumer durables is a must because consumers invest more amount of money in electronic products and they expect that they will get enough return from it. And the best way to do innovation in technology. We live in the '20s and today's technology is reached to the other level as compared to the 19's and 18's. Technology helps the human being to live with easiness. And that technology makes the consumer expect more. And same this innovation and technology help in the refrigerator industry.

The fridge or refrigerator is an appliance or compartment that is kept artificially cool and used to store food and drinks so as to maintain the food fresh for a few days. The refrigerator replaces "Icebox." For almost a century and a half before, icebox was a household item. We can claim that Icebox is an ancient refrigerator version that is used to maintain food fresh and cool. It is mainly used to maintain meat and other perishable products, preventing diseases caused by food. It works because bacteria growth is slowed at lower temperatures.

After icebox thing technology takes place and they started to make a refrigerator with the help of innovation and that technology and innovation become the consumer preference. Storage for food, even it keeps your food fresh and then they increased the storage capacity. Now the technology has reached at this point that you can use it in convertible mode. Technology is important because, for personal and business reasons, it makes you feel safer with

each area of life. Cooling technology provides the basis for heat pumps to save power and carbon emissions in all forms of manufacturing and building applications. In terms of energy, it is possible to liquefy natural gas through cryocooling, making it easier and cheaper to transport and store.

One of the major driving forces in the appliance industry is the desire for increased energy efficiency. This innovative, fast-demolding technology enables OEMs to produce cabinets with improved production efficiency while supporting the refrigerator's own energy efficiency and other important quality parameters.

Such technology and innovation made by the some company are door cooling, dual inverter, the compressor technology, changing mode of refrigerator, controlling refrigerator through phone etc., this technology helps the consumer a lot in the making profit. Consumer's preferences can be changed from one brand to another brand as they unable to find the product they want and they will that necessity from another brand. And this is in human nature if someone is giving the same product with better feature, within new technology and then to in a budget price they will try something new and once they feel this is enough fro the money they will start to move to other brand.

Consumer's preference, their choice, their trust, their loyalty, and their satisfaction depends on the performance of that product, service given by the company. It is very important to maintain the relationship between the consumer and the company. In the end, every consumer just needs satisfaction from the product they use.

So the innovation and technology is must in every industry, in every sector for better future and it impacts consumer preference towards products.

### Objectives

1. To study factors influencing consumer while the purchase of refrigerator.
2. To study the importance of technology in consumer preference towards the refrigerator.
3. To study the consumer's preference and the technical factors affecting the consumer while purchasing refrigerator.
4. To study the importance of innovation in the refrigerator industry from a consumer point of view.

### Historical Overview Of Refrigerator

- The history of artificial cooling began when the Scottish professor William Cullen built a tiny cooling machine in 1755. Cullen used a pump in a diethyl ether container to create a partial vacuum, which boiled after that and

absorbed Surrounding air heat. The experiment even produced a tiny quantity of ice, but it did not have any practical results implementation at that time.

- A closed compression of vapor cooling Ether manufacturing cycle by was described Ether manufacturing cycle by American inventor Oliver Evans in 1805.
- At the bottom of the cabinet in 1916, Alfred Mellowes developed a self-contained cooler with a compressor. Mellowes manufactured this refrigerator commercially, but was purchased by William C. Durant in 1918, who began the Frigidaire Company to produce mass-produced refrigerators.
- The first refrigerator with any sort of automatic control was launched in 1918 by Kelvinator Company.
- In 1940, the first effective introduction of frozen food by Marjorie Merriweather Post in the United States. The frozen food shops made it possible for Davies to entertain and serve otherwise out of season fresh frozen foods sumptuously. Home freezers as separate compartments (only for ice cubes) or as separate units.
- In the 1970s and 1980s, more effective refrigerators were created, although environmental problems resulted in very (Freon) refrigerants.

### Electronics Appliance Industry: Current Scenario

- In 2017, the Indian market for appliances and consumer electronics (ACE) reached Rs 2.05 trillion (US\$ 31.48 billion). It is anticipated to rise to in 2022, Rs 3.15 trillion (USD 48.37 billion) at a CAGR of 9 percent. In India, Demand for hardware in electronics anticipated to achieve FY24 \$400 billion.
- Exports of Indian consumers ' electronics amounted to 451.29 million dollars in the year 2019. The demand for durable goods such as refrigerators and consumer electronics is also probable to experience increasing demand in rural economies in Governments are planning to invest strongly in rural electrification in the coming years. Sensitivity, easier access and evolving lifestyles were main drivers of development for the consumer sector.
- Consumers in India sustainable in the urban and rural market economies and attracts global marketers. The industry consists of an enormous middle class, a comparatively big wealthy class and a tiny economically disadvantaged class.

### Industry Insights

- Single door refrigerators and freezers are the most commonly used form of door as they are cost-effective, easy to use and may or may not contain an integrated freezer. On the other side, French door refrigerators are gaining rapid popularity due to the ease of use and intelligent characteristics implemented in these refrigerators.
- Their adverse effect on the environment is a main issue for the use of refrigerators that have always existed. High consumption of energy, coal emissions and other pollutants from them are damaging to the atmosphere. Nevertheless, market players are attempting to develop fresh models with minimal environmental impact. Discontinuation of the use of ancient refrigerators and periodic maintenance.

#### Future Prediction about the refrigerator Industry

- The projected refrigerator market size It is estimated in India at Rs 195 billion (USD 3.02 billion in 2017) and Rs 344 trillion (USD 5.34 billion) is expected to reach by 2022.

#### Review of Literature

Literature Review is a sort of review article in which the investigator did something associated to this issue or problem. A literature review is a Present understanding paper or paper, including substantive findings, as well as theoretical and methodological contributions to a particular topic.

Anitha K (2018) mentions in her study that main goal is to define the factors influencing the replacement purchase of refrigerators. “Buying conduct of refrigerators with unique reference to Calicut City” provides the manufacture of refrigerators, as in some families the choice is made by the economic individual, but when it comes to home appliances it is important to look, design, specification and that choice is made by the women. Furthermore, the research is to review the business situation of the identified products, to show the profile of customers considered for the research, to assess the factors that influence the purchase conduct of replacement. O Sari, M Balli (2014) in their study identifies the negative impact of refrigeration on the environment is visible and, consequently, refrigeration systems are subject to prescriptive regulation. This regulation provides a great opportunity for the emergence of new refrigeration technologies and new product markets. In recent years, magnetic refrigeration is considered as a serious alternative for conventional systems.

#### Research Methodology

This study has taken the exploratory research design because the study needs a clear investigation about the problem. This has been conducted with the help of primary

data. The primary data has been collected with the help of a structured questionnaire considering the objectives of the study. The primary data has been gathered from 103 respondents. This study included all age group based customer, all social class customer and the locality of the customer. It has the sample design as convenience sampling. A convenience sampling involves choosing respondents at the convenience of the researcher. This research study has sampling area was from Airoli.

Data analysis is the method of data evaluation using analytical and statistical instruments to find helpful information and make appropriate decisions about the issue. SPSS (Statistical Package Social Science) is the tool used for data analysis in this research study.

#### Data Analysis And Interpretation

A hypothesis is about the relationship between two or more variables. This hypothesis helps to compare the two variables depend on the project’s objective to find out the required outcome. The hypothesis formed and tested for this study are as following:

#### Hypothesis

**H<sub>A</sub> 1= There is significant relationship between Age and consumer buying preference towards Refrigerator**

$$\mu \neq 0$$

Output:-

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.722 <sup>a</sup>	12	.124
Likelihood Ratio	21.028	12	.050
Linear-by-Linear Association	1.453	1	.228
N of Valid Cases	103		

Table 6.1.3.1

#### Interpretation

- Since the p value at 95% significance level is greater than 0.05 so the null hypothesis is accepted.
- Therefore, there is no significance relationship between age and consumer preference.

**H<sub>A</sub> 2= There is significant relationship between Gender and consumer buying preference towards Refrigerator**

$$\mu \neq 0$$

Output:-

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.259 <sup>a</sup>	3	.100
Likelihood Ratio	7.433	3	.059
Linear-by-Linear Association	.065	1	.798
N of Valid Cases	103		

Table 6.1.3.2

#### Interpretation

- Since the p value at 95% significance level is greater than 0.05.
- So accept the null hypothesis.
- Therefore, there is no significance relationship between Gender and consumer.

**H<sub>A3</sub>= There is significant relationship between Occupation and consumer buying preference towards Refrigerator**

$$\mu \neq 0$$

Output:-

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.430 <sup>a</sup>	15	.569
Likelihood Ratio	16.600	15	.343
Linear-by-Linear Association	.291	1	.590
N of Valid Cases	103		

Table 6.1.3.3

#### Interpretation

- Since the p value at 95% significance level is greater than 0.05.
- So accept the null hypothesis.
- Therefore, there is no significance relationship between Occupation and consumer.

**H<sub>A4</sub>= There is significant relationship between Income and consumer buying preference towards Refrigerator**

$$\mu \neq 0$$

Output:-

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.288 <sup>a</sup>	12	.010
Likelihood Ratio	27.317	12	.007
Linear-by-Linear Association	.150	1	.699
N of Valid Cases	103		

Table 6.1.3.6

#### Interpretation

- Since the p value at 95% significance level is less than 0.05.
- So reject the null hypothesis.
- Therefore, there is significance relationship between Income and consumer.

**H<sub>A5</sub>= There is significant relationship between consumer buying preference towards by faster cooling, feature of dual inverter, service through mobile application, latest technology, life of compressor and power consumption**

$$\mu \neq 0$$

Output:-

Change Statistics					
Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.304	6.992	6	96	.000

Table 6.1.3.7

- According to the above table this model is accepted at 30%



### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.091	.496		2.202	.030
Faster Cooling	.185	.116	.160	1.588	.116
Feature of Dual Inverter	.142	.098	.169	1.444	.152
Service through Mobile application	-.058	.092	-.075	-.626	.533
Latest technology	.062	.095	.065	.653	.515
Life Of Compressor	.179	.108	.173	1.660	.100
Power Consumption used less	.240	.103	.251	2.323	.022

- Since the p value at 95% significance level is less than 0.05.
- So reject the null hypothesis.

Dependent value (overall performance of refrigerator) = 0.062(Latest Technology) + 0.142(Feature of Dual Inverter) + 0.179(Life of Compressor) + 0.185(Faster Cooling) + 0.240(Power Consumption Used less) + Error

### Interpretation

- While buying refrigerator each and every factor taken must be very effective so that customer can take right decision while buying.
- But in above model the service through mobile does not affect the consumer while buying refrigerator.

### Findings and Conclusion

Brand preference differs for each age group. While buying refrigerator the age group below 25 looks more for brand preference and new technology. They buy a refrigerator as per their regular needs. They buy a refrigerator as considering the brand which can be affordable and satisfy their basic needs. Because this age group might live with their families or with friends, so according to that they buy a refrigerator. There is no significant relationship between the age and consumer buying preference for the refrigerator.

In most of the household the buying decision is either taken by mutually consult or by the family payer. So while buying the refrigerator it is a long investment so the payer might think from all circumstances. And in such electronics products either trust on the brand or the information given by the salesman. So this particular doesn't make any sense. Hence there is no significant relationship between the gender and consumer buying preference for the refrigerator.

Occupation is an important factor because it describes the standard of living. As per their occupation and standard of living they change their brand preference. But while refrigerator it doesn't have any relationship between the occupation and the consumer buying preference for refrigerator. Because the consumer totally unaware about the refrigerator features and its new technology. Hence there is no relationship between the occupation and consumer brand preference for buying a refrigerator.

There is a relationship between the income and consumer buying preference because it is natural that every consumer will buy refrigerator seeing his/her buying capacity. It will not directly take the highest or out of his capacity refrigerator. If that particular brand is offering any financing it might possible that consumer will buy but it will again go to the paying loans for that refrigerator. The monthly income is also based on the person's abilities, person's education, personal background, and personal choice of education and based on that it decides a person's lifestyle. But it is true in every household based on the income the female change the brand preference for the refrigerator. The consumer will buy any refrigerator based on their budget, their need and mainly their expectation from that brand.

All the demographic factors are important but all over that refrigerators factors and features also matters. The main feature is faster cooling, power consumption, dual inverter and feature life of compressor. But this study has found that service through mobile application doesn't affect consumer buying preference as compared to the other updated technology and innovation. The main factor which influence the consumer is power consumption used less by the refrigerator, so company should give more focus on saving of power consumption. After that second influencing factor is faster cooling of refrigerator and faster cooling is important because after the less consumption of power it helps to keep food fresh. The third influencing factor is life

of compressor which determines how long a refrigerator will work. The fourth and fifth factor is dual inverter which is mostly used to avoid the noise of the machine and to help the refrigerator work smoothly. Hence the refrigerator all these factors or the technology are important for consumer buying preference for the refrigerator.

## Reference

- Anitha, k. (2018). Buying behaviour of refrigerators with special reference to Calicut city. Clear international journal of research in commerce & management, 9(3).
- Sari, O., & Balli, M. (2014). From conventional to magnetic refrigerator technology. International journal of refrigeration, 37, 8-15

# Does Globalization Impact the Textile Industry : A Study of Thane District

**Dr. Shebazbano Khan**

Assistant Professor, Thakur Institute of Management Studies and Research, Kandivali

**Priyanka Salunke**

Student, Thakur Institute of Management Studies and Research, Kandivali

**Abstract:** The Textile Industry is a major part of the employer in India; Say 70% of the population is dependent on that sector. It is necessary to focus on their challenges and provide suggestions to improve it. The study is focusing on the challenges faced by Textile Industries in Thane District post Globalization and also on their performance.

**Keywords:** Textile Industry, Competition, Challenges, Globalization.

---

## Introduction

### Globalization in the Textile Industry

Globalization refers to the dismantling of trade barriers between nations and the assimilation of the nation's economies through financial flow, trade in goods and services and corporate investments amidst nations. Globalization has raised across the world in recent years due to the fast progress that has been made in the field of technology, especially in communications and transport.

The initiation and development of globalization and Indian Textile Industry took place simultaneously in the year 1990s. Until the economic liberalization of the Indian economy, the Textile Industry in India was predominantly unorganized. In the early 1990s, the economic liberalization of the Indian economy led to the stunning growth of this Indian Industry. The Indian Textile Industry is one of the Big Textile Industries in the world and India earns around 27 per cent of the foreign exchange from exports of Textile s and its related products. Further, globalization of the Indian Textile Industry has seen a paradigm increase in the total 'industrial production' factor of this Industry, which presently stands at 14 per cent. Furthermore, the share of the Indian Textile Industry towards the Gross Domestic Product (GDP) of India is nearly 3 per cent and the numbers are rising.

### Review of Literature

**1. Balan (2001)** has explained his view in the research paper titled "Decolorization of textile indigo dye by ligninolytic fungi". This study focuses on how the indigo dye is extensively used by textile industries and is considered a recalcitrant substance which causes environmental concern. Chemical products which are used on textile processing affect the environment through effluents and it is suggested to be reduced.

**2. Cho & Kang (2001)** has written a research paper titled "Benefits & challenges of global sourcing: Perceptions of U.S. apparel retail firms". This study analyzes various advantages and challenges that retail firms perceive in global sourcing and how those benefits and challenges differ in terms of the firm's demographic and managerial characteristics.

This study also expands the understanding of sourcing activities by apparel retailers which have a significant presence in the global sourcing landscape in the U.S.A.

**3. Albert. & Gary (2002)** has published a research paper titled "FDI impact & spillover: Evidence from chinal electric & textile industries". This study has focused on the presence of FDI in a certain industry, however, may exert an adverse effect on domestic firms in that industry by enjoying better technologies and lower production costs, firms with FDI may cut into the market share of domestic firms without FDI.

**4. Vander Bruggen & Curcio (2004)** explain his view in the research paper titled "process identification in textile industry" has concluded that the concept was not tested experimentally but a simulation for a 500m<sup>3</sup>/d production unit shows that it is feasible although modifications may be necessary depending on the nature of the finishing baths.

**5. Khalid Nasdvi & John Thoburn (2004)** conducted research paper titled "Challenges to Vietnamese firms in the world garment and textile value chain, and the implications for alleviating poverty" has used a global value-chain framework to analyze the Vietnamese experience. It maps Vietnam's changing position in the global industry and probes ties between Vietnamese firms and global buyers. It explores links within the Vietnamese garment and textiles sectors and considers the impact of global challenges on Vietnamese firms and workers. This helps distinguish who are the potential 'winners' and 'losers'.

### Research Gaps Identified

Previous research has helped in knowing Indonesia's textile & its product: Recent development & challenges" and has examines Indonesia's textile and its product industry. It highlights industrialization and sectorial changes in Indonesia since 1908. A special emphasis is put on assessing Indonesia's competitiveness relative to its main competitors in the industry. The final sections discuss the impact of the industry's growth performance on employment and assess prospects of the industry.

From the above study, the following gaps are identified:-

1. Performance of Textile industry in India.
2. Challenges faced by the Textile industry Post Globalization Era.
3. Problems faced by labours in the Textile industry.

The present study is planned to know the impact of globalization on the textile industry in Thane district (Dist. Thane)

### Objectives of The Study

The study aims to concentrate on and anticipate the following objectives.

1. To identify the challenges faced by the textile industry in Thane district in the post-globalization era.
2. To analyze the Role and Performance of Textile industry in Thane district.

### Hypotheses of the Study

Based on the Review of Literature, following Hypotheses are identified:-

1. H0 – The Textile industry in Thane district is not facing the challenges in the post-globalization era.

H1 – The Textile industry in Thane district is facing challenges in the post-globalization era.

2. H0 – The performance and competition of the Textile industry in Thane district is not improving.

H1 – The performance and competition of the Textile industry in Thane district is improving.

### Research Methodology

- Survey method will be followed for the study.
- The data will be collected through primary and secondary sources.
- The primary data will be collected through a specially designed questionnaire.
- The secondary data will be collected through the government reports, books, journals and information available on the Internet will be referred and considered for the proposed study.
- Sampling – Universe – Textile units in Thane district
  - Size of Sampling- 30 Textile units
  - Techniques of Selection- Random Sampling.
- The data collected will be duly processed with the help of current techniques of use of a computer. The tables will be prepared with the help of coded data on a computer, which will be analyzed and interpreted with the help of charts, graphs and statistical figures. The recommendations and suggestions based on the research will be duly recorded along with findings and conclusions.

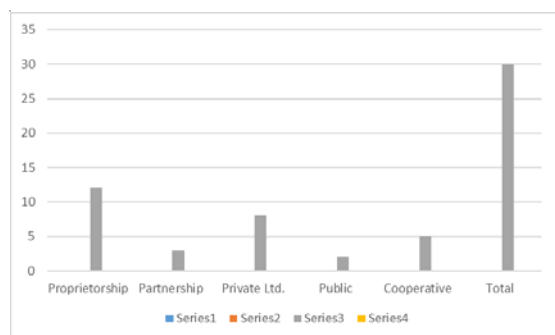
### Data Analysis and Interpretation

Table No. 1

Types of constitution of the textile industries

Particulars	Types of Constitution					
	Proprietorship	Partnership	Private Ltd.	Public Limited	Cooperative	Total
Number of Textile industries in Thane district	12	03	08	02	05	30

Graph No.1  
Types of constitution

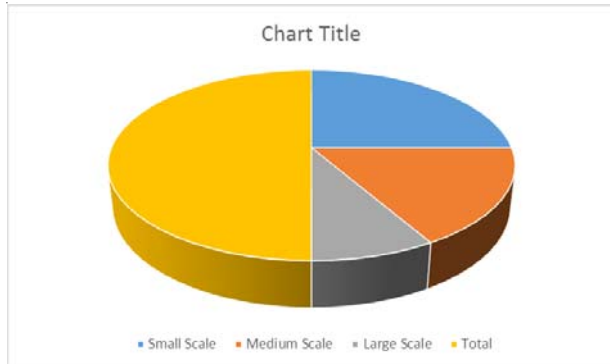


The above table shows the types of constitutions of the textile units in Thane district. The researcher has found that out of 30 textile units, 12 units are of proprietorship, 8 units is of private ltd, 5 units is of the cooperative, 3 units is of partnership and 2 units if of public co. It has observed that proprietorship and private companies are more in Thane district.

**Table No. 2**  
**Size of the textile units**

Size	Frequency	Percent	Valid Percent	Cumulative Percent
Small Scale	15	15	15	15
Medium Scale	10	10	10	25
Large Scale	05	05	05	30
Total	30	30.0	30.0	

**Graph No. 2**

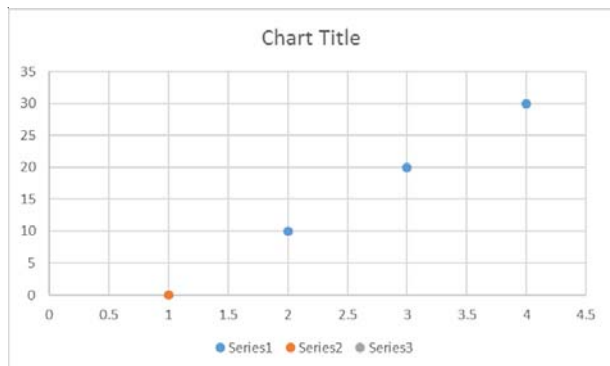


From the above, it is observed that Small Scale Units in Thane district are 15 and Medium scale units are 10 , while 05 units are Large scale. It means that small scale units are very high in Bhawandi.

**Table No. 3**  
**Membership of textile association**

Membership	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	10	10	10	10.0
No	20	20	20	30.0
Total	30	30	30	

**Graph No. 3**

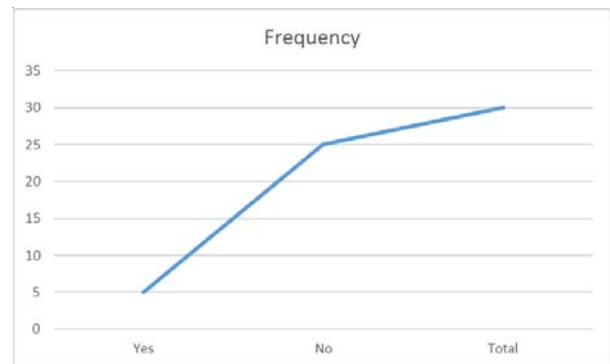


It is observed from the above table that only 10 units of owners have taken the membership of Textile Association and 20 units of owners have not taken the membership of the Textile Association. It is seen that mostly owners of textile units are not having a membership of textile association.

**Table No. 4**  
**Submission of project report**

Project Report	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	05	05	05	05
No	25	25	25	30.0
Total	30	30.0	30.0	

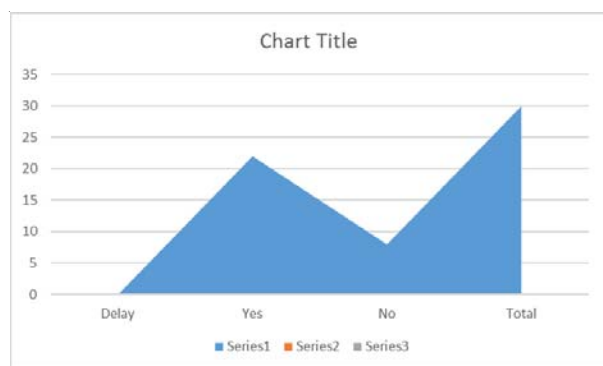
**Graph No. 4**



From the above, it is revealed that only 5 units of owners have submitted the project report to the Government before starting units. 25 units of owners have not submitted the project report to the Government before starting of units. No unit has stated the reason of non-submission of the project report.

**Table No. 5**  
**Delay in implementation of the project**

Delay	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	22	22	22	22
No	8	8	8	30.0
Total	30	30.0	30.0	

**Graph No. 5**

From the above table, it reveals that 22 units of owners stated that there was a delay in the implementation of the project. 7 units of owners stated that there was not delay in the implementation of the project.

**Table No. 6**  
**Checking of feasibility**

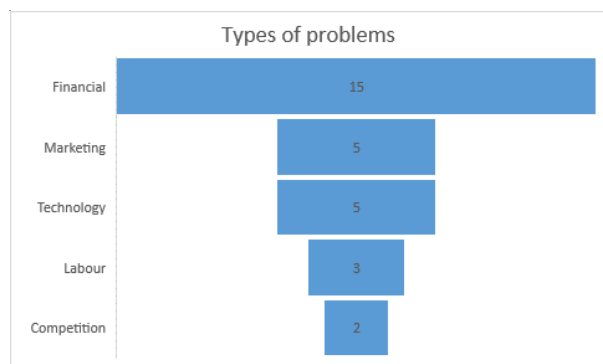
Checking of feasibility	Frequency	Percent	Valid Percent	Cumulative Percent
Market feasibility				
Yes	18	18	18	18
No	12	12	12	30.0
Total	30	30.0	30.0	

Technical feasibility				
Checking of feasibility	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	20	20	20	20
No	10	10	10	30.0
Total	30	30.0	30.0	
Financial feasibility				
Yes	14	14	14	14
No	16	16	16	30.0
Total	30	30.0	30.0	
Legal feasibility				
Yes	26	26	26	26
No	04	04	04	30.0
Total	30	30.0	30.0	
Entrepreneurial feasibility				
Yes	10	10	10	10
No	20	20	20	30.0
Total	30	30.0	30.0	

From the above table it is revealed that 18 units of owners have checked the market feasibility, 20 units of owners have checked the technical feasibility, 14 units of owners have checked the financial feasibility, 26 units of owners have checked their legal feasibility and 10 units of owners have checked the entrepreneurial feasibility.

**Table No. 7**

Problems	Financial	Marketing	Technology	Labour	Competition
Yes	15	05	05	03	02
No	15	25	25	27	28
Total	30	30	30	30	30

**Graph No. 7**

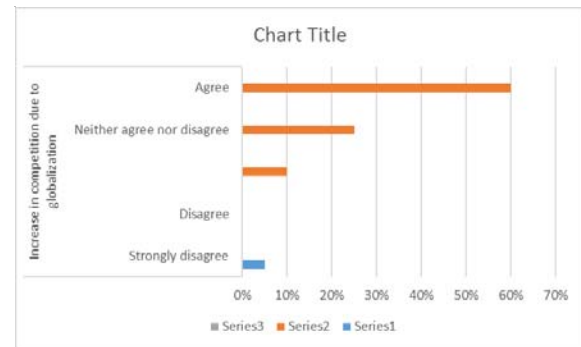
It is observed that out of 30 textile units, 15 units have a financial problem, 5 units have a marketing problem, 5 units have a technology problem, 2 unit have a competition problem and 3 unit have a labour problem. The major problem is related to Finance, marketing and technological issues.

Table No. 8

## Increase in competition due to globalization

Particulars	Increase in competition due to globalization			
	Strongly disagree	Disagree	Neither agree nor disagree	Agree
Number of textile units	5%	10%	25%	60%

Graph No. 8



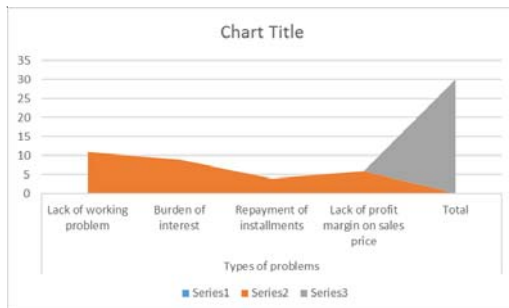
From the above table, it is seen that, 60% of units agree that there is an increase in the competition due to globalization, 25% of units are neither agree nor disagree, 10% of units are disagree and 5% of units are strongly disagree.

Table No. 9

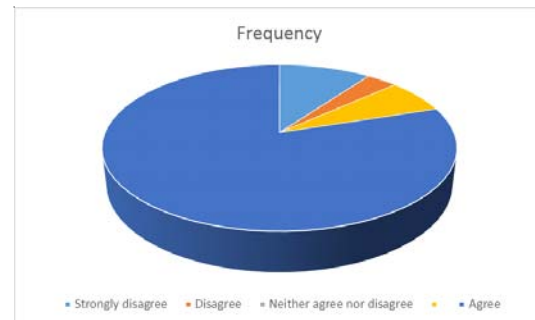
## Number of units of owners who are facing problems

Particulars	Types of problems				
	Lack of working problem	Burden of interest	Repayment of installments	Lack of profit margin on sales price	Total
Number of Textile industries in Thane district	11	09	04	06	30

Graph No. 9



Graph No. 10



It is observed from the above table that out of 30 Textile units, 11 units are facing the problems like Lack of working capital, 4 units are facing Repayment of Installments issues, 9 units are facing the problem like Burden of interest and 6 units are facing lack of profit margin on sales price issues.

The above table and chart shows the financial problem due to globalization and It is seen from the above table that out of 30 units, 24 units agree that they face financial problem due to globalization.

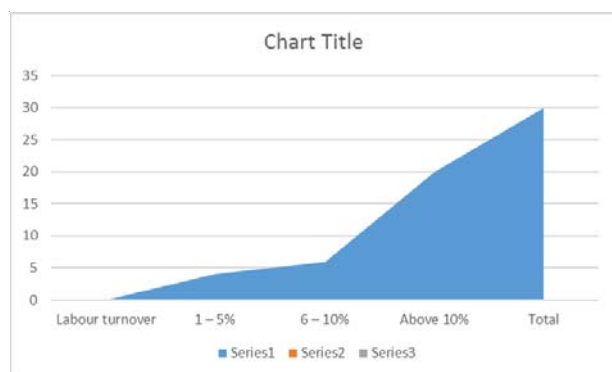
Table No. 10

Financial Problem Due to Globalization	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	03	03	03	03
Disagree	01	01	01	04
Neither agree nor disagree	02	02	02	06
Agree	24	24	24	30

Table No. 11

Labour turnover	Frequency	Percent	Valid Percent	Cumulative Percent
1 – 5%	04	04	04	04
6 – 10%	06	06	06	10
Above 10%	20	20	20	30.0
Total	30	30.0	30.0	

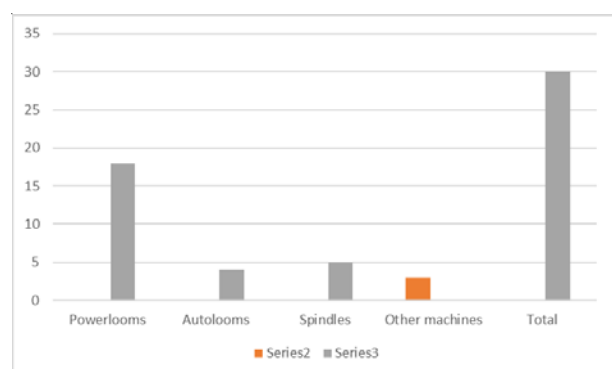


**Graph No. 11**

From the above chart and table, it is revealed that out of 30 units, 20 units faces more than 10% labour turnover issues, 6 units faces 6-10% of labour turnover issues and 4 unit faces 1 – 5% labour turnover issues.

**Table No. 12**

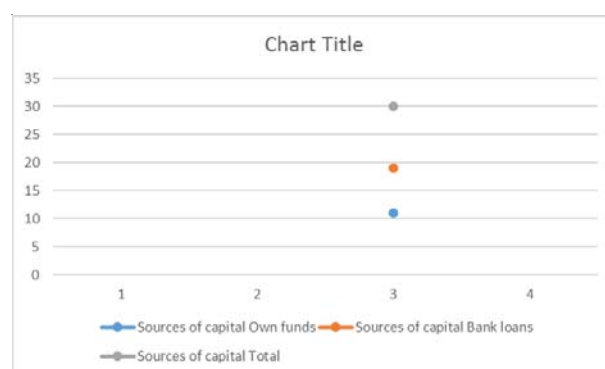
Particulars	Types of machines/powerlooms/spindles/Autolooms				
	Powerlooms	Autolooms	Spindles	Other machines	Total
Number of Textile industries in Solapur	18	04	05	03	30

**Graph No. 12**

It is seen from the above table that , out of 30 units 18 units consists of powerloom units, 5 units consists of Spindles, and 4 units consist of Autolooms and 3 units consists of other machines. It is found that Thane district mostly consists if powerloom units.

**Table No. 13**

Particulars	Sources of capital		
	Own funds	Bank loans	Total
Number of Textile industries in Solapur	11	19	30

**Graph No.13**

It is found from the above table that out of 30 textile units, most of the units are using bank loans for opening their units i.e., 19 units, and 11 units are using their own funds. It means that majority prefer bank loans for their units.

### Findings of the Study

From the above data analysis and interpretation, it has been found that:

- The researcher has found that out of 30 textile units, 12 units are of proprietorship, 8units is of private ltd, 5units is of the cooperative, 3 units is of partnership and 2 units if of public co. It has observed that proprietorship and private companies are more in Thane district.
- It is observed that Small Scale Units in Thane district

are 15 and Medium scale units are 10, while 05 units are Large scale. It means that small scale units are very high in Bhawandi.

- It is revealed from that only 10 units of owners have taken the membership of Textile Association and 20 units of owners have not taken the membership of the Textile Association. It is seen that most owners of textile units are not having a membership in the textile association.
- It is revealed that only 5 units of owners have submitted the project report to the Government before starting units. 25 units of owners have not submitted the project report to the Government before starting units. No unit has stated the reason for non-submission of the project report.
- It reveals that 22 units of owners stated that there was a delay in the implementation of the project. 7 units of owners stated that there was no delay in the implementation of the project.
- It is revealed that 18 units of owners have checked the market feasibility, 20 units of owners have checked the technical feasibility, 14 units of owners have checked the financial feasibility, 26 units of owners have checked their legal feasibility and 10 units of owners have checked the entrepreneurial feasibility.
- It is observed that out of 30 textile units, 15 units have a financial problem, 5 units have a marketing problem, 5 units have a technology problem, 2 unit have a competition problem and 3 unit have a labour problem. The major problem is related to Finance, marketing and technological issues.
- It is seen that 60% of units agree that there is an increase in the competition due to globalization, 25% of units are neither agreed nor disagree, 10% of units disagree and 5% of units are strongly disagreed.
- It is observed that out of 30 Textile units, 11 units are facing the problems like lack of working capital, 4 units are facing Repayment of Installments issues, 9 units are facing the problem like Burden of interest and 6 units are facing lack of profit margin on sales price issues.
- It is found that out of 30 units, 24 units agree that they face financial problem due to globalization.
- It is revealed that out of 30 units, 20 units faces more than 10% labour turnover issues, 6 units face 6-10% of labour turnover issues and 4 unit faces 1 – 5% labour turnover issues.
- It is seen that out of 30 units 18 units consist of power loom units, 5 units consist of Spindles, and 4 units

consist of Autolooms and 3 units consist of other machines. It is found that the Thane district mostly consists if power loom units.

- It is found that out of 30 textile units, most of the units are using bank loans for opening their units i.e., 19 units, and 11 units are using their funds. It means that the majority prefer bank loans for their units.

## Conclusion

The Textile Industries in Thane district is facing challenges even after Globalization and also there is no improvement in terms of performance and competition of Textile Industries in Thane District.

## Suggestions

The government should provide support in terms of modernization of Textile Industry to become more cost-effective and quality-oriented.

Textile Industry should follow the rule of Maximum profit in minimum capital Investment.

Textile Industry should attract FDI.

## References

- **Albert. G. Z. Hu & Gary Jefferson (2002)**, “FDI impact & spillover: Evidence from chinalns electric & textile industries” The World economy, Vol. No. 25, Pg. No. 1063-1076.
- **Andre Luiz Grigorevski Lima(2005)**, “Streptomyces drozdowiczii cellulose production using agro industrial by-products and its potential use in the detergent & textile industries”, Enzyme & microbial technology, Vol No. 37, Pg No. 272-277
- **B.Vander Bruggen &P.E.Curcio (2004)**, “Process identification in the textile industry: The role of membrane,”Journal of Environmental management, Vol. No. 73. Pg. No. 267-274.
- **Doralice S.L. Balan. (2001)**, “Decolorization of textile indigo dye by ligninolytic fungi,” Journal of Biotechnology, Vol- 89, Pg No. 141-145.
- **Jinsook Cho & Jikyeong Kang( 2001)**, “Benefits & challenges of global sourcing: Perceptions of U.S. apparel retail firms”, International marketing review, Vol. No. 18, Pg No. 542-561.
- **Khalid Nadvi & Thoburn (2004)**, “Challenges to Vietnamese firms in the world garment & the textile value chains, and the implications for allavetins poverty”, Journal of Asia pacific economy, Vol No. 9, Pg. No. 249-267.

# Impact of Technology Enablers on Rural Marketing

**Mr. Vijay Karvande**

Manager – Course Coordination & Faculty for Marketing and French language  
ITM Business School, Kharghar, Navi Mumbai.

**Professor B.V.R. Murty**

HOD – Department of Operations and SCM  
ITM Business School, Kharghar, Navi Mumbai.

**Abstract:** The process of distribution, growth, promotion and pricing of rural specific services and items which leads to the desired trade with rural customer to achieve the objectives of the organization and to satisfy the needs of the customers is known as rural marketing. Most of the cities in India are very widely connected with the rural areas. According to the report published in the Economic Times (2019), the rural population of India is nearly 74.3% of the population. Rural Indian market is vast Indian rural market as vis-a-vis the urban markets of India. During last few years, the Indian rural market has seen drastic changes as the urban markets are coming to their saturation point resulting in slowing down of urban growth. Those exploring the rural markets have understood the importance and significance of rural market potential and are customizing their products and services to the rural masses. This has resulted in the growth of business in the rural market. The impact of green revolution has resulted in the consumption of huge quantities of manufactured and industrial products in the rural market. Rural market proposes to give opportunities to explore the business and increase literacy level, sales and offers a wide scope for penetration in the market. To encash upon it, marketers have evolved a new strategy of Rural Marketing.

The objective of this research paper is to go into the depth of the importance of the rural markets and identify the different problems being faced by the rural marketers.

This research paper is literature-based study of the concept, of which the purpose is to gauge a hands-on effect of technology on rural markets – an emerging area in the field of marketing and management.

This paper is predominantly conceptual and demonstrates the strategies, risks and challenges for the Indian corporate houses in developing their bases in the backdrop of the changing rural environment and markets due to the onset of technology in the recent past.

As Indian urban markets are saturating, many corporates are eyeing the big and heterogenic nature of Indian rural markets. Some companies have already made inroads into the rural markets to explore them. In this respect, it is pertinent to know how business atmosphere can be made more conducive to the corporates with the advent of technology in rural area with certain pertinent questions and suggestions.

**Keywords:** Technology, Rural markets, Heterogeneity of rural markets, Risk & Challenges.

---

## Introduction

Rural India has seen an evident surge in prosperity over the last decade. This has been fuelled by strong increase in incomes which has resulted from an increase in non-farm employment opportunities and Government's rural focus through employment generation schemes (Crisil, 2012). This has led to a significant increase in consumption in rural areas. But the need of the hour demands more to be done in rural areas. There are a number of issues related to health, education and sanitation which need urgent attention (Manwani, 2012). In this scenario, Government policies will have to enable the rural sector to create permanent jobs in rural areas (Crisil, 2012).

## Impact of Technology on Rural Marketing

The prerequisite requirement of connecting technology and science and its role in the transformation of Rural India has been discovered as and a matter of fact, Mahatma Gandhi had also endorsed to this idea as a necessity of this necessity. All India Village Industries Association in the year 1935, initiated the movement of "Science for People" which had leading Indian personalities

in the Advisory Board. Some of the scientists included in the board were Acharya Sir Prafulla Chandra Ray, Sir Jagadish Chandra Bose and Sir C. V. Raman.

Latest Technology is being looked at as a major catalyst in boosting rural income and contributing to the economy (Reddy, 2004). The transformation has begun in recent years and more progress needs to be done. The introduction of technology in rural India has brought about change in the lives of the people for their betterment. Internet Technology and its use in the new innovations have been a bonus for the people of rural India (Goel et al., 2011). Many corporates such as HLL, ITC, NGOs etc and the state government of India are conducting experiments of using Information and communications technology (ICT) in rural areas. Partnership between the public and private sector can lead to success stories in information and communication technology in rural markets. The Common Service Centre (CSC) Project of the Ministry of Information and Technology is meant to set up 1 Lakh kiosks for internet services to rural masses. Appropriate technology for ICT is expected to be provided by companies like Microsoft, Nlogue, etc. The use of technology is very helpful in

bridging the gaps between the urban sector and rural sector. The marketers from the rural areas can directly connect to the buyers and seller through Internet and sell their goods on e-commerce websites across the country. The agricultural products from rural areas and their consumption process plays a major role in the growth and advancement of Indian economy. This exactly has evolved a concept of rural marketing process.

According to the National Council for Applied Economic analysis (NCAER), the official collector of knowledge on rural Republic of India, India's rural world is value US\$100 billion in client disbursal, creating them an important link in India's vivacious GDP story.

### The emergence of rural markets

India lives in her villages as two out of three persons live there. The country has seen a major transformation in the last more than 70 years. Food grain production was increased from 50 m. Tonnes to 245 m. Tonnes in 2011-12. Rural spending has outpaced urban consumption for the first time in nearly 25 years in the 2 years upto 2011-12 (Crisil, 2012). By 2025, the Indian rural market is anticipated to grow over denary to become a USD100 billion chance for retail defrayal!

The key drivers are the boosted consumption-led growth, remarkable improvement in infrastructure including communication and change in the attitude of the govt financially towards rural development. Farm income are being supported by trading, agro processing and ancillary industries. These key drivers of rural markets have received a strong boost with the ever-advancing technology in both farming (weather forecast with the help of advanced communication technology, latest technology in tractors, water pumps, etc) and non-farming areas (use of mobile phones, tabs, computers, laptops, digital TV with many private DTH channels, consumer durables, motorbikes, etc).

Rising procurement prices, freedom to sell the agricultural produce and easy availability of finance have also contributed to increased rural incomes. Improved infrastructure and resulted in better communication network and given access to urban areas, leading to making of new businesses in rural sector; therefore, increased employment opportunities and thereby higher wages.

All these have increased the aspirations of rural people considerably. (Manwani, 2012). "This is India's biggest chance yet as India's biggest responsibility.

It can either drive India to become the biggest economic powerhouse or derail our growth story" (Manwani, 2012).

### The relevance of rural markets

Rural consumption outpaced urban spending after a

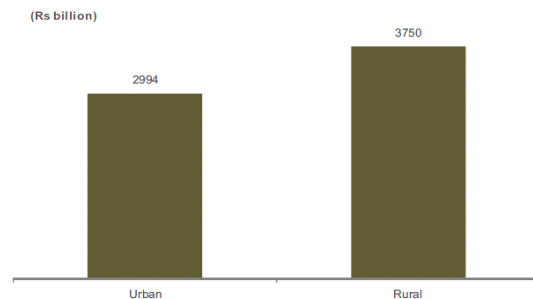
long gap of 25 years. (Figure 1).

With rising purchasing power, rural consumption is evidently shifting from necessities to discretionary goods (Figure 2). Every second household now possess a mobile phone. Even in poor Indian states like Orissa and Bihar, this figure is every third house having a mobile phone (Figure 3).

As much as 42% of rural households owned a television set in 2009-10; an increase of 16% over the previous 5 years. Similarly, 14% of rural households had two wheelers in 2009-10, up from 7% in 2004-05.

One promising aspect of rural India is that more than half of India's stock of consumer durables such as television sets, electric fans and two wheelers are now there (Crisil, 2012).

Figure 1: Incremental consumption expenditure in 2011-12 over 2009-10

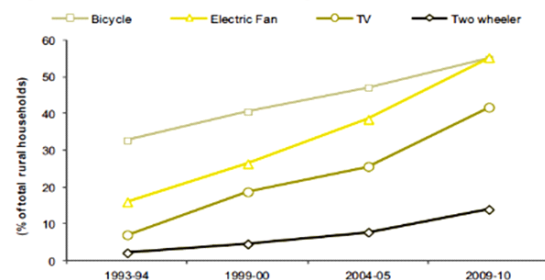


Source: NSSO and CRISIL Estimates

The boost to rural consumption in recent years was underpinned by an across-the-board rise in household incomes due to increase in non-farm job opportunities and government-initiated employment generation schemes. NSSO data illustrates that during the year 2004-05 to the year 2009-10 it was observed that there was an increase in the jobs in the rural construction and the raise was 88 per cent. However, a decline was observed in employment in agriculture sector from 249 million to 229 million (Table 1).

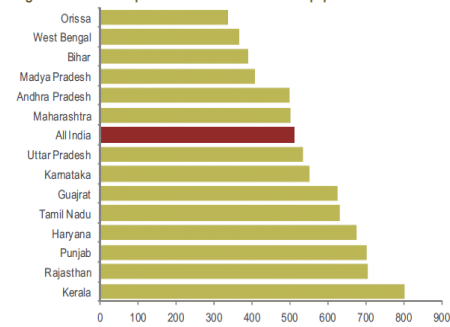
In addition, anecdotal evidence suggests that intra-state rural-urban migration rose in the second half of the last decade as job opportunities were created in urban areas by infrastructure and construction projects. Subsequently, settlements to families in rural India would have boosted consumption. NSSO knowledge suggests that just about 72% of male migrants (seeking work) in the rural areas of India sent the payments to the other parts of India in the year 2007-08 (Crisil, 2012).

Figure 2: Rural households owning consumer durables



Source: NSSO

Figure 3: Mobile phone handset ownership per 1000 rural households in 2009-10



Source: NSSO

Table 1: Rural Employment in million

	Agriculture, hunting & forestry & fishing	Industry	Manufacturing	construction	Services
1999-00	218.3	32.6	21.2	9.4	35.5
2004-05	249.4	47.0	27.8	16.8	46.7
2009-10	229.0	58.6	24.2	31.7	49.5

Note: Manufacturing & construction are included under industrial employment  
Source: NSSO and CRISIL Estimates

## The Government Initiatives

Rural telephony has increased 26-fold in the last decade or so (The no of rural users = 219 million are more than the total subscribers in Brazil). Between 2006 & 2012, rural India outpaced urban India in mobile phone growth, which grew 3 times. The Government's focus is now on expanding broadband coverage in rural areas.

Post 1960s, the Green Revolution transformed rural sector leading to scientific way of farming, and with better and better facilities in term of irrigation and fertilisers, etc and use of technology in farming has boosted solid growth in agricultural production and thus changed the face of rural India on a large scale.

The White Revolution was initiated by the Government of India with the objective of achieving self-sufficiency within the space of milk production. The keystone of the Government of India Farm Development Policy was milk production in the rural areas through the cooperatives and moving processed milk to urban demand centres. The formation of producers' cooperatives has vied a major role in institutionalising milk production and process.

Over a period of time a new area of marketing of farming emerged. This period saw the emergence of companies such as Mahindra & Mahindra, Escorts, Eicher, Shriram Fertilisers and IIFCO (Kashyap, 2012).

Some of the Govt of India initiatives in rural development are: Bharat Nirman, The Pradhan Mantri Gram Sadak Yojana, The Rajiv Gandhi Grameen Vidyutikaran Yojana, Indira Awas Yojna, Rajiv Gandhi National Drinking Water Mission, MNREGA, Self Help Groups (SHG)-Bank Linkage Model, Kisan Credit Card scheme, etc.

Information & Communication Technology (ICT) as a growth trigger for rural development:

Web enabled Management system (MIS) ([www.nrega.nic.in](http://www.nrega.nic.in)), is understood in concert of the biggest

information base of rural households, makes transparency intrinsic to NREGA by inserting all essential parameters like wage payments, variety of days of employment provided and works underneath execution on-line for simple public access - over two large integer Muster Rolls and eight large integer Job Cards are uploaded up to now.

## Enablers of rural technology

In the words of Late Dr. Abdul J Kalam "rural-urban divide can be minimised by adopting PURA: Provisions of Urban Amenities in Rural Areas of India" (Economic Times, 2012).

Rural India needs to be made more self reliant and less dependent on Government subsidies . (Manwani, 2012).

Some key technological enablers which can transform rural markets and unleash its true power on the basis of technology as follows:

### 1. Aadhar linkage

"Technology has the potential to dismantle social and cultural barriers to ensure not only quality of services but also equality of access to all" (Manwani, 2012). Aadhar, the unique identification project, was a success in rural areas, especially remote areas, the people of which could never taste fruits of economic development.

### 2. Optic Fibre Newtork

Another project worth Rs. 20,000 crore to build a national fibre optic network to connect Panchayati Raj institutions would ensure connecting the Gram Panchayats to the Government system. This would facilitate delivery of services to rural people including e-Governance, e-Education and e-Medicine (Manwani, 2012).

### 3. Internet based Mobile phones

Relevant dynamic content like best practices, live market prices of farm produce, etc. by providing internet access could create conducive conditions for people to move to jobs based in rural India (Manwani, 2012). This may initiate a two pronged advantage of checking unplanned migration from villages and spark an entrepreneurial momentum by means of talented people starting Small Scale Enterprises (SSEs).

### 4. Education

The Government, over the last few decades, has implemented many policies, including Right to Education Bill and distributed Tabs in many schools. Adoption of e-Learning concept to transform access and cost reduction seems the way ahead, though it is not impossible.

### 5. Technical Skill Building

Underemployment in rural India is a critical issue. With



prosperity, young people seek jobs beyond farming. However, the current educational system is inadequate in providing right skilling for roles that are available “in an increasingly service oriented economy” (Manwani, 2012).

Adequate skill building is required critically for the rural youth to be prepared for taking up jobs in mobile phone repairs, TV repairs, Computer / Laptops repairs and maintenance, A/c mechanics, fridge mechanics, etc by introducing these courses in the Industrial Training Institutes (ITI) available in each district. Therefore, skill building has a direct bearing on self-employment generation activities in rural areas.

### **The Road Ahead**

In the light of the urban-poor huge gap prevalent today even after the implementation of the Govt schemes and policies, it becomes imperative that private sector creates large scale employment opportunities as it is the private sector which is more equipped with latest technological skills keeping pace with ever changing time. Government policy has to be formulated in conjunction with private participation. “The push to implement the National Manufacturing Policy, with focus on skill development and productive job creation, would need to supplant the focus on social sector schemes” (Crisil, 2012).

### **Value for Money**

According to the Stratigea (2011), rural policy today is the core area of the policy discussion in several countries, within the effort to deal with and effectively support the precise opportunities and requirements of the rural areas and their population within the new era. The researcher emphasized that the role of ICTs and their applications are very important and act as aiding tools vesting for rural development. There is a requirement to spot that types of ICT access deliver the simplest worth for cash, and the way the restricted resources which will be spent thereon, is made to best suit the particular needs of rural India by using the following 3 models:

#### **A. Rural Telecentres**

Rural marketplace for FMCG is growing faster than the urban market. According to T. V. Ramachandran, Director-General of the Cellular Operators Association of India, the

area under mobile tower increased to three times with the construction of new cell towers. This model is based on public-private partnership.

Many services can be delivered through the Rural Business Centres like copies of land records, approval of old age pension for senior citizens, issue of caste certificates, issue of income certificates, etc. Computer education can also be boosted through these centres by IT experts and teachers.

Similarly, the centre can be used for delivering information like agri prices and availability of agri inputs.

The RBC model can be implemented in :

- Education – distance learning, video conferencing, etc.
- Healthcare – tele-medicine.
- Financial services – providing for assets/liabilities.
- Convenience services – mobile top-ups, bill payments, etc.

#### **B. Rural BPO**

The rural BPO groups will effectively slender the gap of digital divide by investment the facility of computing and property to make wealth in rural areas.

The BPO groups can make the systems and networks for businesses to flourish in remote areas and maintain quality standards. This model called “RuralBPO”

Rural BPO can work with the aim of bridging the knowledge gap between rural and urban workers by providing distributed methodology of providing services.

#### **Challenges being faced by BPO areas units:**

- Reliability in the bandwidth
- Management of various resources required to implement the task in rural areas
- Achieving international service standards
- Implementing and maintaining distributed technology software platform.

## Potential Rural BPO Services

Services	Target Industry
Survey & Questionnaire Forms	Education Department, Research Firms, etc
Enrollment Forms	Government organization, Research Firms, Medial, etc
Product/Warranty Registrations	Major Indian corporate, MNC, etc
Invoice Forms	Major Indian corporate, MNC from all sectors of the industries. The major qualification criteria for the lead will be CSR (Corporate Social Responsibility)
Product Order Forms	Major Indian corporate and MNCs
Health Care, Studies	Education, Government, Health Departments, etc
Insurance Claim Forms	Indian insurance companies

### Value Proposition

RuralBPO is a new concept and is on the verge of a start. The RuralBPO proposes to give benefits to all its stakeholders:

Corporate Clients – Permit business growth through cost effective BPO solution

Rural Citizen – Employment based in the area of Information technology for rural communities.

Government – Creating new avenues of employment and reduction in population of migrants

Investors – Substantial ROI, during the creation of new opportunities of employment.

Society – Continuous development of rural communities.

### C. Virtual multiplexes

The concept of multiplexes is being largely experienced in rural areas (Jha, 2017).

In Digital Cinema, this model has the potential to revolutionize the distribution and exhibition system.

Digital Cinema encompasses the assembly, delivery and projection of full-length motion photos, trailers, advertisements and different audio / visual programs.

Instead of delivery of physical media like exhausting disks, the reduced sizes of the files of the digital motion pictures because of MPEG-R technology can ensure reliable delivery of the digital movie in rural areas in a short period of time.

### Recommendations

The Government must leverage the upon the Green Revolution, the White Revolution, Advanced farming

techniques and Communication technology to bring the rural masses on par with that of their urban counterparts in terms of purchasing power, equipping of technical skills so that more and more job opportunities would await the rural masses and the dependency on vagaries of monsoon can be reduced to a great extent.

The concept of PPPs should be aggressively promoted especially on large scale and labor-intensive projects like construction of dams, bridges and flyovers, joining of rivers, etc. involving rural masses. The future of rural India would depend on the traction that the Government is willing to offer to private participants in its bid for rural development. Public Private Partnerships (PPPs) are the order of the day as this seems to be the most viable way to move forward in the right direction which the Government has defined in the past few years.

### Limitations

This research paper is a literature-based study with secondary data derived from different online research journals & sites, and more work, and hence it cannot be finally concluded, and recommendations cannot be accurately implemented. Additional primary research needs to be done in this area.

### Conclusion

It is evident that various technologies have had a great impact on rural markets. Rural masses have started using internet based mobile phones, broadband services, computer tablets in education sector. Farmers are using different Apps during the recent years. This has led to increase in rural incomes and therefore the rural consumption has outpaced urban spending. The technology still has a large scope in furthering the rural growth.

e- concept of rural marketing has a long way to go as rural marketers have to digest the fact that rural markets



have a tremendous potential so that they can capitalise on this untapped rural potential. These can enable a new socio-economic class called rural rich and contribute significantly to reducing the rural-urban gap in terms of per capita income as envisioned by Dr. Abdul Kalam.

## References

- Reddy, Amulya (2004), Science and Technology for Rural India, Current Science, Vol. 87, No.7, 10<sup>th</sup> October 2004, pp. 889-898.
- Goel, Umang, Bajpai, Ankit, Chauhan, Swati and Verma, Pranay (2011), Changes in Rural Marketing through Information and Communication Technology, International Journal of Innovation, Management and Technology, Vol. 2, No. 2, April 2011.
- Stratigea, Anastasia (2011), ICTs for rural development: potential applications and barriers involved, Netcom, Vol. 25, No. 3/4, pp. 179-204.
- Crisil. (2012). Crisil Insight: Sustaining the Rural Consumption Boom. Mumbai: Crisil.
- Kashyap, P. (2012). Rural Marketing. New Delhi: Pearson Education, India.
- Economic Times (2012), Focus on providing urban amenities in rural India: APJ Kalam, Updated: Feb 06, 2012, 04.54 PM IS, second Global Agri-business Incubation Conference, New Delhi, <https://economictimes.indiatimes.com/news/economy/infrastructure/focus-on-providing-urban-amenities-in-rural-india-apj-kalam/articleshow/11778912.cms?from=mdr>
- Manwani, H. (2012, July 27). Chairman, Hindustan Uniliver Limited. Rural India - An Emerging Powerhouse . Mumbai, India.
- <http://www.ijtsrd.com/papers/ijtsrd9498.pdf> Article URL: <http://www.ijtsrd.com/management/marketing-management/9498/a-study-on-rural-marketing-in-india-challenges-and-opportunities/dr-geeta-yadav>
- Goel, Umang, Bajpai, Ankit, Chauhan, Swati and Verma, Pranay (2011), Changes in Rural Marketing through Information and Communication Technology, International Journal of Innovation, Management and Technology, Vol. 2, No. 2, April 2011.
- Jha, Lata (2017), The multiplex story in small-town India, LiveMint, Updated: 05 Jul 2017, 08:17 AM IST, <https://www.livemint.com/Consumer/15jYCPJON9oxIF9pKIURTN/The-multiplex-story-in-smalltown-India.html>.
- Economic Times (2019), Internet users in India to reach 627 million in 2019: Report, Internet usage in the country has exceeded half a billion people for first time, pegged at 566 million, driven by rural internet growth and usage, PTI|Mar 06, 2019, 05.56 PM IST
- (<http://www.ijtsrd.com/papers/ijtsrd9498.pdf> Article URL: <http://www.ijtsrd.com/management/marketing-management/9498/a-study-on-rural-marketing-in-india-challenges-and-opportunities/dr-geeta-yadav>)
- Reddy, Amulya (2004), Science and Technology for Rural India, Current Science, Vol. 87, No.7, 10<sup>th</sup> October 2004, pp. 889-898.
- Stratigea, Anastasia (2011), ICTs for rural development: potential applications and barriers involved, Netcom, Vol. 25, No. 3/4, pp. 179-204.
- Jha, Lata (2017), The multiplex story in small-town India, LiveMint, Updated: 05 Jul 2017, 08:17 AM IST, <https://www.livemint.com/Consumer/15jYCPJON9oxIF9pKIURTN/The-multiplex-story-in-smalltown-India.html>.
- Economic Times (2012), Focus on providing urban amenities in rural India: APJ Kalam, Updated: Feb 06, 2012, 04.54 PM IS, second Global Agri-business Incubation Conference, New Delhi, <https://economictimes.indiatimes.com/news/economy/infrastructure/focus-on-providing-urban-amenities-in-rural-india-apj-kalam/articleshow/11778912.cms?from=mdr>

# Use of Technology to Develop Entrepreneurial Interest and Initiatives Among Management Students

Col Venkat Raman  
Assistant Professor SFIMAR Mumbai

Dr Ravindra Limaye  
Management Consultant

## Introduction

Technology entrepreneurship is basically a combination of two separate terms from two different disciplines, technology came from the discipline of innovation and entrepreneurship came from the business or commercial discipline. Hence it is an integration of technological and entrepreneurial domains. Technology entrepreneur is someone who has specific knowledge and expertise essential for any entrepreneur in order to carry out technology centric entrepreneurial activities effectively and efficiently. Bailetti (2012) explained that collaborative research and development activities, producing innovative products, evolving new resources and their attributes which leads toward progression in scientific and technological expertise basically discriminates technology entrepreneurship from other entrepreneurship domains.

Technology has been the biggest change agent in today's fast moving environment and it continues to make processes more effective, reduce costs and provide a platform to test creativity through experimentation. It is this quality of technology that can prove to be a big motivator to students today in trying out new ideas, experimenting with new and better ways of doing things and convert these quickly and effectively into a viable Business plan

## Scope of Study

The scope involves a study of entrepreneurship as an option for students and how technology acts as an enabler as well as an influencer towards attracting students towards entrepreneurship. It includes students who are graduating or in post graduate courses, preferably in Engineering, Commerce or Management.

## Literature Review

Important elements to become an entrepreneur includes the enthusiasm towards risks, the skill to formulate an operative venture team, the proficiency to organize required resources and essential talent of developing an effective and efficient business plan and finally the vision to identify opportunity where others see confusion, conflict and misperception (Kuratko, 2003). Most of the researchers and practitioners have defined the field of entrepreneurship as the intellectual investigation of by what means and by whom opportunities should be traced in order to generate creative ideas for

production of innovative products and services (Braunerhjelm et al., 2010). . However the challenge of growing the frequency and pace of technological innovation in all sectors of the country's economy, they observed that it can lead to efficient productivity and progression if only more entrepreneurs set up new businesses to commercialize the innovations (Shane and Venkataraman, 2003). Variations and advancements in various technology sections such as personal computers and digital subordinates, integrated circuits, several storage mediums and devices, the software applications, broadcastings (emails, telecommunication), Internet and Web and biotechnology fashioned thrilling potentials for creation of new businesses and also for the extension of existing industries (Van Parag et al., 2007). Today the presence of colleges and universities are not only meant to be the gatekeeper of knowledge and information instead various innovators are inflowing as entrepreneurs in education industry (Romer & Pekkala, 2008). In modern theories of growth and development, technological innovation has taken the focus stage and such innovations are commercialized by technology entrepreneurs. Colleges and universities are investing heavily in the development of their student's entrepreneurial skills and have tremendous impact on innovation and entrepreneurial development. Over the last eras, entrepreneurship has proven its position as the most compelling economic strength (Kuratko, 2005) and an efficient tool of advancement across the globe. Therefore many countries are in direction to introduce several policy structures to provision entrepreneurship education and training in order to endorse entrepreneurial activities (Cheung, 2008). Some of the researchers have shared mutual thought that the basic education and training towards entrepreneurial activities are divided into three classes in the era of knowledge economy, i.e. education about, education for and education in (Herrmann et al., 2008). They have also discussed that to promote entrepreneurial education and training for entrepreneurial activities, there must be a shift from the communication or transferable prototypes of teaching that is "Learning about" into the practical learning that is "learning for" intended to facilitate students with the techniques that can be useful in real world. For taking technology entrepreneurship initiatives the focus of high education sectors should be on two factors. First is education and training for innovative capabilities which is basically concerns with the provision

for career in self-employment and second is education in innovativeness which concerns with the management exercises for established entrepreneurs (Henry et al., 2005).

### **Need for Study**

There is a need to understand the way technology impacts student's education and learning today and how it can rouse their curiosity in improving processes and ideation to run successful businesses.

### **Objective**

The objective of this paper is to bring out the impact of technology on students towards evoking their interest in looking for better ways to do things and this in turn can enable them to formulate workable business plans that can ultimately create successful entrepreneurs

### **Method of Study**

The Study has been done using both Secondary and Primary Data. For the primary study, we intend to use students who are in any Institution the uses technology to enhance learning as the Population. Engineering Colleges have been preferred for Study as they are the best example of such learning centres. Data collection will be done through a structured questionnaire using Google Forms. The expected time frame for the Study is approximately six months

### **Entrepreneurship**

An entrepreneur is a person who sets up and runs a business.

Dhenak (2010) described a businessman as an individual starting a business. Chasserio et al. (2014) claimed that an entrepreneur plays various social roles and is made up of multiple social identities. Torre (2015a) has described an entrepreneur in three different ways: a founder, a builder, and accountable and responsible. A businessman is an initiator, a competitor, and a driver as a leader. An entrepreneur is someone who creates something different, something new like a new idea, a company or a service. As a pilot, the person in charge, the leader and the person who wants leadership is an entrepreneur. In terms of being accountable and responsible, the entrepreneur is responsible for the destiny of the business venture, which can be a company, a project, or any other endeavor Torre (2015b). The forces driving a person to become an entrepreneur may be the desire to acquire wealth, create job opportunities, and earn a living, among other things, that can be called the Entrepreneurial Outcome Expectation (EOE) of an individual.

An entrepreneur is a person who takes risks and is responsible for all actions. In this analysis, an entrepreneur's tendency to take risks is referred to as the Risk Taking Tendency Factor (RTPF). Risk Taking Propensity Factor

(RTPF) is the willingness to take measured business-related risks (Boyd & Vozikis, 1994).

An entrepreneur is therefore a person who wants to set up a business venture to be financially independent. An individual's aim for entrepreneurship motivates the individual to start up a company

### **Entrepreneurship intention**

Entrepreneurship intention is the motivation/desire to establish and run an electronic business venture or an enterprise. Entrepreneurship intention is the product of the individual's attitude and values. Entrepreneurship intention is the state of mind of an individual to foster creativity in a business venture Rasli et al. (2013). Intention is a state of an individual's mind which directs the individual towards something or object(s) for achieving a specific objective (Rasli et al., 2013). The intention of an individual manifests in the behavior of such individual. Krueger et al. (2000) explained that entrepreneurship is a type of planned behavior for which intention models are appropriate. Entrepreneurship intention is the desire which one has either to establish electronic business enterprise or not. Such a desire is translated into action once the individual is able to meet the conditions necessary for starting the electronic business enterprise. Entrepreneurship intention is determined by attitude towards behavior and a rising incidence of unemployment among graduates of electronic technology as well.

Entrepreneurship aim is based on Fishbein and Ajzen's (1975) expected behavior theory. The planned behavior theory states that any action involves some preparation, the act of creating a new business can be anticipated on the basis of an individual's purpose. The theory includes variables such as behavioral attitude, perceived behavioral control and subjective standards that are important determinants in the intention of individuals to enter into any business

Behavioral attitude is an individual's perception and response to a situation or occurrence. This may or may not be a situation or case to become an online entrepreneur. This is the degree to which a person has a favorable or unfavorable assessment or assessment of the actions concerned (Ajzen, 1991). It is an individual's assessment of an electronic business idea and reactions towards such electronic business idea. Attitudes are grouped into two perceptions of desirability and feasibility (Shapero, 1975, 1982).

Perceived desirability is the attitudes that convey an individual's purpose to an act. The perceived desirability is the personal appeal of starting a Krueger et al. (2000) company. An individual's adoption of an online entrepreneurial enterprise as a viable career option is likely to be correlated with an intention to engage in self-

employment in the future at some stage (Segal et al., 2005).

Research studies have shown, according to Sata (2013), that there is a strong relationship between perceived desirability and the willingness to engage in entrepreneurial enterprise, involving the perceived feasibility of setting up a business.

### Research Questions

The study seeks to address the following research questions:

1. Do students exposed to entrepreneurship education, at particular tertiary institutions intend to engage in entrepreneurship after completing their studies?
2. Are there any statistically significant differences in the entrepreneurship intention levels of students exposed to entrepreneurship education?
3. Are there any significant relationships between student exposure to entrepreneurship education and the immediate determinants of entrepreneurial intentions?
4. Are there any significant relationships between technological creativity levels and the immediate determinants of entrepreneurship intentions?
5. Do entrepreneurship education and technological creativity predict the immediate determinants of entrepreneurship intention (i.e. attitudes, subjective norms, perceived behavioural control) of students exposed to Technology?
6. Do the proposed immediate determinants of entrepreneurship intention (i.e. Attitudes, subjective norms, perceived behavioural control) predict the actual entrepreneurship intention levels of students

### Hypothesis

**Ho 1:** There are no significant relationships between tertiary students' exposure to technology and the immediate determinants of entrepreneurship intentions (i.e. attitude towards entrepreneurship, subjective norms and perceived behavioural control)

### Proposed Study

For this study we will use cross-sectional data from a survey on the likelihood of engineering students to launch a new venture or to improve the existing business where they will work after graduation. It will be based on observations, studies, ideas that are obtained both on literature and practice. This study will be based on a survey administered engineering students. The sample will consist of undergraduate and graduate students from the different Faculties in Engineering and Technology in Mumbai. The confidentiality of the respondents will be maintained and

no identification will be requested from them in the survey.

### Findings from Secondary Data

- (a) Accessed empirical studies suggest that the engineering education curriculum has no positive or important effect on the engineering students risk performance. The lack of entrepreneurial experience may be a possible explanation.
- (b) The relationship between the engineering education program and the technology entrepreneurship education program leads to a significant improvement in the ability of engineering students to start a new enterprise using the entrepreneurial skills learned in the technology entrepreneurship education program.
- (c) In a dynamic economy, technology entrepreneurship education plays a major role. This encompasses imagination, ingenuity, risktaking, and engineering student's ability to start new ventures. To technical universities, an integrated approach to these educational programs is important.
- (d) Together, these results underline the value of the training program for technical universities in technology entrepreneurship. We further expand prior research by including in technological entrepreneurship the simultaneous impact of the educational program in engineering and education.
- (e) Technical universities can transform student's passion for technology into an ability to deliver inspired innovation.
- (f) Results support previous findings on the value of an entrepreneurial development program to promote initiative and cultivate a positive attitude towards wealth creation in each engineering student. Entrepreneurship in technology involves taking the concept of technology and seeking a high potential market opportunity to capitalize on it.

### Limitations and Future Scope

This empirical study from which inferences were taken had several limitations that provide direction for future research. Firstly, study focuses on a university from a single country and a single time period, as such the results should not be generalized. A second limitation of this study lies in the fact that it focuses exclusively on perception of students on the topics treated. Finally, the family environment from which the engineering student comes might also be investigated.

Future Scope will involve a similar study but with a larger Scope for Research across Universities and countries



## Conclusion

Technological innovation has taken center stage in modern theories of growth and development and such technologies are being commercialized by technology entrepreneurs. Colleges and universities invest heavily in improving the entrepreneurial skills of their students and have a tremendous impact on creativity and the growth of entrepreneurship. Universities today also play an important role in boosting economic value through the establishment of networks with innovators across the country through their incubators and research and technology parks.

Education technology entrepreneurship essentially investigates how business practices or technology advances are being implemented by technology pioneers to improve education and lead to higher results. As the higher education industry is radically changing and this transformation is valuable for business advantages as well as for innovative startups. Today, the role of colleges and universities is not only meant as the gatekeeper of knowledge and information, but as entrepreneurs in the education industry, numerous innovators are transforming into newer roles.

## References

- Abdullah, S., Ahcene.(2011). "The understanding of technology entrepreneurship according to Shariah principles". International Proceedings of Economics Development and Research (IPEDR),
- Agu, N. N., & Omenyi, A. S. (2013). "Gender enrolment status in higher education courses: A situation assessment and analysis of a southeastern federal university". Emerging Trends Edu Res Policy.
- Bandura, A. (1977). Social learning theory. Englewood Cliffs: Prentice-Hall Inc.
- Chiles, T.H., Bluedorn, A.C., & Gupta, V.K. (2007). "Beyond creative destruction and entrepreneurial discovery: A radical Austrian approach to entrepreneurship. Organization Studies", 28(4), Days". Harvard Business Review, December.
- Dutta, D.K., Li, J. & Merenda, M. (2011). "Fostering entrepreneurship impact of specialization and diversity in education. International Entrepreneurship and Management".
- Gross, D. (2005). "Schumpeter's legacy? Interaction and emotions in the sociology of entrepreneurship. Entrepreneurship Theory and Proactive".
- Menzies, T., & Paradi, J.C. (2002). "Encouraging Technology-Based Ventures: Entrepreneurship Education and Engineering Graduates". New England Journal of Entrepreneurship.
- Militaru, G. (2015). "An exploratory Study of the Impact of Servitization on Customer Perceived Value, Applied Mechanics and Materials".
- Nunnally, I.C. (1978). "Psychometric Theory". Second Edition, New York, McGraw-Hill.
- Ohanu Feanyi, Ogbuanya Theresa (2018). "determinant Factors of Entrepreneurship intentions of Electronics Technology education students in Nigerian Universities". Journal of Global Entrepreneurship Research. Open access.
- Rasmussen, E.C & Sorheim, R. (2006). "Action-based entrepreneurship education. Technovation".
- Schermerhorn, J.R. (2013). "Management", Twelfth Edition, Wiley.
- Urbig, D., Bürger, R., Patzelt, H., & Schweizer, L. (2013). "Investor reactions to new product development failures: The moderating role of product development stage". Journal of Management.

# A Study On Edu-future For Sustainable World Economic Order: Research, Innovation & Technology of Byju's, Tcs-ion & Vedantu

**Dr. Bhupesh V. Rane**

Director, Rohidas Patil Institute of Management Studies

**Prof. Raj D. Joshi**

Assistant Professor, Rohidas Patil Institute of Management Studies

**Abstract:** With the advent of the 4<sup>th</sup> revolution it's important for all the sectors to pull the sleeves & get ready for the change in all spheres which encompasses technology, space science, agriculture, innovation in automobiles, manufacturing globalisation, artificial intelligence & in learning & teaching in the era of digitalisation & knowledge improvisation. Education is a sector, which leaves no stones unturned & is equally pacing with all the other. The question arises whether the new technology or old technology is more sustainable. Are we ready for the sustainable change in Education? The purpose of the study is to summarize the Edu-future based on understanding the 3 online edu-companies that has recently made forays in the market i.e BYJU's. TCS – iON & Vedantu.

**Keywords:** Sustainable education, Innovation, Technological impact, Research, Vedantu, BYJU's, TCS – iON

## Introduction

Education is improving leaps and bounds & as defined by the United Nation it is “interdisciplinary learning methodology covering the integrated social, economic, and environmental aspects of formal and informal curriculum”. It broadly speaks about the education that encourages acceptance of new skills, values, developing competencies, and imbibe the attitude to enhance sustainable development of both students and teachers.

It encourages towards better future generations for better economic, social and environmental dimensions for long term development. For UNESCO, education for sustainable development involves:

Making a combination of teaching skills & learning pedagogy to avoid any issues that can hamper sustainability. This may include, for instance, instruction about climatic disturbances, reduction in natural calamity, biological differences and poverty elimination. It also involves learning & teaching in a way that motivates & gives power to the learners to change their behaviours and contribute towards sustainability. Competencies like logical thinking, future scenarios and decision making are few of the methods to achieve sustainability

## Overview of TCS -iON, BYJU's & Vedantu

### TCS – iON

Tata Consulting Services (TCS) iON is an integral part of Tata Group with focus on Manufacturing sector, IT Services, Education Industry and others. TCS iON offers ERP solutions for employees and recently has made entry into education sector to provide training to Students from Grade 6<sup>th</sup> to Post Graduation level. It offers the services to make ease of use & help students to learn thing in fun to learn methods.

## Byju's

The Learning App is from the company Think and Learn Private Ltd., it's a Bangalore based firm offering educational technology, and online tutor since 2011, started by Byju Raveendran. The company was in news recently after being the official sponsors to the Indian Cricket team & it also has Actor Shah Rukh Khan as the brand ambassador.

## Vedantu

Vedantu is India's leading on-line tutoring company, which enables students to learn LIVE with some of India's tech-oriented teachers. It has more than 500+ teachers who have taught various students spread across 1000+ cities from 30+ countries. Vedantu is founded by IIT students who have been teachers with a decade of teaching experience. Vedantu gives a personalized teaching using two-way audio, video and white boarding tools where both teacher and student are able to see, hear, write and interact in real-time. It is on lines with Skype like interface. It offers training to 6<sup>th</sup> Grade to 12<sup>th</sup> Grade students.

## Education Prior To The Technological Evolution

In the good olden days, the process of imparting education involved primarily classroom approach in the west, whereas in the Indian scenario, it is more like open-air classrooms, ashrams and later evolved into classroom training. The methods were like Chalk & Talk, Gurukul, Ashrams with demonstration way of learning to the modern era of Videos, Case Studies, Internship & to the current day...learning through Apps...

## Objectives of The Study

- To study the recent developments in education w.r.t. changes in technology.
- To study the impact of current research, innovation & technology for sustainable Economic Development.



- C. To understand the challenges in implementing the change for edu-future for sustainability.
- D. To promote the use of technology for sustainable world economic order.
- E. To find various methods used by TCS, BYJU's and VEDANTU's for overall development of the students.

### **The Sustainable Approach**

**Holistic Change** – It includes the old style of teaching i.e. Chalk and Talk, with larger focus on newer approaches like learning through observations, referring journals and participating in various group discussions.

**Analysis Oriented** – It makes emphasis on use of the real-life cases & various events that have occurred in the past, which forms the point of reference for further study. The focus should also be on project-based learnings, simulation tests and on the go trainings.

**Active Participation** – Education for the future should focus on various methodologies such as group learnings, learning from peers & colleagues, Exchange of Experiences (EOE), knowledge sharing sessions & developing case studies with local community groups and businesses.

**Futuristic Approach** – Use of Case studies, role-play, real-life scenarios, understanding the future requirements of the audience, problem solving pedagogy and getting ready for exigencies.

**Synergistic learning** – Focused contributions from eminent guest speakers, buddy assistant like buddy manager, work-based learnings, multiple level working and co-opting learnings.

### **Recent Developments In Education**

With the introduction of the 4<sup>th</sup> revolution that focuses on Artificial Intelligence (AI) the education sector also has seen the major change. The new Gen Students are learning things that are technology oriented & it gives the feel of scoring high with content that keeps them engrossed in it. It helps them learn concepts, languages & many new things using the videos, challenges & many new methods to learn.

### **Challenges In Implementing The Change For Edu-future For Sustainability**

- A. Reluctance from change
- B. Adapting the New Technology.
- C. Availability of Resources
- D. Familiarity of using the technology
- E. Cultural & Language Barrier
- F. Literacy

### **G Psyche of Individuals**

The biggest challenge in implementing the change for edu-future is the reluctance to change from the current systems as most of them are in their comfort zone & it become practically difficult to move away from the comfort zones.

Many has just been comfortable with the use of computers and then switching to mobile app-based learning has a lot of reservations in may people specially the middle-aged parent & who have not had access to education themselves.

People in remote areas would not access to the basic facility like electricity too, so reaching that segment of audience is a big challenge with app-based learning.

Furthermore, language is also a big barrier & hindrance to many of the users in country like India. Many individuals would prefer to have the chalk & talk way only, as compared to the app-based learning.

### **New Methods In Online Technology**

- a. Machine learning and artificial intelligence (AI)
- b. 3D printing and digital fabrication
- c. Digital finance technologies

The “right” choices in Technological development has been the result of various factors:

- Innovative scientific discoveries
- improving business self-image and interests
- adapting to consumer demand
- adhering to government regulations
- evolving institutions and paradigms
- changing dominant values

### **Benefits of Using Mobile Applications In Education**

#### **A. Increased Communication**

App developers believe that use of app-based learning in education can make the learning more engaging & can develop higher interests between students & parents.

#### **B. Innovative learning techniques**

App becomes a pull factor for students to learn & grasp the knowledge. It involves fun learning through cases, quizzes, games that helps logical thinking to develop new outlook.

#### **C. Fosters Pupil – Parent understanding**

On app based leaning teachers can solve the doubts of the parents through phone. This promotes transparency

regarding the child's progress.

#### **D. Online Pandora's Box**

Mobile applications help to access the gamut of e-books, journals, web content and other materials and can be operated anytime & anywhere.

#### **E. Support 24 Hrs & 7 Days**

Apps also has important feature of parental control. It's easy to operate & has good features to keep you glued to it.

#### **F. Systematic Learning Activated**

App learning is a combination of smart learning & systematic way to grasp important learning tasks. The apps are designed in a way that you keep progressing to the next level with being involved in to it.

#### **G. On the Go learning**

There are no constraints when you are on the go, for mobile phones. Learning will not be limited to the classrooms alone.

#### **H. Sustainability**

Using mobile apps for getting reference notes and research data is tailored in a simple way in mobile learning app. You just need to download it.

#### **I. Instant Updates**

Apps have become a way of life, as it keeps you updated & provides you with updates, reminders, to – do lists, events, Time-tables, deadlines etc. The also provide facilities of making fees payments, online funds transfer, understanding the prospects, existing students and passed outs.

#### **J. Track the Student Life Cycle**

Apps can also help to tack the student Life cycle i.e. the No. of Hours, Progress, Test results, percentile performance, Cumulative Grade Point Averages, etc.

#### **Challenges In Using The App**

1. Apps are expensive
2. Lack of usage can make the doubtful of its security
3. Reservations in using the App
4. Immediate output expected
5. Ill effects on health – eye sight & weaker limbs

#### **Comparison Of Tcs-ion, Byju's And Vedantu**

- A. BYJU's** tops the position because of its efforts on heavy marketing. With a huge budget it is captivating the market & being the official sponsor of the Indian

Cricket team, it has entered into markets across India. It heavily markets on all the platforms like TV, Online, Radio, Newspapers, OOH, Metro Stations, Schools & others. Due to its strong MBA Marketing team is able to reach the mass. It also has resorted to Celebrity Endorsement – Veteran Actor – Shahrukh Khan as its Brand Promoter.

- B. Vedantu** has recently entered the market & has adopted the target market selling. The trust has not developed yet in them & being new in the market they are still struggling to reach the masses.

- C. TCS-Ion** is having a Brand name attached to it However they have only been popular to few Post Graduation colleges & their target audience is totally different, so its still to make the TCS benchmark.

#### **Conclusion**

These App based learning are now being widely accepted, however they have lot of repercussions on our lives & kids. It's creating a lot of convenience on the other hand it's also increasing the unemployment too. It is easily accessible at the cost of Lack of eye-sight, weaker limbs, lack of Vitamin – D & no physical activity.

Furthermore, it creates a gap between the Teacher & the Student & it loses the human element of teaching & learning. We also have to consider it for the ones who are not literate & doesn't have the access to basic facilities of life like electricity, how do we access them? The question arises who will take efforts to teach the under-privileged students.

In today's world of Sustainable Economic Order, we also need to save the energy, so that becomes a big question for their survival. Saying this we still prefer to use these apps for better learning & grasping. There are lot of new players entering the markets, to name a few like Unacademy, Meritnation, Edukart, I-champ and many more...

#### **13. References:**

- Appa Iyer S. and Mathirajan M., (2011). Management Research Methodology. Seventh impression.
- <https://www.indiatoday.in/india-today-insight/story/e-learning-apps-have-nothing-on-traditional-teaching-1575419-2019-07-31>
- <https://blog.technavio.com/blog/top-10-elearning-companies-in-india>
- <https://elearningindustry.com/mobile-apps-in-education-5-benefits>
- <https://education.cu-portland.edu/blog/classroom-resources/play-based-learning/>
- [https://en.wikipedia.org/wiki/Education\\_for\\_sustainable\\_development](https://en.wikipedia.org/wiki/Education_for_sustainable_development)

# Education in the wake of Industry 4.0

Deepak Agnihotri

Adjunct Faculty, DR VN BRIMS

**Abstract:** Neoliberalism – political ideology, played remarkable role during 2007- 08 crisis, creating wealth and power by increasing cross border trade. It aimed at integration of economies to achieve growth that is measured by gross national product (GNP). This undoubtedly made economies interdependent. The unsuccessful feature of neoliberal period is the huge growth of inequality which was overlooked till recent time has brought political discontent in the western world. Globalisation is left behind with the upcoming multipolar world, a new period witnessing dramatic changes in the world of political thought and power equations undergoing change in the international relations. Education for sustainable development is an integral element of quality education. With open access to quality education people will be empowered to think, respect cultural diversity and develop skills, knowledge, and change behaviour for sustainable development. Technical advancement with consistent improvements has changed various process and product value systems including education industry gradually adapting the student centered learning systems facilitating learning by doing instead of the conventional methods of learning. The skill requirement has customised future learning. To enrich human capital, countries with societal unity should commit to improve the quality of education by increasing the educational institute's resources thus refining their efficiency.

**Keywords:** Industry revolution 4.0, Higher education, Education, Information management, Knowledge management

---

## Introduction

Post World War II the global order served a solid base preventing conflicts with the establishment of World Bank, International Monetary Fund (IMF) and recently World Trade Organisation (WTO) with the emergence of various trading blocs across the world promoting trade and economic development.

In progressive state of the world shifting from unipolar to multi-polar actuality the international system needs to be handled with extreme care and this requires a collective action by countries in this globalized world.

Currently with the impressive rise of China and relative decline of US trade there is a danger of economic nationalism.

Global stability with secured environment leading to prosperity is a requirement of tomorrow. In spite of global trade if the leaders of major countries are at war with each other no new ideas will be generated to battle the upcoming storm.

With one side the world being threatened by huge technical advancements, climate changes, a need for stable governance, and on the other side the world is experiencing unmatched magnificence. This is causing complication and exposing everyone to systemic risks.

In order to face the brave new world of tomorrow the global transition happening today should be broad-ranging, illustrative and reasonable. Wide access to education with quality improvement is crucial to sustain development. A rise with targeted investment in support towards education and employment policies is required. The result of education on development is facilitated through an improved source of human capital and more innovation.

There is a lack of talent especially at higher education level, where the focus should not be only building skills but

also developing innovative talent. This warrants an alternative to the standardization of teaching which requires customization of education practices focussing on the needs of individual student. This will meet the demand of future job markets.

Teaching learning system needs a transformation where education institutes reconceive their competitive advantages rebuilding their service architecture. This can be facilitated by the Universities creating platform-as-a-service thus creating education-as-a-service delivering education in the most affordable form making student central to education. Universities will have to emerge in a new form becoming interdisciplinary, virtual and upgrading the educational experience. Education of today will be economy of tomorrow.

## Evolution of Education

Obtaining skills, knowledge, developing values and habits is what education is and this teaches how to live and not just earn money to live, it trains us to think, prioritize, and understand our struggles. Education provides opportunities, gain experience and solve problem through critical thinking.

Education 1.0 – Gurukul – a teacher centric system giving knowledge to different sections of the society viz. Kshatriya the warriors, Vaishya the business people, and Shudra for work related to house and locality.

Text books formed the basis of Education 2.0 – a rote learning system as teachers centrality focussed on the teaching by the teacher rather than practical experience.

Education 3.0 where technology plays an important role provides blended education and teaches to think critically as teachers have become facilitators who provide a learner all the resources needed.

Education 4.0 focusses on the student, providing skill based learning to an individual.

Education processes have evolved from 1.0 to 2.0 to 3.0 and now 4.0 drawn from the idea of progress and social constructs. Progress depicts learning by doing where a learner is able to develop problem solving skills and decision making skills.

Social constructs brings out the importance of culture in learning facilitating dialogue and discussions of meaningful content.

The role of educator has transformed to a facilitator from an instructor as ever-present content enables learning through easily available resources.

### **Evolution of Industry**

For ages manual work was performed to produce goods like clothes, weapons, food and many a time animals helped the activity of manufacturing.

At the beginning of 19<sup>th</sup> century, dramatic changes could be seen as introduction of machines that were steam powered was developed. This helped in developing operations swiftly. Businesses transformed from cottage industry to organisations taking care of masses. This was marked as Industry 1.0

As the century passed by electricity became the medium/source to supply power to machines. This was much easier to use than using water and steam. Machines were design with power units as they became portable.

People realised the importance of efficiency and effectiveness with division of labour was managed for mass production of goods optimizing the processes at workplace. Advanced concepts like Just-in-Time(JIT), and Lean Manufacturing improved the functioning of organisations producing quality output. This movement was marked as Industry 2.0.

Industry 3.0 came into force with the invention of electronic devices like integrated circuits, making it possible to automate operations. Software systems capitalised on hardware and integrated systems introducing new techniques of Material-Requirement-Planning (MRP) and Manufacturing Resources Planning (MRPII). Modern management concepts of reducing cost of production and supply chain were introduced and businesses spread across geographies.

Industry 4.0 unites internet of things (IoT) with manufacturing procedures and the information generated is shared and analysed to decide upon futuristic intelligent actions to be taken. State-of-the-Art technologies like Robotics, Artificial Intelligence, Augmented Reality, and other intellectual systems and processes have changed eco system of a business.

Disruption is happening in varied industries, in manufacturing, in high technology, financial services as technology advancement is changing the way we work and our lives giving us benefit in economic and social fields. This technology change is in all directions rather than being in sequence.

To succeed in this changing world one will have to clasp to the changes around which means changing and adopting new skills.

It is vital to create an environment of learning taking advantage of our native varied skills and sharing the knowledge to solve problems. The key to this is continuous learning covering skill gaps and avoid challenges in future.

### **Bridging the Evolution of Industry and Education**

Industry 4.0 integrates real and virtual world making cyber physical production a reality. This will require high level skills not just in information technology and analysis of data but also skills that can be applied to equipment handling and team performance.

Countries today face a challenge of highly skilled labour which may be the cause of job-loss tomorrow. At the same time labour will have to be re-skilled or up-skilled to be ready for the new requirements.

This demands exploring the future and equipping young generation with soft and behavioural skills, team spirit, opportunity for internships making the student ready for industry as they will be critical for success.

The base of the economy is manufacturing industry. It is expected for the demand to rise for quality products and advanced technologies can have major influence on the approach adopted by manufacturing industry.

India is poised to have a young working population which are out of degree colleges which is a sure sign of major change in the education sector. Digital tools entering educational institutes do not guarantee integration with industry requirements. Fundamentally the change has to occur in teaching methodology to propagate design thinking in a collaborative environment.

### **Impact of education on economy**

It is the demand and supply of labour in respect to the requirement of highly or poorly educated workforce that drives the education model as well as the economy of that country.

International trade due to globalization has increased between countries making their economies compete with each other. Developed economy will have varied industries having varied competitive advantages or disadvantages in the global market. Countries that are economically successful



will hold competitive and comparative advantages over other country economies. The deciding factor is the education in a country that produces the workforce and makes a country perform well and build its economy.

Training is an important factor that distinguishes a developing and developed country as the effect of well-educated workforce (externality) positively impacts the productivity of an organisation along with other factors such as primary sector resources or even geographic location.

Workforce increases their potential to earn by refining or developing themselves on the job function and understand a particular industry much better through their newly acquired skills.

From the economic perspective emphasis is laid on education system that produces workforce to function in new industries viz. scientific or technology as these new industries are more competitive in the developed economy.

Educated workforce can carry out tasks proficiently that require critical thinking and countries where greater percent of population enrolls in higher education tend to witness faster economic growth.

The enrolment ratio differs to the percent of GDP spending done by a country on education but it does not necessarily mean high percentage spent means high proportion of population is more educated.

Investment in education is considered as opportunity cost. Skill and knowledge of workforce determines economic growth. Countries having higher percentage of educated workforce often capitalize by setting value added industries.

### **Higher education affected by future economic trends**

Education is looked at as an investment. This thought is prevalent for many decades but the context of investment has changed. Today people invest in education to better their economy in future, they conceptualise it as return on investment (ROI), whereas in earlier time education was looked as an investment to gain knowledge and knowledge in turn would better the personal economy.

Likewise, education today is considered as industry, which makes investments in building infrastructure, maintain to the current living standards, in the bargain making education liable to higher economic tendencies.

There is inconvenient truth underlying modern economics. Every aspect from generating by-products to printing cash is based on contradictions – as the countries use debt based monetary system in the process of money creation. Such a system allows nation to have control over debts issued in its currency. But such an economy needs consistent growth to pay previous debts. If GDP is considered as the measure of growth a country needs to

gain several percentage points every year or else the economy may face deflationary cracks and enter depression.

Of course, the central bank can reduce the interest rates – reducing the price of debts – or print more money, to control the slow speed of economy.

Such a scenario happens because infinite growth is assumed when we have finite resources. This is a matter of contradiction – infinite growth model with finite resources. An economic system with finite resources aspiring for infinite growth is sure to collapse.

For example – the desire for oil or ore is ever expanding reaching the maximum limit level of the same that can be procured. Even though the contradiction is not visible, the infinite economic growth model will reach its natural limit hence industries including education should be aware of rising economic challenges.

Investors had been investing earlier in growing sectors; unemployment rate though on the higher side was pretty controllable. But things today seem to be moving out of hand as there are no enough jobs available, young graduates are waiting for a long time to get a decent job, many of the available jobs are part time where a young person cannot satisfy requirements. People are reluctant in taking risk, as businesses are not doing great, no new businesses are being created, and student loans have declined putting the education sector in a riddle and economic constraints.

The current century is faced with market instability. Just before the end of century there was dot com bubble burst, toppling the stock market, followed by sub-prime crisis, causing unrest in western civilization.

The answer to this is Government should borrow more.

Education sector will get less funds if the state treasury was to run dry.

For a small time schools and colleges may tap private resources in the form of industry or rich alumni, but such funding would scale back research activities making a college professor just a teacher overworked like an personal assistant rather than being tenured and full time.

The education sector is in a fix as it cannot retract back to trade schools because of the advent of technology. Technology is making skilled professions diminish, as robots, drones are increasingly used for labour intensive jobs.

Students are inclined to complete their basic education faster and cheaper. As a result the importance of online distance education is rising. Though these schools may be good until graduation level they cannot suffice the need of research scholars.

As funding becomes hard to be procured, distance education will gain more market. Students need not take

loans for their basic needed degree education, they will earn while learning, at the same time geographically a student will not be caught up to get the required education from a best school.

The world is changing faster and so the education sector too. Industries are being replaced by modern technology and jobs are evaporating, similarly the traditional universities and thought patterns are undergoing huge transformation.

During industrial revolution, education system was built assuming one-size-fits-all with every one reading same books, and taking standardized tests. Today education can be customized to strength, time resources of an individual. This helps to communicate with focussed, likeminded people using technology like Skype, online message boards, WordPress, YouTube, Facebook, Twitter etc.

People will be more intuitive and will use preferences, will find what really interests them, use cheaper means to gather knowledge in those areas, without bothering about the source of knowledge.

Good universities, those are large, have good reputation in research and are independent of Government support, will be able to face future storm as these research facilities cannot be replaced by online formats.

Second and third level universities and colleges will feel the heat as less number of students will be inclined to make high tuition fees affordable as Government assistance will be scarce at the same time online education will be on the rise.

In the age of information, education will undergo massive change, these changes would be exhilarating but to make them exciting one will have catch the moment of the day.

### **Is Education 4.0 the future of learning?**

Basic purpose of education is to help an individual live a successful life contributing maximum to the family, society and nation. Education must set free the inherent knowledge of the student freely.

Social transformation can happen with the most powerful tool – education. To make the most gains at the national level, quality education to youth is a must who can think, innovate and adapt to modern way of working as there would be abundant opportunities for the endowed and knowledgeable.

Universities in India are mostly degree giving factory and certainly are not the sources of innovation or entrepreneurship skills. The delivery model is of 19<sup>th</sup> century in a 20<sup>th</sup> century environment, to the students who are digital natives in 21<sup>st</sup> century. Current Indian education system can create good soldiers and obedient employees who will

follow orders but cannot think and work on their own.

Industry 4.0 is causing a huge shift where machines perform tasks replacing humans with disruptive technology driving the skills required causing unstable, vague and difficult environment. As majority of repetitive jobs will be taken over by machines, education needs to generate humans with capability to drive Machine Intelligence and Artificial Intelligence.

Industry 4.0 is a connected cyber-physical system, runs on data, driven by IoT. This will create interconnected society, in a disruptive world and Education 4.0 has to leapfrog and adapt to these changes.

Hence Education 4.0 will have to be supply-led, competency based system, learning for whole life to tackle disruption. This will make the youth future ready, improve productivity, compete globally, think and innovate, and face uncertain situations.

### **Global Industry 4.0 Needs Education 2.0 to leapfrog**

Education 1.0 – dictated in a classroom of brick and mortar school, one side conversation from teacher to student and no technology allowed in the class

Education 2.0 – an open access system with schools having brick and mortar environment, increase use of Web/Internet access with teacher to student conversation but also student to student with the help of Internet.

Education 3.0 – a knowledge producing environment systematically permeated into the society, not specific to a location, but even in cafes, bowling alleys, bars, with conversation happening for knowledge creation without specific hierarchies.

Education 4.0 – an innovation producing education in a global networked human being, 24/7 learning with the enablement of technology.

Education 4.0 need a framework considering the changed habits and attitude of Generation Z: Absorb – basic concepts, Repeat – fundamental skills, Understand – facts and apply them to suitable situations, Curiosity – to explore to create more knowledge, and Originate – think different.

There would be four types of skills that work would demand in the next decade to compete – Innovation, Scale, Societal and Human which would force changes to higher education ecosystem to make young graduates ready to carry responsibilities.

In this connected world the social changes in behaviour would demand intellectual and economic supremacy for which skills needed should be renewed. The ecosystem should provide lifelong learning in an interconnected world with Industry 4.0 features that would be critical to build a talent pool of future students and faculty



for leadership roles.

Raising the standard of living with the rise in global income levels is a possibility today because of technology enabling the making of different products and services driving better efficiency and productivity making safe workplaces and improving health.

But also Industry 4.0 can pose challenges of inequality as jobs will be recreated requiring different skills such as augmented technological capabilities, new communication tools, social technologies driving value creation, and adaptability to the new methods of operations as repetitive jobs will be taken over by technology advancements.

With Generation Z (age group from 13 to 19 currently) the learning habits are different from that of earlier generations. Earlier generation developed reading habits to at least medium level, with hands-on parental involvement, having homogeneous educational experiences, face-to-face interaction, having a clear career path with appreciation earned through efforts. Generation Z faces information overload that is mostly unverified in the form of data, videos, social media, have no patience to read anything more than a paragraph, with very less parental guidance, still getting abundant appreciation thus developing a skewed self-image.

The changing profile of a student demands agility and personalized learning that is both vibrant and friendly. This warrants increased innovation in teaching or improved learning opportunities that fits the change motion.

The new ways of learning is through media, internet and a different mechanism of response are needed to deal with it.

Collaborative learning with flexibility, addressing employability challenges by providing required skills, building project management capabilities, diversifying the revenue model to sustainability model will have to be the focus of tomorrow's educational universities/institutes.

The classroom needs redesigning creating support environments for self-directed students collaborating and debating, with fellow students and faculty generating knowledge and new ideas.

Pedagogical approach should become diverse to support students making them more inclusive in teaching method by using digital technology. The curriculum needs a linkage to the outside real world for a student to create experience adhering to the blended delivery program.

Educational institutes need to partner with industry and society, offer partnered curriculum delivery programs and invest in professional development. Promote research by fostering collaborative models with experts by opening community based centres, creating opportunity for small and medium industries to conduct research.

Modify existing policies to encourage new use of data consumption by students and faculty enabled by high speed networks and open systems.

Develop technology driven strategy by creating monetizing delivery models, and generate research based funding from local industry/society.

### **Industry 4.0 & MBA Education: What industry really wants, and how B-schools can reshape curriculum**

Industry 4.0 is transforming every business including higher education. Business schools should rethinking about their curriculum to match the need of Industry 4.0 viz. Analytical mindset, solution orientation and problem solving, deal with uncertain situations, social sensitivity, entrepreneurial outlook, global mindset not limiting to only these as the needs will align to future work.

These needs are required to manage multi-generational workforce, communicate and integrate data. Wellness as a skill is required to self-manage with a service mindset carrying more importance than strategy.

To prepare a better future manager for the Industry 4.0 era, interventions like decision making sciences, innovation incubation, Design thinking, Social, cross-cultural programs, and Project based courses are needed.

### **Is Indian Education Sector Equipped to handle Industrial Revolution 4.0?**

Education systems of teaching and learning are about to witness massive change in the delivery of the content because of Industry 4.0.

Industry 4.0 will involve different approach to processes, service deliveries, and applications of products which will demand employees using their newly acquired skills and knowledge. Knowledge will continuously change and the employee will have to upgrade the skills to become successful. This means Education systems need to modify their curricula to meet the Industry 4.0 requirement.

Skill development and not rote learning will have to be the future process of education. Surviving in unambiguous situation is a skill that needs to be mastered by the student and the teacher needs to be the facilitator instead of instructor, making clear the future vision.

Big Data coding and processing will have to be integral part of school subjects, and if started at an early level learning the application of such modern systems that will help student in his future life. Education will have to be all round imparting knowledge of integrating machines in human life as well as learning Arts and Humanities to strike balance between machines and humans.

It is expected of schools to invest in setting up of Artificial Intelligence and Virtual Reality labs in the premises

to embrace knowledge.

Industry 4.0 will alter the education delivery from task based characteristics to human centric characteristics which will reduce the difference between science and humans.

#### References:

- AIMA Journal of Management & Research, (2015), Improving the Global Ranking of Indian Universities - An Analytical Approach
- Akash, (2018), Is Indian Education Sector Ready for Industrial Revolution 4.0?, <https://digitallearning.eletsonline.com/2018/12/rajasthans-new-council-of-ministers-to-take-education-sector-to-new-heights/>
- Brent Radcliffe, (2019), How Education and Training Affect the Economy, Investopedia, <https://www.investopedia.com/articles/economics/09/education-training-advantages.asp>
- Harry A Patrinos, (2016), Why education matters for economic development, <https://blogs.worldbank.org/education/why-education-matters-economic-development>
- IFIM-NHRDN Study, (2018), Industry 4.0 & MBA Education, mbauniverse.com
- India Today, (2019), Is Education 4.0 the future of learning?, <https://www.indiatoday.in/education-today/featurephilia/story/is-education-4-0-the-future-of-learning-1557292-2019-06-27>
- Judy Marks, (2018), Building a Skills Bridge to Industry 4.0, <https://www.linkedin.com/pulse/building-skills-bridge-industry-40-judy-marks/>
- KPMG Consulting, (2017), Online Education in India: 2021
- Parag Diwan, (2017), Is Education 4.0 an imperative for success of 4th Industrial Revolution?, <https://medium.com/@pdiwan/is-education-4-0-an-imperative-for-success-of-4th-industrial-revolution-50c31451e8a4>
- Pranav Kothari, AnurimaChaterjee, Education 3.0 and beyond
- PWC Report, (2019), Global Industry 4.0, <http://www.newindianexpress.com/magazine/voices/2019/apr/28/global-industry-40-needs-indian-education-20-1968573.html>
- RakhiChitnis, (2019), Indian education sector's journey of evolution in last 70 years, Elets News Network (ENN), <https://digitallearning.eletsonline.com/2019/02/indian-education-sectors-journey-of-evolution-in-last-70-years/>
- Richard E. Crandall, (2017), Industry 1.0 to 4.0: the Evolution of Smart Factories, APICS, <http://www.apics.org/apics-for-individuals/apics-magazine-home/magazine-detail-page/2017/09/20/industry-1.0-to-4.0-the-evolution-of-smart-factories>
- RitikaSubhash, (2019), Industry 4.0 and Indian Education System, <https://edtechreview.in/trends-insights/trends/3466-industry-4-0-and-indian-education-system>
- Robert Muggah, Yves Tiberghien, (2018), Facts you need to understand the new global order, World Economic Forum, <https://www.weforum.org/agenda/2018/01/five-facts-you-need-to-understand-the-new-global-order/>
- Stephen DeRose, How will future economic trends affect higher education, <https://thebestschools.org/magazine/will-future-economic-trends-affect-higher-education/>
- T.V. MOHANDAS PAI, SHOBHA MISHRA GHOSHT, Making India the global education hub, Hindu BusinessLine, <https://www.thehindubusinessline.com/opinion/creating-new-india-world-class-and-new-age-universities/article23245879.ece>
- Technavio, (2016), Distance Learning Market in India 2016-2020
- Vikas Gupta, (2019), Bridging Evolution and Education – The Industry 4.0 Norm, Wiley, <https://vikasguptawiley.com/bridging-evolution-and-education-the-industry-4-0-norm-by-vikas-gupta-md-wiley-india/>

# Linkplace: Philippine Farmers Market Place System for Trading Agricultural Products

Joey M. Suba

University of the Assumption, Philippines

---

**Abstract:** Trading agricultural products by farmers are essential. Market place is a form of e-commerce website where product or service data is provided by multiple third parties. Transactions are processed by the marketplace partner which uses the technology infrastructure for support services, payment processing, and customer protection. Several solutions to surpass the problems in trading the products of farmers and consumers is not viable due to the lack of available system and technologies. Farm prices are dictated by the middlemen in gaining profit due to the huge markup of one intermediary level to another. E-commerce infrastructures and the motivation to embrace and use the technology is the option to break the barrier in between farmers and consumers. To solve further the commercialization and innovation barrier, requires an adoption process that includes investment in technology, communication infrastructure, strengthening of business services, and improving farmer skills especially in remote places. The study used an electronic market information system which consists of mobile application and web-based as prototype to improve the current business model that can streamline the process of trading of farm products of farmers and consumers with portability and ease of access. With the use of technology particularly mobile phones and internet access, electronic market information system services in high and low- income countries have benefited farmers by improving their negotiating power, reduced transaction costs and able to gain more profit.

**Keywords:** E-commerce, Infrastructure, Mobile application, Business model

# “Lack of Tourism Growth In India and Its Impact on Indian Economy.”

**Saurabh Mohan Chaudhari**

(MMS Student, DR VN BRIMS)

**Suyash Patil**

(MMS Student, DR VN BRIMS)

**Nandini Gupta**

(MMS Student, DR VN BRIMS)

**Abstract:** Tourism is an industry with a series of events, providers, and industries that provide travel experience, including transportation, hotels, food, shopping, entertainment, and other hospitality services. In India, tourism industry growth has a major impact on the economy's economic development. Tourism not only contributes to the GDP of the nation but also create a lot of jobs. The tourism industry can be instrumental in national wealth's economic development. Through its backward and forward linkages, it can encourage other sectors of the economy. Tourism has had a groundbreaking and significant impact on the economic scenario of the world. For its further growth and diversification, It has become the fastest-growing service sector with huge potential in the country. This has a direct and indirect link between the chain and other economic sectors. Tourism has a far-reaching effect on India's economic, social, political and environmental aspects, both positive and negative.

**Keywords:** GDP, FEE, WTTC, Indian Economy, Domestic Tourists.

---

## Introduction:

India can be a country and its various environmental conditions are documented for alternatives. The Asian nation has become one of the promising holiday destinations of the world with a huge number of tourists every year. This is one of the most significant economic developments and a rapid expansion in markets in the last 25 years. Business activity has a socio-economic impact on the economy for a long time.

According to the report of the World Economic Forum, India is the 12th most attractive holiday destination in Asia-Pacific. Trade is well known as an important business with great potential for reducing unemployment and economic growth. Therefore, it is a good suggestion that developing countries, such as the Asian nation, are considered important for the rapid development of states. The tourism business is receiving sensible attention as a result of remote exchange job holders from most of the world's components, which these days are mainly promoted to earn interchange. Housing, food, transportation, recreation and then holiday spending on the linkage effect resulting from the development of the country.

India's business campaign and IT development "Incredible India" draws many business tourists and foreign tourists to India. "Atithi Devo Bhava" is the outline of Indian culture which means guests are like God. The Ministry of Tourism also has an impressive campaign for the Asian country. Newly discharged ministry information suggests that foreign tourists visiting India are on a healthy rise. Information points weigh a marked increase in entries for e-visas. The business helps guests familiarize themselves with the culture, customs, traditions, language, and lifestyle. The business, therefore, liberalizes their minds and helps individuals strengthen the bonds of friendly relations,

international understanding, and cooperation.

## Objectives:

1. To study the current status of tourism and revenue generation from tourism.
2. To study the factors contributing to the development of tourism.
3. To study the relation between tourism growth and economic growth.
4. Suggestions to improve tourism in India.

## Literature Review:

Vijayaragavan (2014) found that among all the sectors in the Indian economy, the Indian travel industry has become the important sector it contributing to a large proportion of GDP and reducing unemployment. We should be central to liberal attitudes, unwelcome in duties, broad bundles, etc., to influence passenger and remote speculation. Tourism is the best means of economic development in all ways. We need to focus on liberal policies, tax exemptions, and comprehensive packages and so it influences tourists and foreign investment. The government of India is also having to focus on tourism to blossom into the global market. India has a wide scope in tourism development. Tourism is the best means of economic development in all ways.

Shiji (2016) found that tourism is the world's largest industry occupying one in nine global jobs and contributing 10% of the world's GDP. Active partners in the country's growing tourism efforts are central and state governments, private sector, and professional organizations. The total number of foreign tourists in the country has increased manifold. It shows that India's government is focused on tourism development, and nearly all the known tourist

destinations have been connected by road, rail, and the civil sector. Tourism has increased the country's foreign exchange earnings from 2000 to 2014 by more than 7 times from 2000 to 2014. This proves that economic, political and social wealth has a positive impact on revenue and revenue generated by the tourism industry in countries.

Dayanand (2014) found that tourism has become the fast-growing service industry in the country contributing to many sectors of the economy. Tourism has positive as well as negative effects on India's economic, social, political and environmental. Tourism in India has developed in such a manner that it accommodates and entertains visitors, is minimally empowered or important for the environment supports and supports native cultures in the places it operates because tourism is a versatile activity. For sustainable development in tourism, the service industry will require central and state governments, private sector, and voluntary organizations to become active partners.

Venkatesh and Raj (2016) found that the tourism industry is an important sector with an important role in economic development, cultural development, and national integration. Tourism is the second largest foreign exchange earner in India. Tourism is an industry that contributes to the Indian economy by employing both skilled and unskilled people. The sectors which benefit through the tourism industry are hotels, travel agency, transport industry. There are some new ventures undertaken by the Government of India, which can improve the development of the tourism industry in India.

It studies the role of the tourism industry in India's economic growth on tourism, contributors to economic growth and India's GDP, foreign vs. domestic tourists. It said that we need to focus on liberal policies, tax exemptions, comprehensive packages, etc. to attract tourists and foreign investment. India also needs to enhance the role of government to blossom in tourism and become famous in the global market. India has a rich source of tourism for the economic development of India. The tourism industry is one of the best tools in the economic development industry. The tourism sector plays an important role in helping to provide employment opportunities at an increasing rate.

#### **Rationale of Study:**

This research has been done by us to study tourism development in India according to the satisfaction of tourists. Also, to understand the economic impact of tourism on the Indian economy. As India will see the fourth tourism sector in the world in the period between 2018 and 2028, a report by the World Travel and Tourism Council said. A council is a group of CEOs in the travel and tourism sector around the world. The report also states that tourism's contribution to the gross domestic product (GDP) in the country will increase from 3.7 percent in 2017 to 3.9 percent in 2028.

Accordingly, in 2017 the sector contributed Rs 5,943.3 billion directly, while in 2028 the economy is expected to contribute Rs 12,677.9 billion.

#### **Research Design:**

**Primary data:** We have selected the Questionnaire design. We have designed our questions in the proper format to check the satisfaction.

**Secondary data:** Secondary data is collected from the Annual Report of Ministry Of Tourism WTTC Annual highlights.

**Sampling Technique:** In sampling technique, we have different types but this research paper is based on respondent's feedback because from their feedback we are going to apply new techniques and strategies for it. So here we have taken the Convenience sampling technique. Convenience sampling is a type of non-probability sample that includes a sample drawn from that part of the population that is close to hand.

#### **Hypothesis:**

1. There is a significant difference between the current status of tourism and revenue generation from tourism.
2. There is a significant impact on tourism factors that affect the growth of tourism.
3. There is a significant relationship between economic development and tourism development.

#### **Research Methodology:**

The research described in this paper focuses on the satisfaction of tourists while visiting tourist destinations and studying the factors that contribute to the development of the country's economy. The population of this study includes a questionnaire. All questions related to their satisfaction with tourist destinations in India. From this questionnaire, 80 responses were included in the analysis.

Each tourist destination can have different characteristics. Satisfied tourists at one destination may differ from those satisfied at another destination according to the particular characteristics of each destination. Following this process, a questionnaire consisting of two sections was prepared. In the first part, respondents were questioned about their characteristics (age, gender, marital status, occupation, and employment status), general travel arrangement preferences, such as travel party, length of stay, and type of accommodation. In the second section, the Likert scale is used to measure their level of satisfaction. The scales ranged from very dissatisfied to very satisfied. We have collected secondary data from the World Travel and Tourism Council (WTTC) Economic Impact 2018



## Data Analysis:

### 1. Factors Affecting Satisfaction of Tourists:

Factors	Significance Value	Hypothesis	Effect of factors
Personal Safety	0.000	Reject Null Hypothesis	Negative
Overall Cleanliness	0.000	Reject Null Hypothesis	Negative
Heritage	0.001	Reject Null Hypothesis	Negative
Climate Conditions	0.000	Reject Null Hypothesis	Negative
Diversity of Culture	0.000	Reject Null Hypothesis	Negative
Quality of accommodation	0.000	Reject Null Hypothesis	Negative
Friendliness of local peoples	0.000	Reject Null Hypothesis	Negative
ATM service	0.001	Reject Null Hypothesis	Negative
Medical Service	0.000	Reject Null Hypothesis	Negative
Road Condition	0.007	Reject Null Hypothesis	Negative
Convenience of booking	0.005	Reject Null Hypothesis	Negative
Nightlife and entertainment	0.000	Reject Null Hypothesis	Negative
Food	0.000	Reject Null Hypothesis	Negative
Carnivals & Festivals	0.000	Reject Null Hypothesis	Negative
Local Tour guide & Operator	0.000	Reject Null Hypothesis	Negative

### Result:

1. There is a significant relationship between personal safety and overall satisfaction of the tourist.
2. There is a significant relationship between the overall cleanliness and overall satisfaction of the tourist.
3. There is a significant relationship between heritage conditions and the overall satisfaction of the tourist.
4. There is a significant relationship between climate conditions and the overall satisfaction of the tourist.
5. There is a significant relationship between the diversity of culture and the overall satisfaction of the tourist.
6. There is a significant relationship between the quality of accommodation and the overall satisfaction of the tourist.
7. There is a significant relationship between the friendliness of local peoples and the overall satisfaction of the tourist.
8. There is a significant relationship between ATM service and overall satisfaction of the tourist.
9. There is a significant relationship between medical

service and overall satisfaction of the tourist.

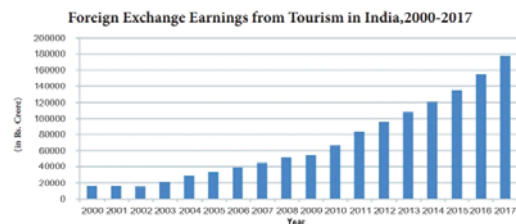
10. There is a significant relationship between road conditions and the overall satisfaction of the tourist.
11. There is a significant relationship between the convenience of bookings and the overall satisfaction of the tourist.
12. There is a significant relationship between nightlife and entertainment and the overall satisfaction of the tourist.
13. There is a significant relationship between food and the overall satisfaction of the tourist.
14. There is a significant relationship between carnivals and festivals and the overall satisfaction of the tourist.
15. 15. There is a significant relationship between Local Tour guide & Operator and overall satisfaction of the tourist.

**Interpretation:** As these factors rejecting the null hypothesis so these factors are important in the growth of tourism. But if there is significance is found within any factor then we have to vary the significance level or increase the sample size for accurate analysis of the factors.



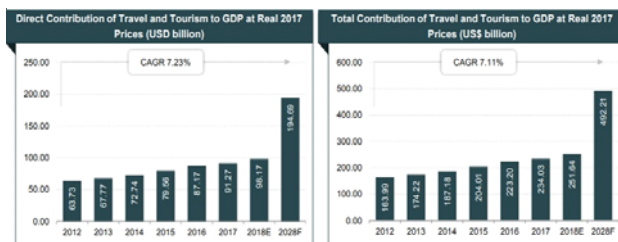
## Revenue Generation from Tourism:

Year	FEEs from Tourism in India (in Rs. Crore)	Percentage (%) change over the previous year
2000	15626	20.7
2001	15083	-3.5
2002	15064	-0.1
2003	20729	37.6
2004	27944	34.8
2005	33123	18.5
2006	39025	17.8
2007	44362	13.7
2008	51294	15.6
2009	53754	4.8
2010	66172	23.1
2011	83036	25.5
2012	95607	15.1
2013	107563	12.5
2014	120367	11.9
2015	134844	12.0
2016 <sup>(2)</sup>	154146	14.3
2017 <sup>(2)</sup>	177874	15.4
2018 <sup>(1)</sup> (Jan-June)	95713	12.2@



Source: Reserve Bank of India, for 2000 -2015

## 3. Contribution of Tourism to GDP:



Source: World Travel & Tourism Council's (WTTC's) Economic Impact 2018

## Tourism Contributions:



**Result:** As there is the growth seen in the tourism industry from the past few years so the tourism sector in generating revenue to India according to the data from Reserve Bank of India. And the tourism sector contribution is also contributing well to the GDP of India. According to the report o WTTC, there is expected growth in the GDP of India in 2028 so the sector has to focus on the factor which

affects the growth of the tourism industry.

## Suggestions :

1. Getting feedback from tourists can help the destination tourism industry to measure how well the destination is and to identify segments of satisfied or dissatisfied tourists.
2. Tourist satisfaction is a complex process, with many factors related, so the sector also has to focus on food while focusing on accommodation. In upcoming years the sector has to focus on infrastructures and road conditions
3. The sector has to focus on the convenience of booking while peoples are choosing a tourist destination.
4. There is growth expected in the tourism sector so the industry has to focus on training tourism guides.

## Conclusion:

The tourism sector is one of the world's fastest-growing service sectors. It acts as a powerful instrument for the economic process. India is a tourist destination for national as well as foreign visitors. Various types of tourist places, wellness centers, eco-tourism spots, adventure activities, culture, heritage, and educational institutions in India attract domestic and foreign tourists. Getting feedback from tourists can help the tourism industry find out how well the destination is doing and identify tourists who are satisfied or dissatisfied and want to pay extra attention to lift their user status... Tourist satisfaction is a complex process with many related factors. The efforts of the industry should cater to their needs and desires to ensure the increasing satisfaction of tourists. From a promotional point of view, the results indicated that respondents expressed the highest satisfaction scores for safety and security of the characteristics and friendliness of the locals, road conditions and booking facilities. The industry should focus on the safety and security of the local people and hospitality as each of these specialties is one of the main strengths of tourists. Thus advertising and promotional efforts should emphasize these powers to increase tourist visits.

The growth of the tourism sector has increased foreign exchange income, employment generation, development of infrastructure facilities, capital investment, socio-economic development, contribution to GDP. Due to the wide expanse of the tourism sector, India has given evidence of sustainable and macroeconomic development.

## References:

- Vijayaragavan. T "IMPACT OF TOURISM IN INDIAN ECONOMY" International Journal of Development Research Vol. 4, Issue, 12, pp. 2835-2839, December 2014 K. C "Tourism and its Impact on Indian Economy" IOSR Journal of Humanities and Social Science (IOSR-

JHSS) Volume 21, Issue 6, (June. 2016).

- Vijayaragavan. T “IMPACT OF TOURISM IN INDIAN ECONOMY” International Journal of Development Research Vol. 4, Issue, 12, pp. 2835-2839, December 2014 Mahalakshmi Venkatesh & Stanley Joseph Michal Raj “Impact of Tourism In India” International Journal of Scientific Engineering and Applied Science (IJSEAS) - Volume-2, Issue-1, January 2016.
- Vijayaragavan. T “IMPACT OF TOURISM IN INDIAN ECONOMY” International Journal of Development Research Vol. 4, Issue, 12, pp. 2835-2839, December 2014 Shiji. O (2016) “Economic impact of tourism in India” Department of Economics, Dr. John Matthai Centre, University of Calicut, Aranattukara, Thrissur-680 618.
- Vijayaragavan. T “IMPACT OF TOURISM IN INDIAN ECONOMY” International Journal of Development Research Vol. 4, Issue, 12, pp. 2835-2839, December 2014 Sujith T S & Jisha M K “Tourism in India: Opportunities and Challenges” Imperial Journal of Interdisciplinary Research (IJIR) Vol-3, Issue-10, 2017.

- Vijayaragavan. T “IMPACT OF TOURISM IN INDIAN ECONOMY” International Journal of Development Research Vol. 4, Issue, 12, pp. 2835-2839, December 2014

#### Web Links:

- [http://tourism.gov.in/sites/default/files/Other/ITS\\_Glance\\_2018\\_Eng\\_Version\\_for\\_Mail.pdf](http://tourism.gov.in/sites/default/files/Other/ITS_Glance_2018_Eng_Version_for_Mail.pdf)
- <http://tourism.gov.in/sites/default/files/annualreports/Annual%20Report2017-18.pdf>
- <http://tourism.gov.in/sites/default/files/Other/India%20Tourism%20Statistics%202018.pdf>
- <https://www.ibef.org/download/Tourism-and-Hospitality-Report-June-2018.pdf>
- <https://www.incredibleindia.org/content/incredibleindia/en.html>
- <http://tourism.gov.in/>
- <https://forms.gle/5kSfFWk75wg1dWVe8>

# Shifting trends in Gems & Jewellery Industry in India

Pranita Kothavade

(MMS Students, DR VN BRIMS)

Akshay Gaud

(MMS Students, DR VN BRIMS)

**Abstract:** The Gems and Jewellery industry can be divided into 8 major sub-sectors viz., manufacturing, retailing, cast and diamond set jewelry, gemstone processing, processing, hand-made gold, diamond processing and gem set jewellery. The main aim of the study is to understand the current scenario of the industry and identify the future trends in the industry with respect to demand, shift in technology, and changing consumer preferences. The goal is also to identify the emerging supporting industries of the gems and jewelry industry.

**Keywords:** Gems & Jewellery Industry, Shifting trends, SWOT, Technology

---

## Introduction

In India, the gem and jewelry sector is growing tremendously these days. Due to technological advances in marketing, design, polishing and cutting..

Gems and jewelry sector of India is among the major in the world. The contribution by India is nearly 29% in the gems and jewellery consumption. The sectorial report of 2018 shows that According to 2018 market size of gems sector is approximately Rs. 5,24,175 crore (US\$ 75 billion) and is estimated to go up to Rs 6,98,900 crore (US\$ 100 billion) by 2025. This sector consist of more than 300,000 gems and jewelers, which amounts around 7% to the Gross Domestic Product (GDP) of India and approximetly gives employment to 4.64 million people. If we consider merchandise experts Gems and Jewellery amounts to 15% contributes by India in total export. On the whole net exports of gems and jewellery was Rs. 67,793.3 crore (US\$ 9.70 billion) in FY20P (April' 19-July' 19) amounting a compound annual growth rate (CAGR) of 4.99 per cent over FY05; on the other hand gems and jewellery overall imports is about 3%, in regards of value Rs 2,29,239.2 crore (US\$ 32.8 billion) in FY19 and increased at a CAGR of 7.97 per cent from Rs 81,282.07 crore (US\$ 11.63 billion) in FY05 to Rs 2,20,293.28 crore (US\$ 31.52 billion) in FY18.

India is the world's largest center for carved and polished diamonds. It exports 75% of the world's polished diamonds. Nearly 95% of the diamonds sold in the world are engraved or polished in India. India exported cut and polished diamonds worth Rs 24,601.28 crore (US \$ 3.52 billion) in fiscal year 2021 (as of provisional May 19). It almost contributed 73.42% of total gems and jewelry exports.

India is the largest buyer of gold in the domain. The emerging middle class population and cumulative income levels are the main factor of demand for other jewelry and gold in India. India's demand for gold jewelry reached a highest in four years in the first quarter of 1919 at 125.4 tons. In the first quarter, 35% of India's gold import in the current fiscal year since the year Rs 80,024.05 rupees (US \$ 11.45 billion) The demand for gold in India increased 11%

year-on-year to 760.40 tons during January-December 2018. Additionally, the Government of India has permitted 100% of foreign direct investment (FDI) in the sector below the automatic route. The home jewelry industry of Rs 250,000 crore (US \$ 35.77 billion) is likely to get a great enhance through the government's policy of foreign direct investment (FDI) in retail. As of January 2018, the Reserve Bank of India (RBI) has increased the capacity of the gold monetization scheme by permitting charitable institutions and government entities to deposit gold, which is expected to boost deposits in next months. The Bureau of Indian Standards (BIS) has changed the standard on gold marking in India as of January 2018, to include a BIS mark, karat purity and fitness, as well as unit identification and brand of identification of the jeweler in gold jewelry. The measure aims to ensure quality control in gold jewelry. According to the 2019-20 Union Budget, the GST rate has been reduced from 18% to 5% for services through work in relation to gems and jewelry, textiles, leather goods, etc.

## ISwot Analysis of The Sector

The strengths of India in the sector include presence of skilled craftsmen combined with strong marketing & distribution and a wide spread retail network. Thus giving the opportunities of exploiting the growing demand in South Africa, Europe and Latin America. Also the increasing per capita income of India will be a determining factor in the future demands. The increase in health consciousness of the people will see a demand for multipurpose jewellery for monitoring health parameters thus opening gates to a whole new combination of jewellery and healthcare industry. However the high inventory carrying cost and less improved technology compared to China and Thailand are some of the major hurdles for the growth of the sector in India. The threats include increase in gold and diamond prices combined with fluctuations in the exchange rates of the currency. Moreover major competition from China, Sri Lanka and Thailand in small diamond sector and enhanced benefciations near mines of South Africa can take away India's growing market share.

## Contribution of Technology

The future of Jewellery industry will be largely shaped by the inclusion of 3D designing solutions provided by software's like Jewel CAD, Tinker CAD and 3D Design. And the advancement in 3D printing technology over the recent years has paved a way the way to a high degree of customization printing one's own jewellery as well. Companies like Pipa and Belle, Melorra and Isharya are the pioneers in 3D jewellery printing. With the help of 3D printing designers are now able to produce more multi-functional jewellery than ever.

The application of augmented reality in this sector has opened gates to new possibilities for customers to have access to tonnes of designs at their fingertips and experience the presence of actual jewellery on their body using smartphones. According to a survey about 72% of shoppers purchased items which they had not planned to purchase because of Augmented Reality.

Latest wearable designs integrated with health monitoring technology will be the future of the sector. One such example is Ringly Luxe Smart Ring which can track the steps, distance, burned calories, and various activities. The Bellabeat Leaf Urban which is a bracelet cum pendant can even track activities like sleep and menstrual cycles.

The implementation of AI and machine learning is already helping the designers to develop most visited designs on their websites and apps.

## Future Scope of The Sector

In coming future Synthetic gems & jewellery prices will get low and affordable which would boost the growth of synthetic jewellery market. Currently, the sector employs above 4.64 million and the number of employees is expected to increase to 8.23 million by the year 2022.

In order to attract large number of artisans in the next coming years, it is of vital importance that the industry adopts the policy of promoting and supporting skills. The online sales accounted for just 1% in 2003, rose to 10% in 2018,

and is expected to reach 28-30% by 2025.

## Shifting Trends in the Industry

The trends in the industry have shifted from gold to diamond and from diamond to colored gemstones. The adoption of western lifestyle has led to unique designs and customized and light weight jewellery made out of paper and quilling in the Indian market. Cultured pearls and synthetic gemstones have seen an increased demand due to low prices.

## Acknowledgment

It is a genuine pleasure to express my deep sense of thanks and gratitude to faculty members of Dr. V. N. Bedekar Institute of Management Studies, Thane (west), Mumbai. Their dedication and keen interest above all their overwhelming attitude to help their students has been solely and mainly responsible for successful completion of this study.

## References

- K Balaji and Dr. R Maheshwari (2014) - A Paradigm Shift in the Buying Behavior of Indians Towards Gold Jewellery.
- India Brand Equity Foundation. Gems and Jewellery. Retrieved from - <https://www.ibef.org/industry/gems-and-jewellery-presentation>
- INDIAN JEWELLER. THE FACE OF THE INDIAN JEWELLERY INDUSTRY. Retrieved from - <https://www.indianjeweller.in/index.php>
- Toki Net. Artificial Intelligence in Jewellery Designing. Retrieved from - <https://www.tokinete.org/artificial-intelligence-in-jewelry-designing/>
- BUSINESS WORLD. How Gems & Jewellery sector plays a significant role in the Indian Economy. Retrieved from - <http://www.businessworld.in/article/How-Gems-Jewellery-Sector-Plays-A-Significant-Role-In-The-Indian-Economy/02-06-2018-150508/>

# Study on Google Effecting the Creative Side of the Human Brain

Tabassum Shaikh

Student, Kandivali Education Society's Bk Shroff College of Arts and MH Shroff College of Commerce.

Deepali Manjrekar

Kandivali Education Society's Bk Shroff College of Arts and MH Shroff College of Commerce.

**Abstract** The Internet has changed the way we live our lives. From receiving and passing the information to getting assistance in whatever we want may it be education, research, entertainment, banking, shopping, to know about the current happenings of the world it is all available on the tip of our fingers. Google is the first thing that pops up in our minds when it comes to the internet. It has changed the way we comprehend things and also has some effects on our brains. We have stopped using our brains because what we need is readily available to us. It somehow has restricted us to use our creative side of the brain which is the right hemisphere. Through this study, we will find out that has to google affected our creative side of our brains and how.

**Keywords:** Google, Internet, Creative

---

## Introduction

Creativity is not a skill that only used by creatives in an ad agency, it is a skill that is required in every role in the marketing may it be developing product or website, communication, insights, brand and media strategy and many other functions. The ease of online search and our accessibility to almost every possible information has begun to program our brains to work a little less in terms of thought and creativity. Google is a widely used search engine which brings knowledge from every part of the world to our mobiles, tablets, laptops or desktop screens. Every day search engines like Google give us thousands of solutions and facilitate our lives. It seems so, according to a new study that claims that the Internet has a direct impact on how our memory works. It is any which ways a human tendency that people don't put in extra efforts when they can have an option for easy access to anything and that is how Google is killing their thinking capacity.

## Literature Review

Google the most famous search engine and pioneer in AI technology are making our day to day life easy by being a part of our life in every type possible. It is in our life since Sept 1999. The average time taken by the google search engine to show the results of our search is less than 0.01 second. Let's be retrospective and go down the memory lane, as to how the life worked. Without google, without the search engines finding a solution was not easy Creativity today is more emphasized on making life easy and that too with taking the help of various means. Especially the internet. Our thinking level is too deteriorated and more dependent on various sources. Our remembering capacity is also decreased because we know solutions are available on the internet so reaching them is ease. This psychology has touched the student's mindset to the very core. Thus it is also one of the reasons behind the downgrading of students. The results, published in the Science magazine, suggest that the way our brain "saves" various data has changed significantly because of our "confidence" to find them

online. The researchers claim that the Internet has now become a dominant form of transitive memory – recollections that are outside of our minds but we know where and how we can access them.

## Objective

1. To understand the effects of the google search engine on the creative side of the brain
2. To understand at what level does google affects the creativity of a person
3. To know what are the reasons behind google affecting our creative side of the brain

## Hypothesis

H1 : The creative side of the human brain is affected by google

H0: The creative side of the human brain is not affected by google

## Methodology

Both primary and secondary data were used for the research paper. In the primary research, google forms were surveyed among the sample size and for secondary research we referred to a research paper, articles, newspaper, report and journals.

## Sample Size

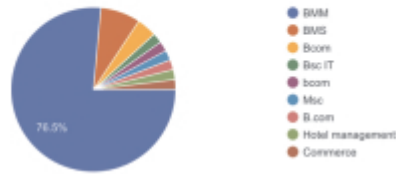
A sample size of 50 respondents was selected for the research. The respondents were selected based on the level of creativity they use in their daily life.



## Analysis of Data

From which course do you belong

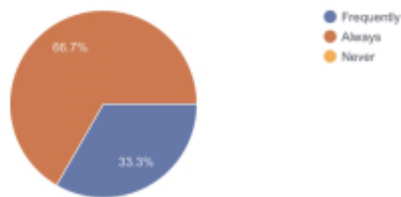
51 responses



Most of the respondents were mass media students which is 76.5% as they use the creative side of their brain more frequently.

How often do you use google

51 responses

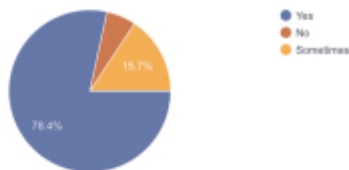


66.7% of the respondents used google always and the rest 33.3% used it frequently

When asked for what purpose did they use google major of the respondents used it for searching information as and when they required.

Do you use google for college projects

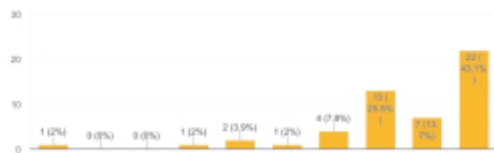
51 responses



As the sample size of the respondents were all students 78.4% of them used google for their projects.

How much is google important to you for your projects

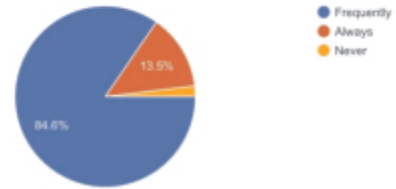
51 responses



As major percent of respondents used google for their projects when asked about the importance of google in their projects from 1 to 10. For 43.1% google was very important and for rest it was important

How often do you copy paste things from google

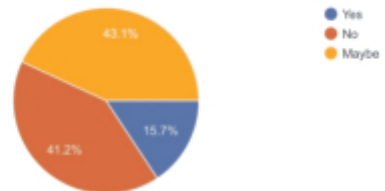
52 responses



84.6% people copy paste information from google among all the respondents.

Are you completely dependent on google

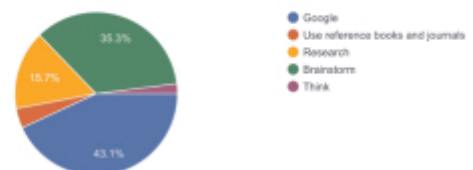
51 responses



43.1% respondents feel that may be they are completely dependent on google while 41.2% say that they are not completely dependent on google and the rest are dependent.

What is the first thing you do when you have to create ideas

51 responses

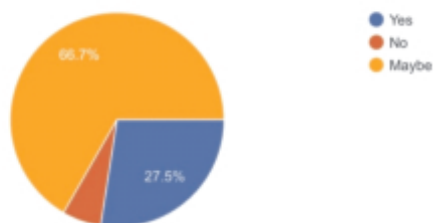


43.1% of respondents say that they first google when they have to create ideas while 35.3% say that they brainstorm first.



### Can we rely on the data that is available on google

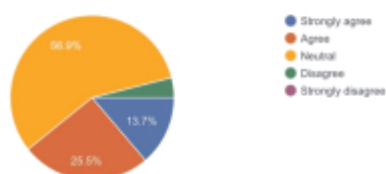
51 responses



66.7% of respondents say that maybe we can depend on the information that is available on google and only 27.5% say that yes we can depend.

### Google is stopping us from using our creative side of the brain

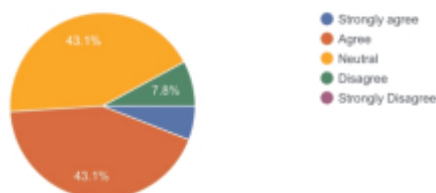
51 responses



56.9% of respondents are neutral about the statement that it is or it is not affecting and 25.5% agree to the statement and the rest strongly agree

### Google affects the way we comprehend things

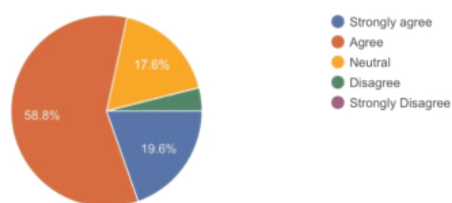
51 responses



43.1% of the respondents feel that maybe it affects the way we comprehend things and the same percent of the respondents agree to the statement.

### Google is the reason for creation of duplicate ideas

51 responses

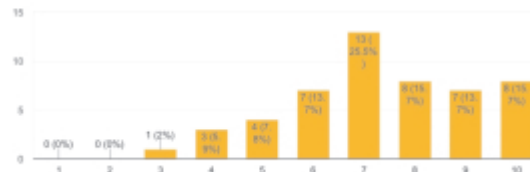


58.8% strongly agree that google is the reason for creation of duplicate ideas and 19.6% strongly agree to it

while rest say that maybe or maybe not.

### How much do you think google has affected the creative side of our brains on the scale

51 responses



25.5% respondents say that it has somewhere affected our creative side of our brain while 15.7% strongly agree that it has affected our brains.

When asked what was their opinion on google was affecting our creative side of the brain major respondents said that yes it has somewhere affected our creativity as google provides us from ready information and answers to anything which restricts us from using our brains and creativity and makes our brains lazy.

### Findings

- Through this research, it was found that a lot of people are dependent on google in their daily life.
- As our sample size consists of students, it was found that a lot of students are completely dependent on google for their projects and they don't use their creative side of the brain much.
- A lot of people rely on the data that is available on google which motivates them to use google more frequently
- Not very much brainstorm and not think +while creating ideas. They just google and create ideas
- The major percentage of people agree that Google has given rise to a lot of duplication of ideas and concepts as this kind of information is easily available on google
- Major of the respondents agree that google has affected the creative side of our brains and has restricted it to some extent to develop ideas or concepts
- Through the survey, we find out that Google has affected our creative side of the brain. It has made people lazy and it somewhere motivates them to use shortcuts instead of thinking and developing creative ideas.

### Conclusion

Through the research, it is concluded that google does somewhere affect the way we think and use our brains to interpret information and create ideas. People tend to google before actually thinking but it differs from person to person. Some may only refer things while others may use all the

information directly and just modify it somewhere. It is hampering the thinking capacity of humans as everything is readily available. It has made one lazy to brainstorm while some might still do it. A major per cent of the human mind is getting affected and depleting the creativity in them. Hence my H1 that is the Creative side of the human brain is affected by google is proved through my research

### **Suggestions**

1. One must first try to understand the topic and try to develop own ideas and not directly google it.
2. One must then check whether that idea or concept has been used before
3. One should refer things from google but not copy the whole thing directly

### **References :**

- Betsy Sparrow, J. L. (2011). Google Effects on Memory: Cognitive Consequences of Having.
- Gary W. Small, M. T. (2006). Your Brain on Google: Patterns of Cerebral Activation during Internet Searching.
- <https://academicearth.org/electives/internet-changing-your-brain/>. (n.d.). Retrieved from academic earth.

## SRUJAN: A Multidisciplinary Journal Announcement and Appeal

Vidya Prasarak Mandal, Thane (VPM), a registered society engaged in educational activities, is happy to announce the publication of a multidisciplinary journal - "Srujan", meaning creativity.

Srujan considers original works that deliberate on ideas, suggestions and works that have global, national, or regional perspective. Works such as:

\* Research papers \* Surveys \* Abstracts \* Case-Studies \* Essays

Srujan has adopted a multi-disciplinary approach to highlight the developments, innovations and intellectual research works in the extensive field of traditional and modern management, business theory and business models, intellectual contributions in management excellence and social and economic practices that contribute to business and societal growth.

The articles/papers in Srujan will be peer reviewed before their inclusion. A panel of experts will be created from among the academicians in India and abroad. The papers submitted for publication will be sent to subject experts for a blind review. Suggestions received from the experts will be promptly communicated to the contributors. The author/authors will have to make appropriate modifications in the paper based on these suggestions before submitting for final editing by the editorial board. An appeal is made to all the academicians to send their articles for publication in Srujan. With your help we propose to make the journal an outstanding quality publication from India. Guidelines for contributors are enclosed herewith. Please send the papers to the following email id: [srujan@vpmthane.org](mailto:srujan@vpmthane.org)

### Theme & Content:

**Srujan 2021** will be released during our International Conference which will be held on Saturday 6<sup>th</sup> February 2021.

**Surjan** is a multidisciplinary journal, contributors, scholars and researchers can contribute substantial research content in the domains of finance, marketing, operations management, information systems, human resource, organizational theory and behavior, design thinking, project management, quality management, sustainable business management, general management, international business, economy etc.

### Calendar For Submission:

Submission of Abstract: 30<sup>th</sup> June 2020

Submission of Full Paper: 30<sup>th</sup> July 2020

Please send the papers to the following email id: [srujan@vpmthane.org](mailto:srujan@vpmthane.org)

Kindly refer our weblink for Guidelines for authors, outline style ,format  
<https://vnbrims.org/Post-Graduation/srujan-editorial-board.html>

### Registration for International Conference

*Conference Assistance:*

**Dr. Smita Jape**

Associate Professor, Convener 91 9619367480

**Dr. Meenakshi Malhotra**

Assistant Professor, Coordinator 918054498839

**Ms. Kanchan Akshay**

Coordinator 91 9821681550

Email : [srujan@vpmthane.org](mailto:srujan@vpmthane.org) |  
[vnbrims@vpmthane.org](mailto:vnbrims@vpmthane.org)

#### Who can participate

Academicians/Faculty

Research Scholars

Industry Participants

Students

#### Registration Fees

Rs 2000/-

Rs 2000 /-

Rs 4000/-

Rs 500 /-





Vidya Prasarak Mandal's

**Dr. V. N. Bedekar Institute of Management Studies, Thane**  
(DR VN BRIMS)



# National Conference on

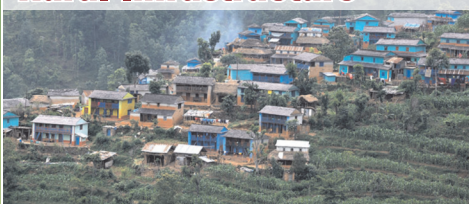
**Saturday 6<sup>th</sup> February 2021**



## Rural Healthcare



## Rural Infrastructure



## Rural Education



**“Changing Scenario of  
Rural Economy:  
Role of Research,  
Innovation &  
Digitalisation”**



2456-4879