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### **From the Editor's Desk:**

Dear Readers,

Greetings!

I am delighted to release the management Effigy, Vol. XIII Iss. I, a peer reviewed ISSN journal, Indexed with J-Gate, that tie together the expanding discipline of Management by encouraging original research articles that report significant finding in the field of management. Research contributions in all facets of management and its related disciplines are published by Management Effigy. It releases two issues a year and uses blind peer review. The journal welcomes publications on cross-functional management domains with cross-functional managerial or societal difficulties and ramifications, while submissions from all management domains and their linked disciplines are welcomed. The journal seeks out novel and perceptive research articles that establish divergent research traditions in order to provide new knowledge on the problems that management practitioners, policy makers, academics, and others are currently facing.

The Paper "**Opportunities and Challenges of Using ICT in Teaching and Learning– Teachers' Perception**" Covid-19 pandemic created lot of changes in teaching and learning mechanism. In the last two years, the teachers are facing challenges due to the change in the mode of education system. This situation creates challenge for the teachers to cope up with the change in Information and Communication Technology (ICT) in educational system. Study explored the challenges faced by the teachers of Kanyakumari District, India in using ICT in teaching and learning.

The paper "**A Review towards Various Challenges & Opportunities in e-Learning System Post Covid-19 Pandemic**" The continue flow of education was a very needful demand from the future perspective of the young students during Covid-19. Hence this paper narrates about various opportunities offered by e-Learning tools & their corresponding challenges in the education system. It gives an overall idea about sustainability development of academic practices in education system via virtual classrooms across the world.

The paper "**Host Country's Macro Economic Determinants to Attract FDI Inflows- An Empirical Analysis of India**" FDI inflows can be used as a gauge for how many other countries are interested in investing in the Indian economy. The study identifies determinants under the headings of India's Economic Environment, Political Environment, Social Environment, and Geographical Environment. The analysis determines the significant relationship between variables and FDI Inflows.

The paper "**Heart, Mind and Money: A Study on Emotional Investments**" explains that decision making has a direct association with emotions, good health, proper lifestyle, mind and heart. A stress free, positive mind and healthy heart play a vital role in decision making. The study attempts to understand and explore the relation between the positive and negative emotions, Heart and Mind and investment and also attempts to describe the concept of emotional investment and investor.

The case study "**Making IT Possible Across the Globe: A Success Story**" is a journey of Cyber Infrastructure (P) Ltd (CIS), a top-notch Custom software development company, which has achieved a great recognition in the



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IT industry in just a span of few years and has now become a CMMI Level 5 compliant company with ISO certification. The case states the journey of the organization started in 2003 at California, USA, the strategic moves in terms of consistent business expansion. The case also talks about the Covid-19 pandemic which was taken by the company as an opportunity even in the situation of global slowdown.

The Article **“Competitive Analysis by a Leader from the Bhagavad Gita”** analyses the discussion between Duryodhan and Dronacharya where both opponents of battlefield were compared. The Article analyses the merits as well as mistakes of Duryodhan as a leader in the context of competitive analysis also compares the approach of both Arjun and Duryodhan in the context of prioritizing the resources.

The Book Review **“Being You: Against All Odds”** contains stories of uplifting story about a transgender man fight for acceptance by his family and society, struggles of a cancer survivor, young entrepreneurs who dreamt big in spite of multiple obstacles, struggles of a single parent, sexual abuse survivors and LGBT activists. The book has the potential to touch every one's life.

I sincerely appreciate the authors and members of the Editorial Board and Advisory Board for their unvarying cooperation and guidance. I really hope that this issue will enhance the knowledge and education of academics, researchers, students, and management practitioners.

With warm Regards

**Dr. George Thomas**



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## OPPORTUNITIES AND CHALLENGES OF USING ICT IN TEACHING AND LEARNING– TEACHERS' PERCEPTION

D. Ashlin Melbha\*, C.L. Jeba Melvin \*\*

### Abstract

Covid-19 pandemic creates lot of changes in teaching and learning mechanism. In the last two years, the teachers are facing challenges due to the change in the mode of education system. Teachers are not able to control the students in virtual classroom and not able to give exercises and cannot able to monitor the students' progress. As a learner, he/she is not able to understand new application software and not aware about new online courses in teaching and learning activities. This situation creates challenge for the teachers to cope up with the change in Information and Communication Technology (ICT) in educational system. So, the researcher wants to study the challenges faced by the teachers by using ICT in teaching and learning. This study focuses in Kanyakumari District, India. Both Government aided college teachers and Self-finance college teachers of Arts and Science colleges are selected for the study.

**Keywords :** ICT tools, Teaching and learning, Challenges, opportunities, online education.

### Introduction

Information and communication technology is an important part of learning today. Due to Covid 19, the teachers are forced to adopt ICT to teach their students as well as to equip their knowledge through learning. Because of this situation, the teachers are facing challenges regarding get more knowledge about the application software, the change in teaching methodology (online), classroom management and so on. Sometimes the teachers are not getting proper support from the institution regarding their learning aspects. It is the duty of every teacher to learn the change and act accordingly to improve the wellbeing of the students as well as the society especially in this pandemic scenario.

### Review of Literature

Maria del Carmen Ramirez-Rueda et. al. (2021) The study focuses on analysing the perception of teachers and parents in relation to the use of ICT in teaching-learning process in three dimension include attitude, usage and beliefs. The results revealed that the parents and teachers are more favourable towards the usage of ICT in teaching. The usage of ICT in education creates more interest among the teachers and students. Some parents perceived that overuse of ICT impact some negative consequences in their children like deterioration in interpersonal skills or physical welfare and exposure to inadequate contents.

Henderson (2020) The study explains the benefits of information and communication technology in education. Technology has both positive and negative effect. In the positive side, using ICT in classroom improves students' engagement, knowledge retention, encourages individual learning, encourages collaboration, learn life skills through technologies. Lack of software problem, lack of sufficient training, Lack of knowledge, lack of learning equipment tools and resources, teachers' reluctance to new technology are some of the challenges of using ICT in education.

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Alkahtani (2017) The study gives an insight of the challenges faced by the teachers using ICT tools in teaching. Lack of training and lack of working equipment are the two aspects analysed in this study. Further lack of understanding between students and teachers of how equipment functions, lack of mastery of ICT teaching techniques, lack of training to bridge the gap and lack of mastery of electronic equipment are some of the problems faced by the teachers while using ICT in teaching.

Ghavifekr et al. (2016) In this study, the authors select 100 secondary school teachers in Melaka, Malaysia. The study shows that the key challenges are significant in the below mentioned area ie. limited accessibility and network connection, limited technical support from the institution, lack of effective training, limited time and lack of teachers' competency. The result revealed that the male teachers are using ICT more than the female teachers in Melaka, Malaysia.

Noor-Ul-Amin (2013) The study stated the importance of ICT in education through literature review. National and international level strategies and initiatives related to measuring and demonstrating the effective use of ICT for education with regard to the teaching learning process; ICT and quality and accessibility of education; ICT and learning motivation, ICT and learning environment, and ICT to enhance the scholastic performance.

## **Objectives**

- To know the opportunities and challenges of using ICT in teaching by the arts and science college teachers in Kanyakumari District.
- To analyse the opportunities and challenges of using ICT in learning by the arts and science college teachers in Kanyakumari District.
- To identify the arts and science college teachers' perception towards implementation of the ICT tools in teaching and learning.

## **Statement of the Problem**

Information and communication technology is an integral part of teaching and learning environment during this pandemic situation. Digitally literate teachers can integrate ICT in students learning. The teachers working in developing district like Kanyakumari are not much familiar to ICT. Sudden change from the physical black board to digital board, classroom control (virtual), teacher-learner digital communication and so on are new challenges to the teachers in teaching environment. In addition to this, the teachers have to attend online course and equip their knowledge through various digital platform is another challenge. So the researcher made an attempt to study the "Challenges of using ICT in Teaching and Learning – Teacher's Perception" in Kanyakumari District, Tamilnadu, India.

## **Research Methodology**

The present study is an empirical study. The present research paper attempts to understand the challenges of using ICT in teaching and learning from the teacher's perception and the study area is Kanyakumari District, Tamilnadu, India. The study is mainly focus on primary data and secondary data also used for this study.

Primary data was collected through the structured questionnaires using Google form from different location of Kanyakumari District and secondary data was collected from books, journals, periodicals, articles and internet. The researcher used t-test, one-way ANOVA and percentage analysis for analyzing the data. The sample size selected was 153.



## Data Analysis

### Descriptive Statistics

Descriptive statistics of the study is given under this title. Both male (45.1%) and female (54.9%) higher education teachers are selected for the study. Most of the respondents' designation is Assistant Professor (82.4%). 44.4% respondents getting the salary in between 20,001 to 40,000 only. Most of the respondents having ten to fifteen years (34.6%) of teaching experience. 76.5% respondents are having the pre-requisite qualification set by UGC. 75.8% respondents can control students in both online and offline mode of education.

### Comparison of opportunities and challenges faced by teachers in teaching and learning with gender of the respondents

These are classified into two gender groups and t-test is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with different gender group respondents.

**Null Hypothesis :** There is no significant difference between Male and Female higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

**Table 1: Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with Gender of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	Gender				t value	p value
	Male		Female			
	Mean	SD	Mean	SD		
Offline Mode of Teaching	42.25	2.34	42.69	2.06	0.597	0.037*
Both online and offline Mode of Teaching	36.53	2.64	38.47	4.28	3.028	<0.001**
Professional Learning	21.55	2.82	20.90	3.18	1.351	0.686
Self -Learning	26.31	3.25	24.63	2.68	3.429	0.001**
Difficulties in teaching	21.55	3.29	18.45	4.92	4.657	0.014*

Source: Primary data

**Note :** \*\* denotes significant at 1% level

\* denotes significant at 5% level



Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to both online and offline mode of teaching and self-learning. Hence there is significance different between male and female with regard to both online and offline mode of teaching and self-learning. Based on Mean score, female teachers have more control over both online and offline teaching and male teachers have more self-learning than female teachers.

Since p value is less than 0.05, the null hypothesis is rejected at 5% level, with regard to offline mode of teaching and difficulties in teaching. Hence there is significance different between male and female with regard to offline mode of teaching and difficulties in teaching. Based on Mean score, female teachers have more control over offline teaching and male teachers find more difficulties in teaching.

There is no significant difference between male and female teachers with regard to professional learning since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level with regard to professional learning.

### Comparison of opportunities and challenges faced by teachers in teaching and learning with designation of the respondents

These are classified into two designation groups and t-test is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with different designation group respondents.

**Null Hypothesis:** There is no significant difference between the designation of higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

**Table 2 : Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with Designation of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	Designation				t value	p value
	Assistant Professor		Associate Professor			
	Mean	SD	Mean	SD		
Offline Mode of Teaching	42.42	2.06	42.50	2.64	0.083	0.018*
Both online and offline Mode of Teaching	37.03	3.68	41.5 8	1.77	8.064	0.002**
Professional Learning	21.16	3.19	21.30	2.23	0.267	0.052
Self -Learning	25.52	3.17	24.67	2.39	1.576	0.009**
Difficulties in teaching	19.81	4.44	19.81	5.06	0.005	0.178

Source: Primary data



Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to both online and offline mode of teaching and self-learning. Hence there is significance different between assistant professor and associate professor with regard to both online and offline mode of teaching and self-learning. Based on Mean score, associate professors can have more control over both online and offline teaching and assistant professors have more self-learning.

Since p value is less than 0.05, the null hypothesis is rejected at 5% level, with regard to offline mode of teaching. Hence there is significance different between assistant professor and associate professor with regard to offline mode of teaching. Based on Mean score, associate professors have more control over offline teaching.

There is no significant difference between assistant professor and associate professor with regard to professional learning and difficulties in teaching since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level.

### Comparison of opportunities and challenges faced by teachers in teaching and learning with qualification of the respondents

These are classified into qualified and not qualified groups and t-test is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with qualification of respondents.

**Null Hypothesis :** There is no significant difference between the qualification of higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

**Table 3: Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with Qualification of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	Qualified				t value	p value
	Yes		No			
	Mean	SD	Mean	SD		
Offline Mode of Teaching	42.42	2.06	42.50	2.64	0.083	0.018 *
Both online and offline Mode of Teaching	38.30	3.52	35.54	4.10	3.129	0.965
Professional Learning	21.68	2.56	19.56	3.85	3.112	0.002 **
Self -Le arning	25.36	3.01	25.36	3.22	0.011	0.694
Difficulties in teaching	19.76	4.89	19.97	3.17	0.304	0.387

Source: Primary data



Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to professional learning. Hence there is significance different between qualified and not qualified teachers with regard professional learning. Based on Mean score, qualified teachers have more professional learning.

Since p value is less than 0.05, the null hypothesis is rejected at 5% level, with regard to offline mode of teaching. Hence there is significance different between qualified and not qualified teachers with regard to offline mode of teaching.

There is no significant difference between qualified and not qualified teachers with regard to both online and offline Mode of Teaching, Self-Learning and difficulties in teaching since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level.

#### Comparison of opportunities and challenges faced by teachers in teaching and learning with Income of the respondents

These are classified into four income groups and one-way ANOVA is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with Income of the respondents.

**Null Hypothesis :** There is no significant difference between the income of higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

**Table 4: Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with Income of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	Income				F value	p value
	Below 20,000	20,001 - 40,000	40,001 - 60,000	Above 80,000		
Offline Mode of Teaching	42.25 (2.34)	43.91 (1.04)	40.00 (0.00)	-	7.804	0.002**
Both online and offline Mode of Teaching	34.75 (2.49)	38.69 (3.67)	43.00 (0.00)	38.63 (3.05)	18.350	<0.001**
Professional Learning	20.16 (3.62)	21.67 (2.48)	20.00 (0.00)	14.69 (7.76)	6.949	<0.001**
Self -Learning	25.32 (3.19)	25.13 (2.72)	24.45 (0.52)	27.19 (4.31)	2.436	<0.001**
Difficulties in teaching	20.43 (3.97)	20.46 (3.59)	20.00 (0.00)	14.69 (7.76)	8.792	0.067

Source : Primary data

Note : The value within bracket refers to SD



Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to offline mode of teaching, both online and offline mode of teaching, professional learning and self-learning. Hence there is significance different between Income of college teachers with regard to offline mode of teaching, both online and offline mode of teaching, professional learning and self-learning. Based on Mean score, teachers have the income of Rs. 20,001 to 60,000 can able to control offline and both online and offline mode of teaching and the teachers earn Rs.20,001 to 40,000 can have more professional learning and teachers earn above Rs.80,000 have more self-learning.

There is no significant difference in income of teachers with regard to difficulties in teaching since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level.

### Comparison of opportunities and challenges faced by teachers in teaching and learning with teaching experience of the respondents

These are classified into five groups and one-way ANOVA is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with teaching experience of the respondents.

**Null Hypothesis :** There is no significant difference between the teaching experience of higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

**Table 5: Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with Teaching Experience of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	Teaching Experience					F value	p value
	Below 5 years	5-10 years	10-15 years	16-20 years	More than 20 years		
Offline Mode of Teaching	-	41.13 (1.50)	44.50 (0.53)	42.50 (2.64)	-	11.719	<0.001**
Both online and offline Mode of Teaching	36.00 (1.34)	36.48 (3.44)	37.91 (4.83)	39.50 (1.57)	38.95 (2.91)	2.718	0.033*
Professional Learning	20.36 (1.57)	20.96 (3.37)	20.57 (3.29)	22.36 (1.84)	22.50 (2.56)	2.701	0.033*
Self -Learning	26.64 (1.57)	25.06 (3.22)	25.68 (3.40)	25.18 (1.10)	24.75 (3.65)	0.953	0.436
Difficulties in teaching	22.64 (1.57)	20.15 (3.58)	17.85 (6.17)	22.00 (2.05)	20.25 (1.52)	5.519	<0.001**

**Source :** Primary data

**Note :** The value within bracket refers to SD



Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to offline mode of teaching and difficulties in teaching. Hence there is significance different between experience of college teachers with regard to offline mode of teaching and difficulties in teaching. Based on Mean score, teachers have 10 to 15 years of experience can control offline mode of teaching and the teachers have below 5 years of experience have more difficult to handle class.

Since p value is less than 0.05, the null hypothesis is rejected at 5% level, with regard to both online and offline mode of teaching and professional learning. Hence there is significance different between experience of college teachers with regard to both online and offline mode of teaching and professional learning. Based on Mean score, teachers have 16 to 20 years of experience can control both online and offline mode of teaching and the teachers have more than 20 years of experience have more professional learning.

There is no significant difference of experience with regard to self-learning since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level.

#### **Comparison of opportunities and challenges faced by teachers in teaching and learning with ICT experience of the respondents**

These are classified into three groups and one-way ANOVA is prepared to study the significance of difference that exists among the opportunities and challenges faced by teachers in teaching and learning with ICT experience of the respondents.

**Table 6: Comparison of Opportunities and Challenges Faced by Teachers in Teaching and Learning with ICT Experience of the Respondents**

Opportunities and challenges faced by teachers in teaching and learning	ICT Experience			F value	p value
	Little Experience	Well Experienced	Little experience before Covid and well experience after Covid		
Offline Mode of Teaching	-	42.25 (2.34)	42.68 (2.06)	0.346	0.560
Both online and offline Mode of Teaching	40.44 (2.56)	36.63 (3.05)	38.29 (4.68)	7.845	0.001**
Professional Learning	20.63 (0.96)	22.22 (2.81)	19.76 (3.18)	20.377	<0.001**
Self -Learning	24.63 (0.50)	26.06 (3.31)	24.52 (2.83)	12.722	0.008**
Difficulties in teaching	20.63 (0.50)	21.48 (3.19)	17.00 (5.54)	4.939	<0.001**

Source : Primary data



**Null Hypothesis :** There is no significant difference between the ICT experience of higher education teachers with respect to opportunities and challenges faced by teachers in teaching and learning.

Since p value is less than 0.01, the null hypothesis is rejected at 1% level, with regard to both online and offline mode of teaching, professional learning, self-learning and difficulties in teaching. Hence there is significance different between ICT experience of college teachers with regard to both online and offline mode of teaching, professional learning, self-learning and difficulties in teaching. Based on Mean score, teachers have little ICT experience can control both online and offline mode of teaching and the teachers have well ICT experience have professional learning, self-learning and have more difficult to handle class.

There is no significant difference of ICT experience with regard to offline mode of teaching since p value is greater than 0.05. Hence the null hypothesis is accepted at 5% level.

**Table 7: Frequency Distribution of Difficulties faced by Higher Education Teachers using ICT in learning**

<b>Professional Learning</b>	<b>Expensive (%)</b>	<b>Lack of employer Support (%)</b>	<b>Time Limitation (%)</b>	<b>No Difficult (%)</b>
Attending Seminar/ Webinar/ Conference	16.3	30.7	17.6	35.3
Orientation/ Refresher Course	17.0	23.5	30.7	28.8
MOOC Courses	16.3	14.4	34.6	34.6
Training and Workshop	19.6	17.6	20.3	42.5
Research	26.1	6.5	27.5	39.9
<b>Self-Learning</b>				
Reading books, Newspaper, Journals etc..	3.3	20.9	40.5	35.3
Watching educational videos	10.5	6.5	48.4	34.6
Conversation with colleagues about the teaching methodology	7.2	19.6	20.3	52.9
Publishing articles in journals and magazines	26.8	23.5	28.1	21.6
Personal experience	6.5	10.5	34.0	49.0
Visit to other colleges to learn best practices	10.5	30.1	36.6	22.9

Source : Primary data





### **Frequency Distribution of Difficulties faced by Higher Education teachers using ICT in learning**

The above table clearly depicts the difficulties faced by higher education teachers while professional learning and self-learning.

Higher education teachers perceived that they have lack of employer support to attending seminar/webinar or conference and also publishing articles. Publishing articles and research are expensive one in the field of education. Higher education teachers are have limited time spend for professional and self-learning techniques such as orientation or refresher course, MOOC courses, research, read books, journals etc., watching educational videos, publishing articles and visit to other colleges. The teachers feels there is no difficult to attend seminar/ webinar or conference, MOOC Courses, Training and workshops, Research, Conversation with colleagues about the teaching methodologies and personal experience.

### **Findings**

Information and Communication Technology is now a day plays an important role in education. Teachers as well as students have to know the opportunities and challenges while using ICT in teaching and learning environment. No teachers are willing to thought students through online mode only. Because they cannot give learning by doing exercise, network issues and wrong perception about the subject thought.

Higher education teachers who have less experience in teaching are rarely provide assignments, ask questions in between the session, praise the students for the job well done and periodic exams. Teachers who are qualified and get low income are interested in professional learning. Teachers who get higher income are interested in self-learning. Low experienced teachers have more difficulties in teaching. Well ICT experienced teachers are interested in professional and self-learning. Teachers feel research is expensive and they are not getting support from the employer while publishing paper and attending seminar, webinar and conference. To balance work and life, the teachers are not ready to spend time for learning instead of personal life.

### **Suggestions**

ICT can be clubbed with offline teaching to enhance the quality of education. It cannot substitute to offline teaching completely. Offline education is essential for the students; it will reduce the difficulties of teachers in teaching. Teachers can use ICT tools in classroom, which leads to better understanding of students in the subject.

Learning is a continuous process in teaching. So the teachers should spend some quality time for learning things around them. The employer support is important in learning. Providing ICT tools for teacher and proper training will lead to get more subject knowledge to the higher education teachers.

### **Conclusion**

This research has shown the opportunities and challenges of using ICT in teaching and learning. ICT plays an important role in day to day life. So it is important to provide ICT facilities in classroom and usage of ICT by teachers for the future generation. The study has revealed that the teachers should spend some time for equip themselves through both professional and self-learning. The employer should provide ICT tools in their institution and provide support for attending training. This will lead the higher education teachers as an asset to the institution.



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## A REVIEW TOWARDS VARIOUS CHALLENGES & OPPORTUNITIES IN e-LEARNING SYSTEM POST nCOVID-19 PANDEMIC

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### Abstract

nCovid19 pandemic literally impacted every vertical of the human life. In this Education Sector was not an exception. Due to this critical disease entire world was under lockdown & hence educational institution including schools, colleges, Universities and various research centers also were closed. Now in this scenario to continue the flow of education was a very needful demand from the future perspective of the young students. Here eLearning systems have come in the consideration to solve the problem arise from the pandemic. Because eLearning systems are capable of creating a virtual classroom or Laboratory environment via some software tool like zoom, webex, google-meet and Microsoft teams etc. Hence this paper narrates about various opportunities offered by eLearning Tools & their corresponding challenges in the education system. This paper gives an overall idea about sustainability development of academic practices in education system via virtual classrooms across the world.

**Keywords:** eLearning, virtual classrooms, nCovid19.

### Introduction

Fundamentally eLearning is the educational learning activity done in online mode via Internet (also possible without internet). Earlier to this physical class room teaching was in existence but upon the evolution of internet & various communication devices the teaching-learning process in education sector has adapted a new teaching technology which is eLearning. eLearning facilitates the user to explore the teaching material or course content as per their convenience, that mean now learners are not bound to any infrastructure boundaries or time tables which was the modus operandi in earlier days. Following diagram depicts the working of eLearning system.

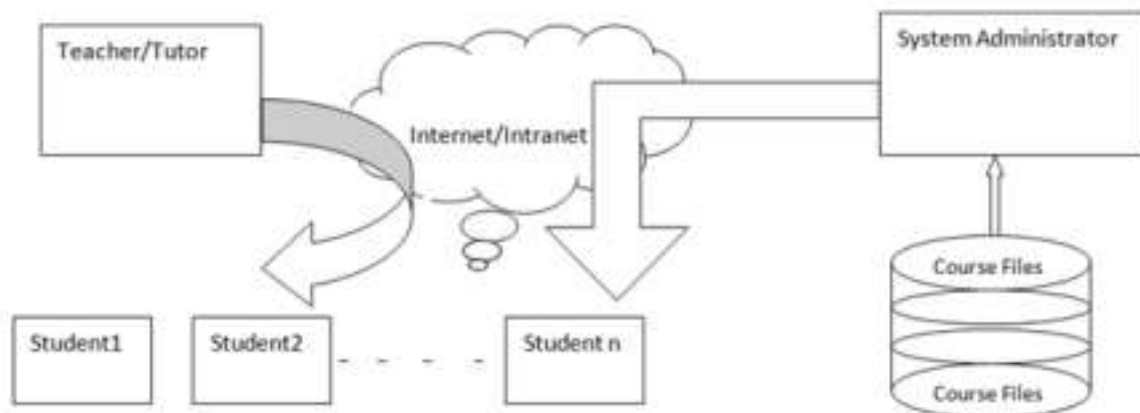


Figure 1: eLearning Architecture

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Figure 1 is showing a typical eLearning model which is consisting of 04 basic entities. They are listed below.

- 1) Teacher/Tutor
- 2) Remotely Located Student/s
- 3) Database Administrator
- 4) Course content data bank

For above model shown in figure 01, students initially have to register for the course/program which he/she desires to learn. Then the detailed schedule & course contents are shared with students. Tutor will be given with an option of either take the teaching session in real time or may be he/she will record the same & share with the students and later can solve their difficulties.

Since September 2019 nCovid19 pandemic has reached to every part of the world due to which lockdown was called by all administrations & governments across the world. Due to which it was not possible to conduct the teaching-learning session in physical mode. Here eLearning systems have emerged as a solution where all education system saw an opportunity to teach their students in online mode. To implement the eLearning architecture various tools like Zoom, Webex, Google Meet etc came in the considerations. These tools have the utility of remote learning as well as provide ample of facilities for creating conducive environment for teaching-learning process. Here eLearning was a game changer in the times of pandemic because using it the teaching-learning process can be continued without any physical appearances of students in the educational premises. Having said that eLearning also comes with certain challenges, in this paper we are going to visit all the probable challenges came from eLearning model.

## Review of Literature

A learning system that employs internet/Intranet media as a learning paradigm is known as online learning. In recent times various multimedia tools such as Webex, Zoom, and Google Meet are used to implement online learning activities. Online education was came in consideration in early years to 2000 but its significance was observed recently when whole world was infected with nCovid19 pandemic.

During nCovid19, online learning was required to keep the learning process on track. The E-learning framework has emerged popularly as a platform for teaching-learning process. E-learning is a novel approach to online learning that is built on information communication technology (ICT). Academic professionals, educators, and other practitioners, in contrast to traditional learning methodology, are keen to observe how eLearning might improve results and academic performance. The only way to determine the same is to look at the student satisfaction and performance. Currently research is going on to evaluate whether face-to-face or traditional teaching methods are more effective or online or hybrid learning is superior. The findings of the studies reveal that student's performance substantially better in online learning than they do in traditional learning. Several research studies on online learning have been conducted in recent years to investigate student happiness, acceptability of eLearning.

The degree to which learners believe that using online learning will help them enhance their performance is referred to as perceived usefulness. The significance of eLearning is to provide the attributes like remote learning, saving money & time and also enhances the self learning dimension in the students. In the time of nCovid19 perceived usefulness has been proven that it has very useful impact on learners' attitudes and has

motivated them to produce better results, following hypothesis have been framed to observe the students ease of use for eLearning tools during the period of nCovid 19.

**Ei= H0 (Null hypothesis), Ease of use of online tools**

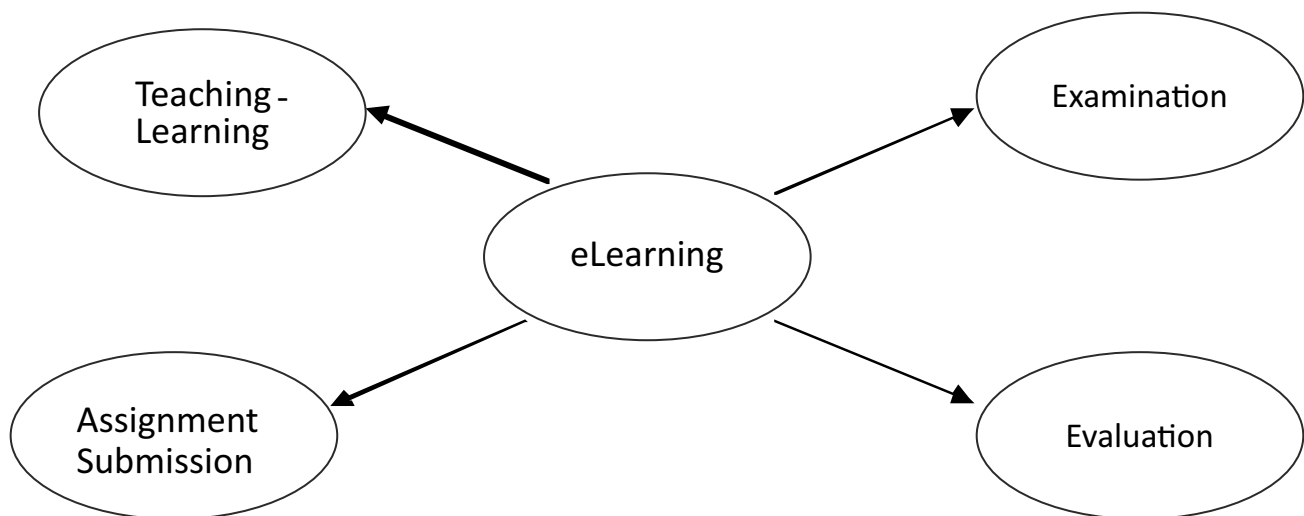
**H1 (Alternate hypothesis), Difficulty in use of online tools**

Above hypothesis narrates about the ease of use while using eLearning tools, H0 represents the null hypothesis which is expressing that majority of students enjoyed using eLearning tools and H1 represents alternate hypothesis where very few students felt some issues like non-availability of internet or poor communication network problems while accessing the eLearning tools (which may be considered as exception).

Due to the lockdown Learning without the physical classroom has become extremely crucial in student learning, but thanks to the availability of online learning platforms the teaching-learning process was continued. Online learning has become the new norm now, with a huge number of students converging towards it and taking its advantage. It has helped in cultivating cognitive skills in students so that they can learn to solve complicated problems having said that, research and analysis is still going on to evaluate the impact of eLearning over the traditional teaching learning mechanism.

Students' involvement in any academic paradigm is very important because students used to derive the desirable outcomes of any academic institution/university. Student involvement which also can be stated as learning involvement can be briefly analyzed by the students behavior, students response and about the enhancement observed in the cognitive skills of problem solving.

Involvement of present day students is extremely important in eLearning system, but unfortunately it is difficult to define clearly and does not fully reflect the learners' efforts. As a result, we should consider learners' perception, regulation, and emotional support in their learning process. Students should be fully immersed in online learning, which includes both quantity and quality of interaction, as well as communication with others. Following diagram represents various academic activities provided by eLearning systems.



**Figure 2: eLearning Process**



Even though eLearning systems come up with so many advantages still they lacked in various verticals of academia. Initially when online Learning started it felt very exciting to students but gradually there are some shortcomings which are observed in the same. It has been analyzed that, in online eLearning systems one need to be equipped with adequate ICT facilities and infrastructure, Further it is also observed that eLearning systems have their limitations when it comes to students-teacher interaction and students interaction amongst themselves. Sometimes the deadlines of assignment and project submissions become so tight as no face-to-face guidance is available to students. Due to all these considerations eLearning systems can be given another thought to fully implement all the teaching-Learning academic process.

## Objectives

The discussion made in current research paper is aligned to following objectives associated with eLearning systems post nCovid19 pandemic.

- To access & evaluate the significance of eLearning post nCovid19 pandemic on education systems.
- To perform analysis of eLearning systems as being new opportunity in teaching-learning paradigm.
- To examine the challenges to eLearning systems in education.

## Research Methodology

To tackle the impact caused by nCovid19 on education system across the India, Indian government made special provision of Rs. 5784.05 crores in the budget for spending on ICT facilities to avail, teachers training and providing needful health care products to students as well as faculties. Here a symbolic example from Mizoram University, India is taken in consideration to elaborate the utilization of eLearning facilities consumed by students and faculty members. Following table depicts the same.

**Table 1: Online Teaching-Learning Adopted by Mizoram University During nCovid19**

<b>Sr No</b>	<b>Activity</b>	<b>% Teachers involved</b>	<b>% Students involved</b>
1	Google class -rooms	32	20
2	Zoom/Webex/Skype	45	15
3	Online webinars	25	35
4	You tube	50	28
5	Facebook	16	20
6	Whatsapp	100	100
7	Emails	100	100
8	Swayam (MOOCs platform)	11	27

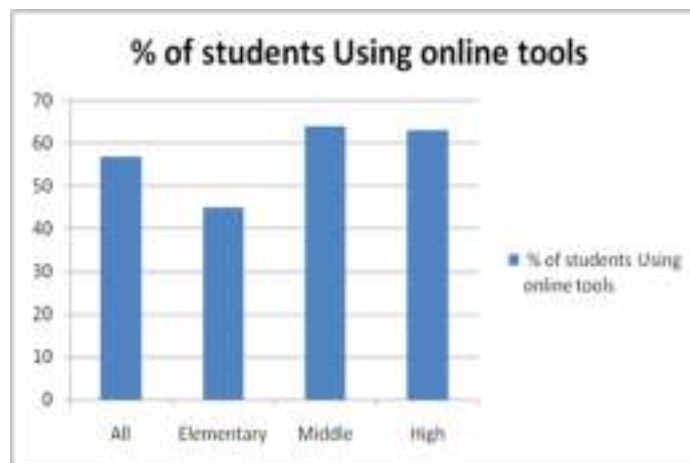
Even though table 1 provides a symbolic example but it is sufficient to narrate the impact of online resources usage in the time of pandemic. Here we can analyze that both students & teaching faculty members needs these eLearning tools for academic purposes. However it is evident that some of the tools are used more frequently by students/faculty members that depend upon their popularity amongst the masses.



Now, let's look at the bigger scenario of the developed country like United States of America (USA), here following graph provides a pictorial presentation for the utilization of eLearning resources by K-12 students during nCovid19 pandemic.

**Table 2: K-12 Students (USA) Using Online Tools**

Sr. No.	Students Category (school -wise)	% of students Using online tools (K -12)
01	All	57
02	Elementary	45
03	Middle	64
04	High	63



**Figure 3: Utilization Analysis of Online Tools.**

Above statistics provides the growing needs of online tools in education but along with these demands the eLearning tools also comes up with various limitations or challenges, some of them are listed below.

#### **Limitations of Online Learning:**

1. Lack of internet availability and related infrastructure.
2. Data Security is another important issue.
3. Lack of awareness about various ICT tools available.
4. Limited student-teacher interaction.
5. Consistent power supply and availability of backup storage systems.



Above limitations suggest that, one must use online resources upon the availability of needful resources and infrastructure otherwise depending on online resources for teaching-learning process may cause problems.

## **Suggestion/Recommendations**

We know that, since September-2019 nCovid19 has impacted every human life in the world. Therefore we desperately need a solution specifically in education sector where students and facilitators can work from their own space so that they need not required to come physically in schools/colleges and universities. Here eLearning systems works as game changer which enables the teaching learning process to be continued in the critical time of pandemic as well. These resources having ability to offer learning facilities, examine the students and evaluating them online but these online resources posses their own limitations which means they can be incorporated as a alternative but cannot fully replace face-to-face or physically teaching-Learning paradigm. Therefore it is to be suggested that, we have to use eLearning systems as the modest verticals in the education system along with the orthodox physical teaching-Learning methodology.

## **Conclusion**

eLearning systems have shown their significance in education specifically in the times of nCovid19 pandemic. They enabled the entire horizon of students, teachers, facilitators and practioners to continue the stream of education across the globe when physical education was not possible due to infectious diseases. Here various multimedia tools like Zoom, Webex, Google Meet etc. have offered ease of use and impactful learning environment to students as well as teachers. However while implementing the eLearning tools the care must be taken to counter the limitations and challenges caused by online environments.

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## HOST COUNTRY'S MACRO ECONOMIC DETERMINANTS TO ATTRACT FDI INFLOWS: AN EMPIRICAL ANALYSIS OF INDIA

Mamta Sharma\*, Neha\*\*, Satinderpal Singh\*\*\*

### Abstract

The Indian government has been emphatically trampling on the role of numerous determinants that attract large amounts of foreign direct investment for decades. Both policymakers and Indian central and state governments have been effective in luring FDI inflows and showcasing their growth. FDI inflows can be used as a gauge for how many other countries are interested in investing in the Indian economy. As a result, the current research in this study identifies many determinants under the headings of India's Economic Environment, Political Environment, Social Environment, and Geographical Environment. A few variables are collected under each heading and the linear regression method is used to determine the significant relationship between variables and FDI Inflows. The significant variables are then selected for further Co integration using the Johanson Co integration Technique and VECM. GDP, Trade, Inflation, Corruption, Political Stability, GNI per capita, and Natural Resources from Economic, Political, Social, and Geographical Environments have been found to have a positive relationship with FDI inflows.

**Keywords :** FDI, Determinants, Macro Environment, Linear Regression. Johanson Co- integration, VECM.

### Introduction

FDI is a critical driver for the economic development of any developing economy as it brings foreign capital into the economy. For India, FDI inflows have proved to be an important element. For the last few years, India's FDI policymakers are trying to make such FDI policies to ensure that FDI inflows kept on coming in the future too. There are so many reforms that have been included in many sectors like defense, airlines, telecom, power stock exchanges, etc. because FDI inflows bring technology advancement and employment too beside capital. FDI and Determinants of India have been the burning topics these days because determinants are varied from country to country or are country-specific. India has the fastest developing economy in the world and will be in the top three economies in future years. According to a report from the NASSCOM Indian economy preserved the third rank in large startup base.

India is going to open a new 1300 start-ups in the year of 2019. In one of the studies of the ASSOCHAM and The Thought Arbitrage Research Institute, India's workforce is presumed to be 70 million in 2020. This study is on the basis of the variables like population growth rate, higher participation of the workforce, enrolment in higher education. Recently in the month of February reserves were US\$ 476.09 billion (RBI Bulletin, 2020) The utmost contribution of FDI inflows in equity is from telecommunications, Computer software and hardware, trading, construction and automobiles in India with an increase of US\$ 456.79 billion during April 2000 to December 2019 (RBI Statistics, 2020)

### Routes of FDI in India

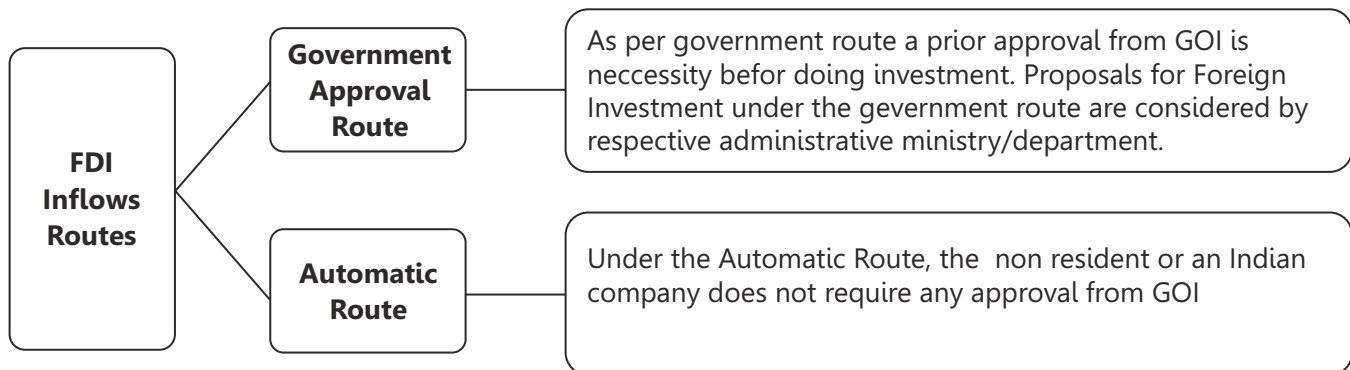
FDI inflows in India can be permitted by the two routes one is Automatic Route and other is Government Approval Route.

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**Figure 1: FDI Inflows Routes in India (a)**

## Covid-19 Impacts on Indian FDI Inflows

The entire world has recently got stale with the rise of Corona virus pandemic. The pandemic has impacted the economies of the world without question. During the pandemic Indian economy was still showcasing the FDI inflows as a positive indicator. One of the articles shown the entire amount of FDI has grown up in the year 2020-21 by USD 74.39 billion (fdi.finance) In India also, like the whole world getting online in the Covid-19 the major sectors that are alluring FDI investors are computer hardware and software related sectors. India still remains a well-known global enterprise objective because of its intrinsic advantages: a huge market with a somewhat young age, popularity-based regime, financial backer amicable change, expanding pace of urbanization, a steady rise in the country's level of use Growth, and expansion supported in per capita per capita income per year. Despite this, the pandemic has wreaked havoc on the nation, stalling progress. Yet India has executed nation vaccination projects in its economy in such a way that it can recover from the dreaded COVID episode and get back to business as usual. As per the reports of Finance and service for the year 2020-21 Indian economy is showing positive improvement in the development of FDI on account of IT region drove a sharp recovery overall FDI to the country that has truly been a record high for the country.

## Review of Literature

### Theoretical Framework

Globalization has responded positively and extensive manner by an Indian government. Many Changes has been taken place in FDI policies time to time to attract maximum FDI inflows. This makes researchers force to have an empirical and descriptive look into determinants and policy alterations of FDIs. Various Existing literatures suggest that there is an impact of various factors to attract FDIs Inflows. Kochar, (2014), Saifilali and Sharmiladevi (2013), Sharma and Kaur (2013), Surya, (2008), Merajothu (2020) and Pattayat (2016) have studied the impact of FDI on GDP and concluded his study on the basis of simple linear regression that if there are any changes occurred in FDI it will surely make visible changes in GDP too. These changes are not only visible but negative also. It has been shown in this study with evidence that the present effect of FDI on the growth of developing countries is negative but in the case of coming years, there may be chances of manipulation in these results too. Gupta (2018), Abdul Malik et al. (2017) and Dency Varghese (2016) revealed in their study that there is some logic behind the variations of inward investments by foreign countries. It had been examined by the regression tool for FDI inflows determinants. The empirical outcome of the study was market size, reserves, debts, an exchange rate and infrastructure of the country were the vital determinants of FDI inflows. It had also suggested in the study that other variables like encouragement of domestic savings, external debt, political



stability, law and order situation, economic stability ought to be ensured by GOI to enhance the inflows of FDI. Bandekar and Sankaranarayan (2017) and Tristane Canare (2017) made an analysis by using OLS model and fixed effect model on his panel data statistics. The outcome he found that Economic Stability, Economic Growth, Natural Resources, Market Size, National Income, Reserves are the latent determinants of FDI inflows in BRICS countries, however GCF, Infrastructure and Trade openness are insignificant factors for FDI inflows. Pillai and Rao (2013), Kumari and Sharma (2015), Elfakhan and Mackie (2015) and Majavu and Kapingura (2016) made an attempt to study various determinants of FDI inflows in South Africa. They found Gross Domestic Product, Average Real Wages, and Real Effective Exchange Rate, Inflation, Trade Openness, corporate taxes, exchange rate and financial crisis were the main determinants for inward FDI.

**H1: GDP has an impact on FDI.**

Inflation is a tendency to surge the prices of goods simultaneously in a given period. Increasing prices will upsurge FDI, this will lead to mounting prices of goods sold while the demand for goods declines. Hence Trade has also an Impact on FDI (Ranjan and Agrawal, 2011, Musibah et al. 2015, Miah and Majumder 2020) Thus we hypothesize:

**H2: Inflation has an impact on FDI.**

**H3: Trade has an impact on FDI.**

Gross Savings accelerate economic growth. Bhavan (2011), Raza (2012), Desai (2005) found a insignificant relationship between Gross Savings and FDI. Liu and Garcia (1999) and Zoega (2021) argued that larger the gross savings in the country results in higher amount of capital inflows and we also expect positive impact of gross savings on FDI.

**H4: Gross savings has an impact on FDI.**

Political environment is an essential component of Macro environment. It has an impact on the foreign direct investment inflows. Worldwide governance indicators comprise political variables like effectiveness of government policies, willingness of government towards economic and social development, Political stability, Regulatory Quality, Rule of Law and level of corruption. (Saeed Meo 2017, Sabir et al., 2019 and Jadhav 2012) Thus we hypothesize:

**H5: Corruption has an impact on FDI.**

**H6: Political Stability has an impact on FDI.**

**H7: Regulatory Quality has an impact on FDI.**

**H8: Government Effectiveness has an impact on FDI.**

**H9: Rule of Law has an impact on FDI.**

The social environment refers to the instantaneous physical and social setting in which individuals live or wherein something ensues or develops. There are three factors considered from the previous literature under social environment. These are Population, Gross National Income per capita and unemployed people in the total population. Among the three variables all the variables are found statistically significant. (Singhania and Saini, 2021 and Albino-Pimentel, 2021) On this count, the following hypothesis is proposed to be empirically investigated.

**H10: Population has an impact on FDI.**

**H11: Unemployment has an impact on FDI.**

**H12: GNI per capita has an impact on FDI.**

Geography, which is the study of the Earth's surface, focuses on elements such as the Natural resources, infrastructure and transport services. Siregar and Patunru (2021), Boermans et al. (2011) and Naudé and Krugel (2007) concluded that these factors have an impact on FDI. Hence, we hypothesize:

**H13: Natural Resources have an impact on FDI.**

**H14: Transport Services has an impact on FDI.**

**H15: No Impact of Infrastructure on FDI.**

Sayari et al. (2018) and Anyanwu (2017) investigated the relationship between the Foreign Direct Investment (FDI) and value added components of GDP in thirty Eastern, Western and Central European countries. The study concluded that the Manufacturing value added (annual % growth) (MVA) and Manufacturing, value added (% of GDP) (MVAG) have a significant impact on GDP for these countries. On this count, the following hypothesis is proposed to be empirically investigated.

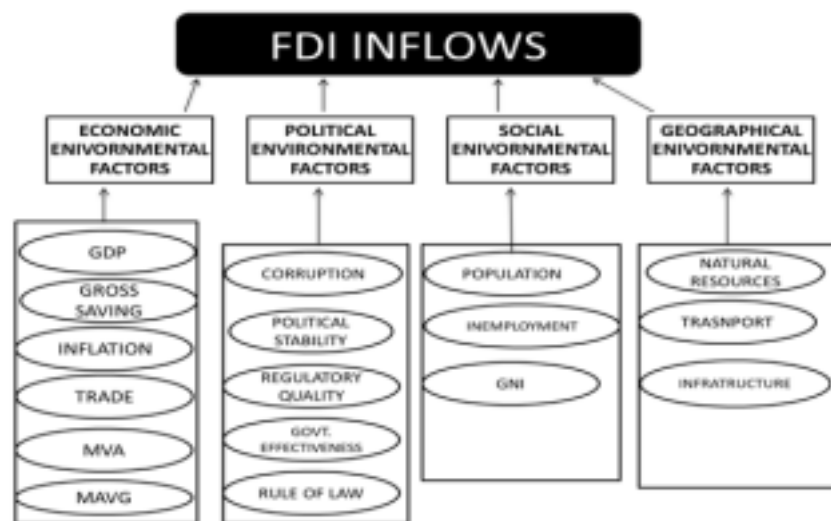
**H16: MVA has an impact on FDI.**

**H17: MVAG has an impact on FDI.**

**Research Framework and Variable Measurements**

The foremost objective of this study is to bring out the recent facts on the determinants data of an India economy that help out to insulate more FDI inflows in an Indian economy. There are various studies done before to identify various determinants of FDI inflows in India but no study brought the variables according to macroeconomic environment factors. The present study highlights macroeconomic environments and their different variables. Like political Factors, Social Factors, Economic factors and Geographical factors.

To determine the way of empirical investigation, the following research framework is devised to tracing the impact of host country's macroeconomic determinants to attract FDI in India:



**Figure 2 : FDI Inflows Routes in India (b)**



## Objectives

- To identify the main drivers of inward FDI in Host country.
- To determine the current scenario of FDI inflows in India.

## Research Methodology

The current examination of various determinants for FDI inflows in India is based upon secondary data sources. All the panel data regarding variables from the year 1991-2020 has been taken from World Bank Statistics (World Development Indicators) The data is verified from RBI reports too.

## Statistical Tools

The whole set of data from 1991-2020 firstly converted into logarithmic values and Linear Regression has applied. From the outcome of the regression results significant variables further checked for co-integration by using Johanson Co-integration Test. After that to obtain the quantitative relation and elasticity between the variables and FDI inflows VECM model has applied with suitable restrictions.

## Variables Taken in the Study

To determine which factors are mostly responsible for FDI inflows in an Indian economy there is much literature has been sorted and selects the following variables heads. In this study different business environment factors are examined like Economic Factors, Political Factors, Geographical Factors and Social Factors to identify which factors are responsible to allure FDI inflows in India. Under these heads various variables are taken that are given below:

## Analysis of Data

It is the empirical study of Panel data where all the variables of time series are moving together if we imposed the regression on all the variables together there may be a problem of Multicollinearity occurred. So, we have made four data sets according to their heads, i.e. Economic Factors, Political Factors, Social Factors and Geographical Factors. To obtain significant variables from all the data set OLS method has implied and all the variables are regressed. The outcome of regression results is given in the following Table 1.

**Table 1: Regression Results of Variables**

Heads	Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>Economic Environmental Factors</b>	<b>LOGGDP</b>	-2.605336	0.984783	<b>-2.64559</b>	<b>0.0148</b>
	<b>LNTRD</b>	2.099792	1.157826	<b>1.813565</b>	<b>0.0534</b>
	LOGGS	1.108363	1.906776	0.581276	0.567
	LOGMVG	-0.11602	0.09818	-1.181711	0.2499
	LNMV	2.149937	1.381219	1.55655	0.1338
	<b>LNINF</b>	-1.020705	0.270809	<b>-3.7691</b>	<b>0.0011</b>

<b>Political Environmental Factors</b>	<b>LNCOR</b>	2.195687	0.556842	<b>3.943108</b>	<b>0.0006</b>
	<b>LNPS</b>	2.965379	0.225806	<b>13.13241</b>	<b>0</b>
	LOGRQ	-0.001847	0.57579	-0.003208	0.9975
	<b>LOGGE</b>	0.490679	0.156653	<b>3.132264</b>	<b>0.0047</b>
	LOGRL	0.00857	0.132112	0.064873	0.9488
<b>Social Environmental Factors</b>	<b>LOGPOP</b>	-4.206761	2.287212	-1.839253	<b>0.0548</b>
	LNUNP	5.313551	6.434304	0.825816	0.4167
	<b>LNGNI</b>	3.625155	0.673522	<b>5.382385</b>	<b>0</b>
<b>Geographical Environmental Factors</b>	<b>LNTRP</b>	1.313691	0.288655	<b>4.551074</b>	<b>0.0001</b>
	<b>LNNR</b>	3.070913	0.999958	<b>3.071042</b>	<b>0.0049</b>
<b>Adjusted R<sup>2</sup></b>			<b>0.73 – 0.91</b>		
<b>Prob. F- Statistic</b>			<b>0.0000</b>		
<b>Durbin Watson</b>			<b>0.68-0.91</b>		

(Author's Calculations in E-views 11)

From the above table, it is clear that among all the various combinations GDP, Trade and Inflation from Economic variable, Corruption, Political stability and government effectiveness from Political Factors, Population and Gross national income per capita from Social Variables and Transport Services and Natural resources from Geographical factors are Significant statistically. However, other variables taken are insignificant. The probability outcome of F-statistics is reflecting significant for the entire factors, and it suggested the model is good fit. The value of an adjusted R square is varied from 0.73 to 0.91 indicates from 73% to 91% of variation in FDI inflows has occurred due to the significant variables taken for the Study. Now lastly statistics of Durbin Watson is varying, which indicates the problem of autocorrelation. The value of adjusted R square is greater than the Durbin Watson value proved a spurious regression. So, to conquer on this problem the co-integration techniques have to be applied. But before applying Co-integration techniques, stationary of the data has to be confirmed, which is the basis condition of co-integration tests. To check the stationary of the data we have to impose augmented dickey fuller test. Data has to be converted into logarithmic values to obtain stationary in lesser order. We have chosen only significant variables for further tests. So here the significant variables are LNGDP, LNINF LNTRD LNCOR, LNPS, LOGGE, LOGPOP, LNGNI, LNTRP and LNNR. Now Unit root test has been implied and it comes out that data is non-stationary at level, but stationary at the first difference. Table 2 will show the outcome of the Unit root test.

**Table 2: ADF Results of Variable for India**

<b>Variables</b>	<b>Constant</b>		<b>Linear Trend</b>		<b>None</b>	
	<b>Level</b>	<b>First Difference</b>	<b>Level</b>	<b>First Difference</b>	<b>Level</b>	<b>First Difference</b>
<b>LNFDI</b>	-3.36057	-5.716063	-4.37904	-5.934443	1.82711	-5.096498
<b>LNCOR</b>	-1.68751	-5.164458	-1.21229	-5.699883	-0.11967	-5.259663

<b>LNPS</b>	-9.53711	-3.754381	-5.27287	-4.50718	0.342699	-3.840952
<b>LNGE</b>	-3.31879	-6.227082	-3.24038	-6.049531	-1.62377	-6.281809
<b>LNGDP</b>	0.093003	-4.638315	-1.89549	-4.5378	6.233579	-0.891293
<b>LNTRD</b>	-0.95435	-3.7557	-0.89878	-3.779747	4.684022	-2.442155
<b>LNINF</b>	-2.2405	-6.008599	-2.19245	-5.882348	-1.25242	-6.062291
<b>LNGPPP</b>	1.784386	-3.83767	-1.5212	-4.11991	21.79318	-0.528043
<b>LNNR</b>	-1.94197	-4.844245	-2.14245	-4.72924	-0.4947	-4.962524
<b>LNTRP</b>	-0.24577	-4.645501	-3.15856	-4.513084	-1.84808	-4.15736

(Author's Calculations in E-views 11)

So, the Co-integration test can be imposed on data without any hindrances. Here to find out co-integration vector Johanson Co-integration Test can be applied on the data which stationary at the first difference. In Johanson Co-integration test, we will obtain two tables i.e., Trace test table and maximum Eigen value table, which describe co-integration, is existing or not. The outcome of the Trace test and Maximum Eigen Value tables are given below:

**Table 3: Trace Test for all the Variables in India**

<b>Economic      Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Trace Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.960347	130.8936	47.85613	0
	At most 1 *	0.666556	53.43128	29.79707	0
	At most 2 *	0.586605	27.07254	15.49471	0.0006
	At most 3 *	0.217037	5.872081	3.841465	0.0154
<b>Political      Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Trace Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.825602	76.02712	47.8561	0
	At most 1 *	0.50767	34.11316	29.7971	0.015
	At most 2 *	0.424412	17.10664	15.4947	0.0284
	At most 3 *	0.148209	3.849937	3.84147	0.0497





<b>Social Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Trace Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.88479	107.449	47.8561	0
	At most 1 *	0.72193	55.5848	29.7971	0
	At most 2 *	0.50053	24.8673	15.4947	0.0015
	At most 3 *	0.2896	8.2062	3.84147	0.0042
<b>Geographical Environmental Variables***</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Trace Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.69333	43.56225	29.79707	0.0007
	At most 1*	0.468032	15.19465	15.49471	0.0544
	At most 2	0.001937	0.046537	3.841465	0.8292

\*\*Trace test indicates 4 cointegratingeqn(s) at the 0.05 level, \*\*\*Trace test indicates 2cointegratingeqn(s) at the 0.05 level, \*denotes rejection of the hypothesis at the 0.05 level, \*\*\*\* MacKinnon-Haug-Michelis (1999) p-value.

**Table 4: Maximum Eigen Value Test for all the Variables in India**

<b>Economic Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Trace Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.960347	77.46231	27.58434	0
	At most 1 *	0.666556	26.35875	21.13162	0.0084
	At most 2 *	0.586605	21.20045	14.2646	0.0034
	At most 3 *	0.217037	5.872081	3.841465	0.0154
<b>Political Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigen value</b>	<b>Max Eigen Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.825602	41.91396	27.5843	0.0004
	At most 1	0.50767	17.00653	21.1316	0.1717
	At most 2	0.424412	13.2567	14.2646	0.0717
	At most 3 *	0.148209	3.849937	3.84147	0.0497

<b>Social      Environmental Variables**</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigenvalue</b>	<b>Max Eigen Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.88479	51.8638	27.5843	0
	At most 1 *	0.72193	30.7175	21.1316	0.0017
	At most 2 *	0.50053	16.6611	14.2646	0.0205
	At most 3 *	0.2896	8.2062	3.84147	0.0042
<b>Geographical Environmental Variables***</b>	<b>Hypothesized No. of CE(s)</b>	<b>Eigenvalue</b>	<b>Max Eigen Statistics</b>	<b>0.05 Critical Value</b>	<b>Prob****</b>
	None *	0.69333	28.3676	21.13162	0.004
	At most 1 *	0.468032	15.14811	14.2646	0.0362
	At most 2	0.001937	0.046537	3.841465	0.8292

\*\*Maximum Eigen Value test indicates 4 cointegratingeqn(s) at the 0.05 level,

\*\*\* Maximum Eigen Value test indicates 2cointegratingeqn(s) at the 0.05 level,

\*denotes rejection of the hypothesis at the 0.05 level, \*\*\*\* MacKinnon-Haug-Michelis (1999) p-value.

The Results of Table 3 and Table 4 indicate that long run co-integration occurred in FDI inflows and the selected variables of FDI inflows as the values of Trace statistics are greater than critical value so here the null hypothesis that there are four co-integration equations and two co-integration equations occurred in Economic, Political, Social and Geographical variables respectively. Therefore, we will run restricted VAR model i.e., VECM with restriction. As the goal of the present examination is to recognize the determinants of FDI inflows so we have applied the following conditions while implying VECM Model.

#### 1.1 Restriction for four co-integration equations (Economic, Social and Political Variables)

$$B_{11} = 1, B_{13} = 0, B_{14} = 0$$

$$B_{21} = 1, B_{22} = 0, B_{24} = 0$$

$$B_{31} = 1, B_{32} = 0, B_{33} = 0$$

#### 1.2 Restriction for two co-intergration equations (Geographical Variables)

$$B_{11} = 1, B_{12} = 0$$

$$B_{21} = 1, B_{23} = 0$$

With the help of restricted VECM Model, the Impact of selected determinants on FDI inflows has been obtained. The results obtained are in following table.

**Table 5: Co-integration Relationship (Estimation)**

Equation No	Variables Heads	Independent Variable	Impact on FDI
1	<b>Economic Environmental Variables</b>	LNGDP	5.61997 [-10.8669]
2		LNTRD	0.64569 [-25.2283]
3		LNINF	-0.561096 [-12.6545]
4	<b>Political Environmental Variables</b>	LNCOR	1.334435 [-4.03115]
5		LNPS	0.792005 [-3.55606]
6		LNGE	-0.28846 [ 6.24939]
7	<b>Social Environmental Variables</b>	LNPOP	28.08993 [ 4.14064]
8		LNUNP	-9.832083 [ 5.42123]
9		LNGNI	5.197107 [-3.49353]
10	<b>Geographical Environmental Variables</b>	LNTRP	-2.815689 [ 10.6581]
11		LNNR	6.9127 [-3.07227]

(Author's Calculations in E-views 11)

The above analysis shows that all the results obtained are significant statistically. The outcomes are also in the form of following equation to get more clarified explanations.

- **Economic Equation**
- **Political Equation**
- **Social Equation**
- **Geographical Equation**

Here the FDI is dependent variable, and X coefficients are showing the elasticity in dependent variable due to independent variable. It means X coefficient denotes the percentage increase or decrease in dependent variable (FDI) due to changes in another independent variable.



## Discussion of Results

As in this study the determinants are categorized into four sections i.e., Economic, Social, Political and Geographical factors. The results are also obtained in four different sections. Let us discuss each factor according to their sections one by one.

**Economic Environmental Factors:** There are total six variables are taken as an economic environment. Out of them three variables (GDP, Trade and Inflation) are having significant results. The null hypothesis of these variables is rejected. In the co-integration equations, the coefficient X of GDP is recorded as 5.62. It means if any variation occurred in variable GDP, it will positively Impact the FDI inflows with an increase of 5.62%. Higher GDP, the rapid and high degree of the development of the economy confers and accommodate more investment opportunities to foreign countries. This also helps them to expand their home country resources to get maximum economic benefits.

Trade is also reflected to be significant term for inward foreign investment in India, as it has a positive Impact on FDI inflows. Trade coefficient is recorded as 0.65. It means one unit variation in trade will increase in FDI inflows by 0.65% More is the Trade more is FDI inflows in our economy. Trading with other economies causes FDI inflows in home country. There will be bi-causality between trade and FDI inflow (Kaur and Sharma 2013)

X coefficient of Inflation is showing 0.56% of variation in FDI inflows in India. This explains that 0.56% of variation has occurred in FDI inflows negatively due to one unit variation in Inflation rate. This Impact might be occurred due to the price level of an economy. Higher the cost of production will result, high priced products and this will have an adverse Impact on the product demands and this leads to losses for investors so high inflation discourage the foreign investment into an economy.

Many of the studies are also effectuate the results of Economic factors of the present study. Though a variation occurred in the percentage of X coefficient but the same Impact is recorded in earlier studies. Debnath and Varghese in 2016 found a positive Impact of GDP on FDI in India. Many other empirical analyses are also found positive association of FDI and GDP (Shamsuddin, 1994; Resmini, 2001; Pilai and Rao, 2003; Zhao, 2003; Janicki and Wunnava, 2004; MacDermott, 2007; Mateev, 2008; Vijayakumaret al., 2010; Mahalakshmi, Thiyagarajan and Naresh, 2015) However, few studies give contradict outcomes that negative Impact and no Impact of GDP on FDI inflows (Nunnencamp, 2002; Belloumi and Alshehry, 2018; Carbonell and Werner, 2018) Trade and FDI, both are having causalities with each other as increase in exports can increase the inflows of FDI inflows. The importance of FDI inflows in Trade of any economy is very strong and many of the studies found so (Vijayakumaret al., 2010; Pilai and Rao, 2003; Zhao, 2003) These studies supported results of present studies too. There are few studies also in which FDI and trade are having one-way causality like FDI inflows cause trade but trade does not cause FDI inflows and these contradict the results of present study (Ullha, Mahtab, and Haq, 2015, Singh 2017) The last significant determinant of the study is Inflation rate. No definite demonstration has been provided yet in the previous literature regarding the Impact of Inflation rate on FDI. There are blended outcomes are available that the high inflation rate causes low FDI inflows and a low inflation rate causes high FDI inflows (Vijayakumar, et al., 2010; Shamsuddin, 1994) The inflation rate is having both Impacts on FDI inflow as too much of everything is bad.

**Political Environmental Factors:** The role of political factors may be having an Impact on the countries which have mixed economy structure. An Indian economy has possessed the same characteristics. So in the present study the Impact of political factors like control of corruption, Political stability, Regulatory Quality, Rule of Law and Government Effectiveness has been tried found as very less evidences that can tell the Impact on FDI inflows.



Among all the variables only three variables found statistically significant these are Control of corruption, Political Stability and Government Effectiveness. For these three variables alternative hypothesis is accepted.

The coefficient of control of corruption has positive and significant association in our study. It has been observed that if one unit variation has occurred in control of corruption than 1.33% hike is noticed in FDI inflows. It means lower the rate of corruption higher will the FDI inflows in an economy. Canare, 2018 have found significant effect of Control of corruption. It has been noticed in his study that if high score of control of corruption, more inflows of FDI. In many studies corruption and FDI inflows are having negative Impact (Ali Al-Sadiq, 2009, Egger and Winner, 2006; Wei, 2000; Zurawicki, 2002)

X coefficient of Government Effectiveness is calculated as -0.28 that shows negative Impact of government Effectiveness on FDI inflows. This explains a decrease in FDI by 0.28% because of one unit raise in Government Effectiveness. Zuhail Kurul and A.Yasemin Yalta in 2017 found positive and significant Impact of control of corruption, Government Effectiveness and the voice accountability on FDI inflows in 113 emerging countries from 2002-2012.

**Social Environment Factors:** There are three factors considered from the previous literature under social environment, these are Population, Gross National Income per capita and unemployed people in the total population. Among the three variables all the variables are found statistically significant. Therefore, null hypothesis of all the variables rejected.

Variable population made an increase of 28.08% in FDI inflows. It means that more the population of the economy more will be the chances to get FDI inflows in the same economy. It has been assumed that a big population demands large number of products and services and hence there will be large markets of product and services also there will be large number of man force who is educated too. Gupta and Wang in 2009 found India and China have three and five million of graduate people per year. These few things attract foreign MNCs to invest in India and other economy having large population. Aziz and Makkawi (2012) found similar results as our study have that FDI inflows and Population are having positive links with each other.

X coefficient of unemployment is showing 9.83 variations. One unit increase in Unemployment will lead to 9.83% decrease in FDI inflows in India. Much of the previous literature has the positive Impact of FDI inflows on employment. It is observed that Employment generation and FDI inflows are mostly affecting according to the development stages in FDI influencing in the economy and its geography. Low degree of correlation between employment and FDI inflows is recorded in India.

**Geographical Environmental Factors:** Under geographical environment factor three variables are considered. These are Natural resources available, Transport services export-Import, and Infrastructure, among them Natural resources and Transport Services become significant and for that null hypothesis is rejected.

Natural resources are having positive association with FDI. X coefficient of natural resources is calculated is 6.91. The coefficient of natural resources shows that if one percent increases in natural resources, this leads to increase the chances of FDI inflows in India. More the raw material in a country more will be the chances of high FDI inflows. Transport services are having a negative link with FDI inflows in the above calculation. Asiedu in 2013 found an adverse effect of natural resources on FDI inflows of 99 developing countries of Ghana and sub-Saharan African Countries. A report given by WWF-UK in 1999 said the FDI inflows are in the host countries came on the cost of Natural Resources of the country and also exploit them.



## Conclusion

In a nutshell we can describe the various determinants which can be examined by environment wise. The main determinants which have significant Impact on FDI inflows are GDP, Trade, Inflation, Control of corruption, Political Stability, Government Effectiveness, Population, Unemployment, Gross National Income, Natural Resources and Transport services. Few of the determinants are having positive Impact like GDP, Trade, Control of corruption, Political Stability, Population, Natural Resources, while Inflation, Government Effectiveness, Unemployment, Gross National Income, and Transport services are having negative Impact on FDI inflows. Much of literature is supporting our results (SumitParashar, 2013; Sherif Abbas and Dalia El Mosallamy, 2016 and Sngmitra and Venkatrama 2016)

The other motive of this investigation is to track down the current situation of FDI inflows in India. So here, GOI makes a couple of huge drives to accomplish the USD 100 billion FDI inflows right away. To upgrade the Make in India program and to reduce the problem of unemployment, the GOI is in the process with stakeholders to make ease in FDI policies regarding the defense sector by increasing the limit through automatic route from 49 per cent to 51 per cent. The year 2018 is proved very fruitful as GOI have made many achievements. The rules related to e-commerce have also been revised in 2018. Now 100% FDI is allowing to model of e-commerce that is based on a market. To boost the insurance sectors too, 100% FDI is allowed in this sector too. It has been discussed in Union budget 2019-20 that FDI in an aviation sector, an animation sector will be allowed. With these changes our economy will be the USD 100 billion economy in future years. According to trend analysis a report issued by USB that in the next five years, the FDI inflows will reach at USD 75 billion, if all the situations become same.

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## HEART, MIND AND MONEY: A STUDY ON EMOTIONAL INVESTMENTS

Chandni Keswani

### Abstract

Investment now days have become a very tedious and risky job, it requires a lot of research, deliberation and efforts to choose a correct avenue to invest in. The funds invested by investors comprise of the hard earned money, savings and therefore needs to be invested in a way, which is less risky and give some favorable results. Investments are important not only for the development of individuals but also for the development of the economy of the country, ultimately forming a vicious circle of money. And therefore it is important to take a correct decision about investing. Decision making has a direct connection with emotions, good health, proper lifestyle, mind and heart. A stress less, positive mind and healthy heart play a vital role in decision making. The present study attempts to understand and explore the relation between the Positive and Negative emotions, Heart and Mind and investment and also attempts to describe the concept of emotional investment and investor.

**Keywords :** Emotional Investment, Positive Emotions, Negative Emotions Heart, Mind, Money.

### Introduction

"Money is numbers and numbers never end. If it takes money to be happy, your search for happiness will never end."

**-Bob Marley**

Most people think that money is everything, it can buy them happiness, and it can buy them peace and also satisfaction. But it's not true. Now days we are connecting and correlating the money with everything even with our existence, if we have plenty of it we are the happiest and if we starve for it our existence is endangered. We can sell our minds, our hearts, our body, our peace and our talents just to get a pay cheque, as that pay cheque will get us the entire materialistic world which we think is required for our survival and existence. And by doing this we are developing financial prostitution as an inseparable part of our personality.

We as a human have evolved over years, we have travelled the journey of growing, satisfying and taming our necessities to needs to wants and finally to desire. Initially we only required shelter and food to survive, but today we need money to buy food and to arrange shelter, we have replaced food and shelter with money, we don't strive to fulfill the basic necessities but we struggle to earn the replacement. We are equating money with our needs and lack of money means lack of happiness as we are unable to congregate our needs.

We are now days living in a world which is ruled by money, as we have linked our emotions (i.e. happiness, our fears and our sadness) with money. We are turning into slaves of money; money drives all our emotions and financial decisions and behavior. So directly or indirectly our emotions and our money are interlinked. The fear of losing money is growing like a virginia creeper in every individual, giving rise to negative emotions, feeling of shame, depression, sadness and inferiority complex.

Emotions are an important aspect of who we are as people. However, emotions can be difficult when it comes to

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investing. Investment decisions are primarily a quantitative exercise, but investors frequently allow their emotions and biases to play a role in their investment decisions without realizing it.

Empirical evidence during the last two decades has shown that investment decisions are often associated with emotions. The funds invested by investors comprise of the hard earned money, savings accumulated after a lot of compromise, sacrifice and struggle and hence need to be invested in a way, which is less risky and give some favorable results. Investments are important not only for the development of individuals but also for the development of the economy of the country and therefore it is important to take a correct decision about investing.

Decision making has a direct connection with emotions, good health, proper lifestyle; mind and heart, a stress less mind and healthy heart play a vital role in decision making (Vangile Makwaka, 2013). At the time of taking decisions especially about investments, investor's mind face a turmoil of various emotions like Fear, Happiness, Excitement, Sadness, Jealousy, confusion, Confidence, Enthusiasm, Suspicion and so on.

## Conceptual Framework

### Emotional Investments:

Emotional investments are relatively new concept in the field of finance and investments. The concept describes a process of investment decision making induced and influenced by various emotions and mental turmoil an investor face when he is about to invest. The concept is complicated as it deals with the emotional side of an investor. Emotions are considered as the diciest and confusing phenomenon; these can either make a person strong or can make him weak. These can be further categorized as :

### Positive Emotions:

Love, joy, liveliness, optimism, a better mental process, and future forecasting are all examples of positive emotions (Fredrickson, 2003). People with positive emotions feel comfortable and relax when making any type of decision, especially an investment. They attempt to grasp different financial concepts and how they can be used to their decision-making, as well as the various outcomes that can result. Emotions have an impact on a person's ability to remember things, make decisions, analyze information, and maintain self-control. Salovey and Mayer (Salovey and Mayer, 1990).

Emotions are relevant to our inner thoughts and beliefs which can be affected by ourselves or internally sometimes from outside or external factors which can be other people, surroundings, place, situation, consequences (Callanhan, 1988). Positive emotions have its own indicators which may affect heart and mind as well and can also be further categorized as:

### Pleasant Emotions (Heart):

- Calmness,
- Sympathy,
- Satisfaction

### Motivating Emotions (Mind):

- Happiness
- Delight
- Joy



### **Negative Emotions:**

Stress, anxiety, anger, violence, depression and suicide, eating disorders, sexual dysfunction, and a variety of stress-related medical illnesses are all examples of negative emotion" (Fredrickson, 2004). It may exacerbate unhealthy habits such as drug addiction, phobias, and insecurities. Person having negative emotions may lead to wrong and aggressive decisions. These emotions have its own indicators which may affect heart and mind as well and can also be further categorized as:

#### **Unpleasant Emotions (Heart):**

- Sadness
- Anger
- Disgust

#### **De-motivating /Disturbing Emotions (Mind):**

- Fear
- Anxiety
- Confusion

### **Review of Literature**

Investment decisions are often guided by investors' attitude, psychology, risk aptitude, sentiments and host of other emotional factors. It is observed that whenever there is an uncertainty regarding investment decisions the investors become baffled.

Loewenstein (2000) argues that the emotions and feelings experienced at the time of making a decision 'often propel behaviour in directions that are different from that dictated by a weighing of the long-term costs and benefits of disparate actions'.

Jason zweig (2007) in his book "Your Money and Your Brain" has tried to equate investor's brain and money in a regression equation and has concluded that financial decision-making is influenced by emotions like greed, confidence, surprise, regret and happiness.

Joseph H. and Peter (2008) in their research has developed concepts of Emotional Cost (EC) and Emotional Returns(ER). According to their research the valuation of assets and investments should be based on emotional components like satisfaction, joy etc.

Skinner (2007) in his research quoted about savings that "thus, saving for retirement may ultimately be less about the golf condo at Hilton Head and more about being able to afford a wheelchair lift, private nurses, and a high quality nursing home", he tried to convey that cracking jokes at the time of investment decision making relaxes the mind and thus make the complications easier.

Vangile Makwaka (2013) argued that now days emotions like fear, happiness, sadness etc. are being linked with money and therefore the fear of losing money is growing like a Virginia creeper in every individual, giving rise to negative emotions, feeling of shame, depression, sadness and inferiority complex.

Goswamiet. et. al.(2020) identified Five emotional factors Indecisive emotion, Clueless Emotion, Paranoid Emotion, Enthusiastic Emotion and Dogmatic Emotion and stated that majority of investors are influenced from enthusiastic emotion. Their study concluded that all of these factors have demonstrated a significant

contribution to dividing investors into five segments based on emotional influence.

Khillaret. AL(2020) concluded that most of the times investor's investment decisions are influenced by behavioural biases. Investors do fall prey in the trap of emotional biases and take wrong investment decisions which make them suffer losses too.

## Objective

- To review various studies to understand the key emotions which influence the investment decision making of individual investors.

## Research Methodology

The present study is an exploratory study. Method adopted is systematic literature review. It involves reviewing, compiling and summarizing the previously published research work pertaining to the topic of the current research. The research articles are being gathered from Emerald Insight, Elsevier, JStor, EBSCOhost, Google Scholar and SSRN.

## Research Questions

- Do Positive and Negative Emotions have any impact on investors' investment decision-making?
- What is the impact of these emotions on investor's investment decision- making?

## Results and Findings

Most of the research papers found in the area of emotional investment and finance have pointed out towards the impact of various emotions on investment decision making in their studies. They have concluded that most of the times investor's investment decisions are influenced by various types of emotions these can be Positive as well as negative. Investors do fall prey in the trap of emotional biases and sometimes they take a right decision whereas sometimes they take wrong investment decisions which make them suffer losses too. Past literature shows that the key emotions which have an impact on the investment decision making are – Positive and Negative. Positive emotions are those which have a pleasant impact and motivate the investors to take right decisions where as Negative emotions disturbs the mind and make the mood and heart of an investor unpleasant.

From the literatures reviewed for this present paper, following matrix has been prepared to understand the impact of emotions and their relation with heart and mind :

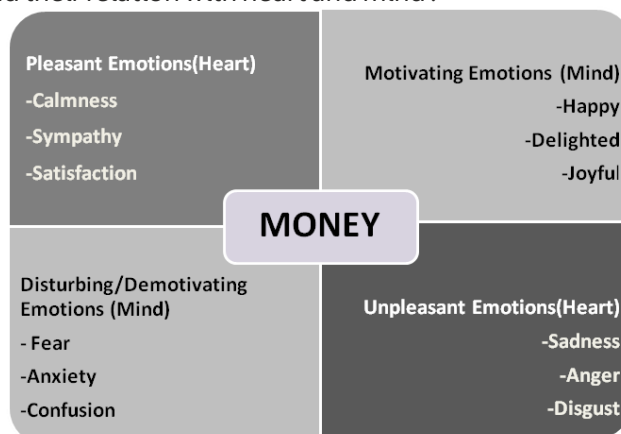


Figure 1 : Heart, Mind and Money Matrix



## Conclusion

Investor decisions are influenced by emotions. Each emotional state has its both positive and negative side. How investors use their emotions will make them to be a successful or failure investor. This study identified the various emotional states often crossed by the investors on making investments decisions. How these emotional states influence individual's investment decisions is taken as the primary aim of this study. Findings of this study reveal that investors can be classified based on the influence of emotions are positive and negative emotional states. Investors need to make rational decisions for successful investment by taking judgments free from negative emotions. It can be concluded that investors need to have knowledge of emotional management. Emotional management helps in maintaining the positive attitude and emotions. Positive emotions are more of psychological understanding of the individual which affect the each and every action in their day to day life. Positive emotion helps in keeping cool and calm and to assess the investment option carefully from the available alternatives according to risk and return criteria. Positive emotion enhances the forecasting capability, predictability, control on spending habits, reduce the anxiety level and increase the awareness and knowledge to get the maximum advantage from investments.

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## Case Study

### Making IT Possible Across the Globe: A Success Story

Dhanashree Nagar\*, Priyanka Jaiswal\*\*, Ruchi Jain\*\*\*

#### Introduction

Founded by three individuals Abhishek Pareek, Chief Executive Officer. Amit Agrawal, Chief Operating Officer and Mr. Kuldeep Kundal, Chief Marketing Officer who had work experience in reputed MNCs with passion to serve their hometown Indore and to eradicate IT challenges faced while working with other organizations. Initiated with two computers in a small garage of 150 Sq. ft. with no funding or investment from any venture capital company, since then Cyber Infrastructure Services (CIS) has achieved a great recognition in the IT industry and now has become a CMMI Level 5 compliant company with ISO/IEC 27001:2013. CIS is a digital solution provider organization, located at California, USA and has Microsoft Gold Partner and SAP Partner and a fastest growing IT/ technology services company with its development center in Indore, Madhya Pradesh, India. The organization combines its strengths in technology, domain knowledge and proven quality processes to deliver solutions that help its clients fulfill their business dreams. CIS was established in the year 2003, with a mission to empower and enhance lives of billions of users through profound technology solutions. CIS specializes in Software Product Development, Web Application Development, Open Source Customization & Development, Mobile Applications Development, Java, .Net, Angular js and Node js.

The company has its headquarters and development center in Indore, Madhya Pradesh, India and offices in USA, UK, Singapore, South Africa and many local representative offices in Europe, and Asia. The organization believes that their employees are their biggest asset, who are highly motivated and dedicated with a high degree of professionalism. Company's 700+ professionals had the convergence of multi-platform skills and extensive industry specific knowledge, which had geared the organization to handle sophisticated international assignments. CIS mostly caters to the requirements on digital platform to their overseas clients.

#### Journey of CIS

Apart from fierce competition, unrealistic expectation of clients, online security issues and financial management it was quite challenging for CIS to win the trust of their potential customers. But soon it established itself as a leading name in providing exceptional technology solutions and services that adhere to globally recognized standards and latest technology trends. As a result of this, from its year of establishment in 2003, within just six months i.e in 2004 it started customer care services for British Company. With over 300% of growth rate the company moved to a better and bigger environment of 3000 sq. feet of office space with 20 employees. Cyber Infrastructure continued to expand its array of services and technology portfolio to capture new markets and domains. In June 2006 it started KPO services for a Florida based real estate company. Well known for maintaining their own ERP (Enterprise Resource Planning) software for employees, CRM (Customer Relationship Management) software for customers, PMS (Project Management Software) for its clients and

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This case was developed by Dr. Dhanashree Nagar of Shri Vaishnav Institute of Management, Indore, Madhya Pradesh, Priyanka Jaiswal of Acropolis Faculty of Management and Research, Indore, Madhya Pradesh and Ruchi Jain, of Shivajirao Kadam Institute of Technology and Management, Indore, Madhya Pradesh in the 8th Case Writing Workshop organized by Shri Vaishnav Institute of Management, Indore, Madhya Pradesh during November 02-07, 2020.



training programs for its skilled employees, CIS strongly believes that their dedicated team of experts always strive hard to deliver the best to their valuable clients and meet their specific IT needs. With top-notch services, timely delivery and strategic business planning, sticking to this even during the recession of 2009 they never fired any of their employees. This fair treatment and work environment resulted in over a 95% retention rate of their employees. In-fact the faith and the satisfaction of their clients multiplied their number of overseas projects resulting in more requirement of employees. So the company hired the candidates to work on new projects. The year 2010-12 was the major period of expansion for CIS in terms of infrastructure, team size, and global reach.

2014-19 were the years of milestone for CIS where the organization earned major achievements and new goals were set. With accreditation of Certifications of Capability Maturity Model Integration (CMMI) Level 3 and Magento Silver Solution Partner, CIS had now 500+ expert professionals as a part of its workforce. It also launched a product Free AsAir, an application platform for mobile users that connects the users to the nearest Wi-Fi hotspot without any cost. With further business expansions at Johannesburg and Atlanta, CIS in 2019 opened a new office in Jaipur, Rajasthan and then they shifted to a new office, located in Electronic Complex Area, Indore, Madhya Pradesh, both in India. With a total area of 1 lakh square feet, this new office was well equipped with state-of-the-art infrastructure and enhanced facilities. Indore office is situated in a Cisco-based robust infrastructure to support 24x7x365 operations with a capacity of 900+ professionals. The company also has its offices in over 5 countries that includes India, UK, USA, Singapore and South Africa. CIS also has strategic alliances with Microsoft, Apple, Google Partner, ZOHO, Adobe and many more big shot IT giants through thought leadership, joint value and executive commitments.

### **Opportunity in Pandemic**

Declaration of COVID-19 pandemic in March 2020 in India and the subsequent nationwide lockdown changed the entire scenario including for the IT industry. Most of the sectors of the economy across the globe faced a significant setback in their activities. But for the IT industry, especially for startups and mobile app development companies and CIS as well, it brought a renaissance of new opportunities in the digital space. CIS took proactive measures when the COVID-19 arrived in India. CIS prepared a solid business continuity plan and shared it with its clients. They allowed their employees to work from home which increased their productivity. With strategic planning and efficiency, CIS succeeded in delivering the best services and maintained clients' trust. All the existing clients were happy with the services and consistently supported even in the pandemic situation.

During pandemic, CIS observed that restrictions of movement and limitations on the activities that one can carry, people were spending on an average more than 4 hrs per day on phone. Out of total time spent on mobile phones, more than 80% of the phone minutes were spent on some app or the other. This in turn provided incentives to many mobile app development services to venture into new possibilities including CIS. Statistics pointed out the fact that because of limited human contact, android app development companies saw a tilt in their favor, as a majority of the people around the world are android users. In addition to this, during this crisis, people resorted to a number of ways to keep their lives away from becoming dull and depressive. One such avenue was the platform of online gaming. This triggered CIS to online gaming program development as an exciting opportunity. CIS developed 'Ludo King App', that works on various platforms (Android and iOS) and has a universal market in all operating systems. One has to download the app from Google Play and invite friends to join to play Ludo, users can play both, online and offline, by inviting others to join the game. 'Ludo King' has a feature of inviting and earning which works in favor of both the user and the company. The friends





who join through the links also earn some extra points and rewards, thus, making it a win-win situation for all. As a result of this The “Ludo” witnessed a fivefold increase in traffic as it became popular in other countries like Pakistan, Bangladesh, and Indonesia that has similar lockdowns going on, with 330 million downloads worldwide. It went on to become the number 1 free game on android and iOS platforms surpassing Temple Run and Candy Crush.

## **Challenges Ahead**

Over the last three decades, the IT industry in India has seen a sea change and witnessed significant growth. CIS was no exception. Despite the recent growth of the company there were various issues and challenges that they had to encounter being a part of the IT sector. Economic Slowdown of western countries which hampered their economic progress, to add fuel to fire, there was a biasing relationship between the dollar and the rupee. The increasing value of the dollar against the rupee further strained the industry. Data Protection and Privacy rules enforced by other countries were preventing Indian companies from serving in those countries. For example, the European Union's GDPR (General Data Protection Regulation) law that became effective in May 2018 is applicable to all the companies that operate in the EU or have their customers in the region – any company that deals with the personal data of European customers need to comply with it. Since not all the companies in India can comply with GDPR and other data protection rules, many had to stop serving EU customers.

Today, traditional business models have become outdated. It is the era of digital transformation, where companies around the world are embracing modern technologies like cloud computing, artificial intelligence (AI), the Internet of Things (IoT), and block-chain. These technologies help them reduce costs, accelerate time to market, save time and increase employee productivity.

IT services and outsourcing companies in India struggled to shift their workforce to a remote-work setting following the nationwide lockdown. CIS scrambled to provide computers to their employees and got permission from clients to allow working from home, which was earlier barred due to security concerns. Finally after initial hiccups, the company was able to convert more than 70 percent of their staff to work from home.

On a positive note, pandemic pushed the organizations towards digital technologies to manage business functions, processes and customer engagement. Many Indian IT companies were already offering these services. So it was a major challenge for CIS to fight such competition and secure good projects.

## **Questions for Discussion**

1. Analyze the case and discuss further expansion strategy for CIS in domestic market?
2. What challenges may CIS face in post pandemic scenario?

## **Teaching Notes**

### **Synopsis of the Case**

This case is a journey of Cyber Infrastructure (p) Ltd (CIS), a top-notch Custom software development company, which has achieved a great recognition in the IT industry in just a span of few years and has now become a CMMI Level 5 compliant company with ISO/IEC 27001:2013. It was started by 3 passionate individuals with 2 computers in a small garage of 150 Sq. Ft. with no funding or investment from any venture capital company for further expansion. The case states the journey of the organization started in 2003 at California, USA, the strategic moves in terms of consistent business expansion. The case also talks about the Covid-19 pandemic





which was taken by the company as an opportunity even in the situation of global slowdown.

### **The Target Learning Group**

PG students and Management and IT professionals and executives.

### **The Learning/Teaching Objectives**

1. To understand the basic fundamentals of competitive environment with respect to IT industry
2. To gain the insights with respect to capitalizing on the opportunities in dynamic environment

### **The Teaching Strategy**

1. Divide the class into separate groups consisting of 5-6 students/ management professionals.
2. Distribute a copy of the case to each one of the group members.
3. Each member of the group will go through the case and understand it.
4. Conduct situation analysis individually.
5. Intra group case discussions followed by inter group discussions.
6. Come up with learning, analysis and conclusion.
7. Case Presentation.

### **Questions for Discussion**

1. Analyze the case and discuss further expansion strategy for CIS in domestic market?
2. What challenges may CIS face in post pandemic scenario?

### **Background Readings**

- K. Aswathappa: Essentials of Business Environment, 13 Ed., Himalaya Publishing House
- Kazmi, Azhar: Strategic Management and Business Policy, 3rd Ed. The McGraw Hill Company

### **Experience of Using the Case**

After analyzing the case the students will be able to plan strategies for an IT firm in a changing global environment. Basic understanding of the business environment and analysis is the expected outcome from the case.



## Article

# Competitive Analysis by a Leader from the Bhagavad Gita

Ram Bhavesh Sharan

### Abstract

The Bhagavad Gita is a universal message imparted by Lord Krishna to Arjun on the battlefield. It is contained in Bhishma Parva of the Mahabharata. Just before the conversation between Lord Krishna and Arjun started, Duryodhan alighted from his chariot and went to Drona. He spoke some lines to Drona. This paper analyses the statements of Duryodhan. As per the author of this paper, the statements made by Duryodhan were part of a competitive analysis in which he compared his side with the opponent's side. The paper analyses the merits as well as mistakes of Duryodhan as a leader in the context of competitive analysis. The paper also compares the approach of both Arjun and Duryodhan in the context of prioritizing the resources.

**Keywords:** competitive analysis, strategy, secondary skills, motivation,

### Competitive Analysis by Duryodhan

On the first day of battle on the battlefield, just before the Gita conversation started between Lord Krishna and Arjun, Duryodhan went to his Guru Acharya Drona and made some statements. His statements can be considered as competitive analysis. His statements are mentioned in Gita chapter 1, verses 3 to 11. He conducted competitive analysis very nicely and motivated his side. But he committed a few mistakes also while conducting competitive analysis. First of all, he went to Drona. He should have gone to Bhishma who was the commander in chief of his side. But he didn't have much trust in Bhishma. It is because Bhishma had vowed not to kill any of the Pandavas. By going to Drona instead of going to Bhishma, he exposed the weakness of his side that something was not good between him and Bhishma. He knew Bhishma would protect his side at any cost but would never kill any of the Pandavas. For reaching the goal of his side, the killing of Yudhishtir was necessary.

Let us examine his statements. In chapter 1, verse 3, he says to Drona, "Look at the mighty army of sons of Pandu arranged by your intelligent student who is the son of Drupad". Drupad and Drona were friends during childhood but later they considered each other enemies. Drupad's son was Drishtadyumna. He was born to kill Drona as per a boon. By pointing Drupad's name, Duryodhan reminded Drona of his personal enmity and so he motivated Drona to fight with full effort. But he did a mistake by using the word 'student' for the enemy. By using this word he reminded Drona that Drishtadyumna was his student. A teacher may not put in his best effort while fighting against his student. An opponent should be considered only an opponent on the battlefield. This is what Lord Krishna also pointed to Arjun when Arjun was unwilling to fight against his relatives and friends.

But by pointing to Drishtadyumna, Duryodhan identified one threat also as Drishtadyumna was born to kill Drona. So he acknowledged one threat. By identifying one threat, Duryodhan also tried to motivate Drona. But he did a mistake by using the word 'student' for the enemy or opponent.

In chapter 1, verses 4 to 6, Duryodhan names the mighty warriors from the Pandavas' side. By acknowledging these great warriors from the side of the opponent, he acknowledged them as threats.

In chapter 1 verse 7, Duryodhan addresses Drona as a 'Brahmin'. By calling Drona a Brahmin, he acknowledged

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him as a teacher and also a knowledgeable person. Drona was the teacher of most of the warriors from the opponent also. By reminding him that he is the teacher of most of the warriors, he wanted to motivate Drona as well as his side. A teacher would rarely lose to his students. A student would exhibit whatever he has been taught by the teacher. By reminding Drona and his side that Drona was the teacher he meant that his side had the upper hand over the opponent's side. So he acknowledged the presence of Drona in his side as strength. By calling Drona 'Brahmin', Duryodhan also acknowledges that his teacher had lots of knowledge of military science and identified one more strength of his side.

But he committed a mistake by using the word 'Brahmin'. Generally, Brahmins would not engage in battles. They would engage in teaching the military science and skills of warfare. Drona was engaging in battle for his loyalty towards Hastinapur. By addressing Drona as Brahmin, Duryodhan might have ended up weakening the passion of Drona to fight the battle. It must be noted that during the course of the battle, the Pandavas' side had gotten rid of Drona by reminding the latter that he was a Brahmin and battles were not meant for him. So later Drona sat in a meditative position and was killed.

In chapter 1, verses 8 to 9, Duryodhan names some mighty warriors from his side and expresses their commitments for the side. He also appreciates the skills of warfare and weapons they possessed. So he acknowledges the strengths of his side. In chapter 1, verse 9, Duryodhan says, "There are many warriors, who are prepared to lay down their lives for my sake". This statement exposes the self-centredness of Duryodhan. He was concerned about himself. As a leader, one must be concerned about the entire team. A leader must not ignore the principle of egalitarianism. Of course, his side would have been defeated once he was killed. But rather than saying that his warriors were prepared to lay down their lives for his sake, he should have said that his warriors were prepared to lay down their lives for the sake of the side's victory.

In chapter 1, verse 10, Duryodhan says, "Strength of our side protected by Bhishma is unlimited but the strength of opponent side protected by Bhim is limited". So in this verse, Duryodhan tries to establish that his side was more powerful than the opponent's side. His side had more men than the opponent's side. The ratio of manpower in his side to the opponent's side was 11:7. Probably he was boasting of his manpower and due to this ratio, he made this statement.

In chapter 1 verse 11, Duryodhan instructs his side to give full support to Bhishma. So it means he instructed his side to come together and remain united. So he did the job of a leader which is praiseworthy.

If we go through the statements of Duryodhan, we don't find any mention of Lord Krishna. He ignores Lord Krishna, the strategy maker, and a key person on the Pandavas' side. He does not utter any word on how Lord Krishna would be treated on the battle - opportunity or threat. He concluded his competitive analysis by saying that his side possessed unlimited power whereas the opponent's side was powerful but with limited strength. It seems that for Duryodhan, strength was important, not the strategy. This is the reason he kept on accumulating manpower.

## **Duryodhan's and Arjun's Priorities**

Just a few days before the battle of Kurukshetra, both Arjun and Duryodhan had approached Lord Krishna to help them in the battle against each other. Lord Krishna said that he would offer his army to one side and would personally join the other side as a motivator and guide and would not use any weapon on the battlefield. It was Arjun who was given the right to choose first since he was younger. He chose Lord Krishna even knowing that Lord Krishna would never use any weapon. He requested Lord Krishna to be his charioteer during the battle. On the other hand, Duryodhan considered it the foolishness of Arjun and he was happy that he would be helped by



Lord Krishna's army. Lord Krishna's army came to be known as Narayani Sena. Duryodhan chose Narayani Sena and both went to their respective camps. Arjun prioritized Lord Krishna's strategy and guidance. Arjun prioritized Lord Krishna's skills as a charioteer also. On the other hand, Duryodhan was always hungry to accumulate strength in terms of manpower.

By ignoring Lord Krishna while conducting competitive analysis, Duryodhan also ignores the secondary skills required to win the battle. A battle is not won based on the skills and weapons of the warrior only. The skills of the charioteer also make a significant impact. Lord Krishna was sitting on the chariot of Arjun. When Duryodhan saw Arjun, he must have seen Lord Krishna also. So it means Duryodhan ignored Lord Krishna. It means that by ignoring Lord Krishna, Duryodhan also ignored the secondary skills as well as strategy required for success in the battle. On the other hand, Arjun prioritized Lord Krishna's skills as a charioteer also. It means Arjun did not ignore the secondary skills required to win the battle. It is concluded that for Duryodhan, strategy and secondary skills were not priorities. A leader must also consider secondary skills required for the success of his team. Similarly, a leader must not ignore the people who contribute indirectly. People from every hierarchy level, function, and department contribute indirectly or directly. They must not be ignored. So a leader should also understand the importance of people from all hierarchy levels, all functions, and all the departments. Team morale is boosted when a leader credits all. Arjun established a management principle that no goal is achieved without the contribution of all, implementation of strategy, and involvement of secondary skills along with primary skills. On the other hand, Duryodhan only focused on accumulating manpower and always prioritized primary skills.

**Reference :** The Bhagavad Gita, The Mahabharata.

## **About the Author**

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## **Book Review**

### **Being You : Against All Odds**

**By Preethi Rai, Ekalavya Education Foundation**  
**Published in : 2020, Pages : 216, ISBN: 978 93 81148 12 9**

#### **Author's Profile**

Preethi Rai is the author of the wonderful book Being You: Against All Odds. As an author this is the first book written by her. The author is inspired by Real-life heroes and encourages her readers to focus on achieving their goals despite the odds.

Preethi is also the cofounder of Millian Smile, which is a Non-Profit organization, and she currently completed a project called Raising Above, A glamour calendar of Amputee Athletes and Artists. She is a social activist who wants to highlight not only the plight but the beauty of those survivors.

#### **Appreciation and Critique**

Being you is a very unique and a beautiful book. This book comprises of different stories of people who conquered all of life's pressing and difficult situations and led a very happy and a normal life.

Each story is complemented by an artfully shot photograph which captured the essence of the individual featured. The best element of this book is that each page has its own plot, which can also be a flaw because it lacks coherence and can disappoint people who are looking for same plot throughout the book. Every chapter begins with a new journey of hope and inspiration brought by the protagonist of every story.

In 2006, Preethi once met Salma Shafeeqq Ghorī, a martyr's widow in an uber pool ride, who narrated her journey of being a wife of an army officer at the age of 19 to the widow of a martyr. Salma narrated many stories how deeply attached she was with her husband and she never washed her husband's uniform as she could feel his warmth and love. This incident inspired Preethi and she thought of putting together all such wonderful stories. She saw herself as a messenger whose primary task is to spread such inspirational stories with as many people as possible. This is how the idea and plot of the book evolved. The author travelled extensively across India to compile such wonderful unheard stories. The characters of the story come from different background and each personality is unique and inspires us to remain unabated by any challenges and hardships life throws at us.

The book begins with an uplifting story about a transgender man fight for acceptance by his family and society as he rises to fame as a drag queen. One such story is related to the struggles of a cancer survivor, which is a beautiful journey between despair and hope. There are stories of young entrepreneurs who dreamt big in spite of multiple obstacles. There are stories of parathletes, struggles of a single parent, sexual abuse survivors and LGBT activists.

The compassion of those who pursued traditional profession such as Joggappas, local folk dancing and Sulagittiis also covered in the book. There are narratives about Padma recipients like Salumarada, Timmak, Milkha Singh etc.

This can also be a good read for those who wants to capture the real essence of Indians and societal issues. This

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book narrates that the characters are the real change makers and they are all around us and to be one of them, we have to think beyond our struggles. Self -belief, determination and persistence of the individual are the drivers leading towards enhancement of self and society. The books has the potential to touch, impact and relate to each one of us. It is a good read for everyone who wants to know about the unsung heroes and get inspired by their life treatise.

**Vineeta Agrawal**



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