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## Editorial...

We are happy to announce the publication of volume 15 issue 2 of the journal, "SFIMAR Research Review". This is a half yearly journal with an ISSN number (0975-895X). The Journal is published with an objective to disseminate information based on application in various segments of Management. It is felt that this publication can help in encouraging and promoting indigenous management research. It is also considered a platform to share ideas, views and experiences of Management Practitioners, Researchers, and Academicians at National as well as International level.

The current issue of this journal contains selected papers from 16th Annual International Research Conference, 'Pathh' in association with University of Mumbai.

**Mr. Pushkar D. Parulekar** in his paper attempt to do comparative study of "Day of The Week" impact on bank Nifty before and after the introduction of weekly option expiry. This study has considered two-time frames i.e from May 2012 to April 2016 is before time frame and from May 2016 to April 2020 is after time frame.

**Ms. Alisha E. Lobo and Mr. Anish B.** in their present study deals with estimate the business generated within the key verticals and overall revenue generated by the IT sector. The comparison would focus on the percentage increase in business and meet our objective of this paper.

**Dr. Subhashree Panda** in her research paper highlights the concept of Gig economy, HR challenges and regulations of Government of India on Gig workers.

**Mr. Paul P. Alukal and Mr. Nikhil Jose Mathew** in their study, try to understand the business models of the online rental furniture start ups in India. It has also tried to get glimpse of the general awareness and perception among the public regarding the offerings of these startups.

**Ms. Namrata Acharya and Mr. Jestin Johny** in their research paper focuses on studying the different teaching -learning practices proposed by universities and technical bodies and adopted by higher educational institutes in the Mumbai district.

**Prof. Rupesh Siyodia and Ms. Riddhi Agarwal** in their paper attempts to comprehend Maggi Noodles controversy and inspects the action taken by the organization to overcome the crisis faced by them in 2015 in the Indian Market and to understand how this brand handled this situation through a proper crisis management decision as well as managing re-launch of their much-loved product.

I hope readers will like the contents of the current issue. I thank all the scholars and supporting personnel who made this publication a reality and request everybody to help continue this publication uninterrupted.

**Prof. Dr. Sulbha S. Raorane.**  
Chief Editor

# COMPARATIVE ANALYSIS OF “DAY OF THE WEEK” IMPACT ON BANK NIFTY BEFORE AND AFTER THE INTRODUCTION OF WEEKLY OPTION EXPIRY

**\*Mr. Pushkar Dilip Parulekar**

## ABSTRACT

Historically, Bank Nifty has exhibited more volatility than Nifty and so to facilitate hedging of traders' positions weekly option expiry was first introduced on Bank Nifty from May 27, 2016. Since then, Bank Nifty option contracts are settled on every Thursday of the week based on the closing of the Bank Nifty index in the cash market segment. This study will consider two time frames viz. from May 2012 to April 2016 (i.e., before) and from May 2016 to April 2020 (i.e., after) the introduction of weekly option expiry. Five days of the week (Monday, Tuesday, Wednesday, Thursday and Friday) would be considered for both these time frames to check the “Day of the Week” impact on Bank Nifty. Based on daily observations of returns and volatility in returns for both before and after periods it would be checked if there is significant change in the daily Bank Nifty returns. Two Sample t-Test (5% significance) would be used for the same. To test the “Day of the Week” impact for both before and after period, ANOVA with (5% significance) would be used.

**Key Words:** Change in Volatility, Day of the Week, Weekly option expiry, Bank Nifty

## Introduction

Bank Nifty is a sectorial index consisting 12 banks. It includes both public and private sector banks. It was launched by National Stock Exchange (NSE) on September 15th 2003. January 1, 2000 was used as the base date with a base value of 1000. Bank Nifty Futures and options were launched by NSE on 13th June 2005. Bank Nifty has exhibited higher volatility in returns as compared to Nifty. To hedge this volatility Bank Nifty was the first index to witness the launch weekly option expiry in May 2016.

An option gives a buyer right but not the obligation to buy (Call Option) or sell (Put option) on or before certain date (i.e. expiry date) at a certain price known as strike price. To hedge the cash market position trader or investor could buy puts or sell calls. Depending on the implied volatilities and trader or investor risk appetite, one of the two could be used. History suggests that most options expire worthless or buyers lose money in the

option buying process. However, option seller can potentially make unlimited losses or losses multiple times of their initial premium receipt. Option price has two components intrinsic value and time value. Loss of time value or the theta decay is maximum towards expiry date. Assuming no or limited movement in the underlying, selling options closer to Thursday for weekly option expiry could make sense. So, this study proposes to test if there is “day of the week” impact on Bank Nifty post the introduction of weekly option expiry. This impact needs to be compared with similar time frame before the introduction of weekly option expiry.

## Review of Literature

The relevant review of literature was done.

Black and Scholes (1972) studied the option prices from 1966 to 1969 and calculated returns for option writers and option buyers with and without transaction cost. They concluded that transaction cost were very

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high in option market as compared to other listed securities. In 1973 in the consequent paper they concluded if options were correctly priced it would not be possible to make sure profits by creating portfolios of long and short positions in options and their underlying stocks. Using this theory they derived option pricing model. The formulae and details were as follows:

$$C = S * N(d1) - K e^{-rT} * N(d2)$$

$$P = K e^{-rT} * N(-d2) - S * N(-d1)$$

Where,

$$d1 = [\ln(S/K) + (r + \sigma^2/2)*T] / [\sigma * \text{Sqrt}(T)]$$

$$d2 = [\ln(S/K) + (r - \sigma^2/2)*T] / [\sigma * \text{Sqrt}(T)] = d1 - \sigma * \text{Sqrt}(T)$$

C = European Call option Price

P = European Put option Price

S = Spot Price at time t=0

K = Strike Price

r = continuously compounded risk-free rate

$\sigma$  = Stock Price Volatility

T = Time to Maturity of the Option

N (d1) = Hedge Ratio or Delta ( $\Delta$ )

N (d2) = Probability that option would end up in the money

Merton (1973) stated that theory of option pricing began in 1900 when French mathematician Louis Bachelier concluded that an option pricing formula is based on the assumption that stock prices follow Brownian Motion with zero drift. He considered the impact of dividend. He derived the formula for “Down and Out” options.

Cross (1973) did a study on Standard & Poor composite index. Based on 844 sets of observations on various days of week it was concluded that Monday returns were significantly lower as compared to Friday.

Lakonishok and Smidt (1988) studied weekday effect for Dow Jones Industrial Average and concluded negative Monday effect.

Taleb (1997) studied managing vanilla and exotic options based on 200,000 option transactions and discussed an interesting concept of Trader decay in strategy favourable in short term was favoured by them. However, many would follow it making it obsolete with more and more sophistications in products.

Andriy (2008) studied data for 13 countries and found Monday effect in 2 countries and Friday effect on eight countries.

Kumar and Jawa (2016) studied weekday effect on Nifty daily returns between 1996 to 2015 and found Wednesday returns were significantly different as compared to any other weekday.

Andersen, (2020) studied short term market risks implied by S&P 500 weekly index options popularly known as “weeklies”. The relative prices of deep out of the money options were largely independent of the level of the volatility. Short term options indicate spot volatility in more accurate manner.

Sudarvel and Velmurugan (2016) studied the anomalies in Indian Stock markets with respect to Nifty from April 2011 to March 2016. They found inefficiencies in the market with least returns on Tuesday and highest returns on Friday. Least volatility was observed on Wednesday. They suggested buying on Tuesday and selling on Friday to benefit from inefficiencies.

Arora (2018) studied the impact of pre-opening session for various days of the week. 18th October 2011 was when pre-opening session was started by the exchanges so, study was divided in 2 periods. 1st January 2010 to 17th October 2010 and 18th October 2010 to 31st March 2011. He calculated data with 5 minutes interval as high frequency indicators. It was concluded that there is significant variation in the volatilities across various days with highest on Thursday and lowest on Tuesday.

Paital and Panda (2018) studied day of the week impact for Nifty 50, Nifty midcap 50 and Nifty small cap 50 indices. The Period for study was from 1st April 2005 to 29th June 2018. Based on the study it was found Tuesday to be negative for all indices and positive weekend effect for Nifty midcap 50 and Nifty small cap 50 indices. Monday was high risk high return day as compared to Tuesday. Friday was a relatively negative day for Nifty small cap 50 indices. Overall it was concluded that Indian markets were not efficient.

## Research Gaps

The research done so far did not consider Bank Nifty in the timeframe from May 2012 to April 2020. The methodology of dividing the time frame before and after the introduction of weekly option expiry in May 2016 was not observed in the reviewed literature. The

statistical tools used to infer results were different from reviewed literature.

## Need for the Study

Options facilitate limitation in loss up to the premium payment only. However, upside potential is unlimited. This fact about the product entices many traders to buy them. After the weekly option expiry premiums tend to be much lower than the monthly expiration which is either four or five weeks. However, historical data proves that probability-wise selling options is better trade than buying them particularly near the expiry; which in case of weekly options is on every following Thursday. So there is a need to study the "Day of the week" impact with respect to returns and returns post the introduction of weekly option expiry.

## Objective of the study

1. To test if there is any significant change or reduction in the daily returns of Bank Nifty post the introduction of weekly option expiry.
2. To test "Day of the week" effect in Bank Nifty daily returns before and after the introduction of weekly option expiry.
3. To quantify Average, Median, Minimum, Maximum and volatility values of daily returns for various days of the week. (i.e. Monday, Tuesday, Wednesday, Thursday and Friday).

## Hypothesis Testing

### Hypothesis I

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of the Bank Nifty.

### Hypothesis II

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of Monday of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of Monday of the Bank Nifty.

### Hypothesis III

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of Tuesday of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of Tuesday of the Bank Nifty.

### Hypothesis IV

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of Wednesday of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of Wednesday of the Bank Nifty.

### Hypothesis V

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of Thursday of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of Thursday of the Bank Nifty.

### Hypothesis VI

Null Hypothesis (H<sub>0</sub>): Post the introduction of weekly option expiry, there is no significant change in the daily returns of Friday of the Bank Nifty.

Alternative Hypothesis (H<sub>a</sub>): Post the introduction of weekly option expiry, there is significant change in the daily returns of Friday of the Bank Nifty.

**All of the above Hypothesis would be tested using "t-Test: Two-Sample Assuming Equal Variances" 5% level of significance.**

### Hypothesis VII

Null Hypothesis (H<sub>0</sub>): Before the introduction of weekly option expiry, there is no significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.)

Alternative Hypothesis (H<sub>a</sub>): Before the introduction of weekly option expiry, there is significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.)

### Hypothesis VIII

Null Hypothesis (H<sub>0</sub>): After the introduction of weekly

option expiry, there is no significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.)

Alternative Hypothesis (Ha): After the introduction of weekly option expiry, there is significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.)

**The above two Hypothesis (viz. Hypothesis VII and Hypothesis VIII) would be tested using Anova: Single Factor for 5% level of significance.**

### Research Methodology

Secondary data collected from was used for the research.

Daily data of closing values of Bank Nifty was taken from 30th April 2012 to 30th April 2020.

It was divided into two equal halves- one from May 2012 to April 2016 (before the introduction of weekly option expiry) and second from May 2016 to April 2020. (after the introduction of weekly option expiry). There were total 1977 observations of daily data of which 988 were in the before period and 989 were in after period.

These observations were segregated in to various weekdays (viz. Monday, Tuesday, Wednesday, Thursday and Friday). Saturday and Sunday were ignored as there were less than 5 observations for both these days.

### Data Collection and Analysis

Based on Daily values of closing prices Average, Median, Minimum, Maximum and volatility values of daily returns for the period from May 2012 to April 2016 were as shown in the table 1.

**Table 1**

	Mon	Tues	Wed	Thur	Fri
Count	200	199	196	196	192
Minimum	-6.90%	-5.37%	-4.62%	-4.03%	-5.74%
Maximum	3.80%	4.35%	4.71%	9.46%	5.47%
Average	0.11%	-0.14%	0.02%	0.11%	0.20%
Median	0.08%	-0.10%	-0.01%	0.05%	0.11%
Volatility	1.44%	1.52%	1.28%	1.63%	1.66%

Analysis based on Table 1:

1. Wednesday is the least volatile day and Friday has the highest volatility followed by Thursday.

2. From the return point of view, Friday has the highest median and average returns.

Based on Daily values of closing prices Average, Median, Minimum, Maximum and volatility values of daily returns for the period from May 2016 to April 2020 were as shown in the table 2.

**Table 2**

	Mon	Tues	Wed	Thur	Fri
Count	193.0	196.0	200.0	200.0	197.0
Minimum	-16.7%	-5.4%	-7.1%	-9.5%	-5.3%
Maximum	5.47%	10.51%	8.03%	6.13%	8.31%
Average	-0.15%	0.09%	0.06%	0.10%	0.09%
Median	0.07%	0.04%	0.04%	0.08%	0.14%
Volatility	1.85%	1.26%	1.29%	1.36%	1.39%

Analysis based on Table 2:

1. Tuesday closely followed by Wednesday, Thursday are the least volatile days and Monday has the highest volatility followed by Thursday.
2. From the return point of view, Friday has the highest median and Thursday has the highest average values.

To test the Hypothesis I data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 3.

**Table 3 (Overall Data):**

	Apr12- May 16	May 16- Apr 20
Mean	0.06%	0.04%
Variance	0.02%	0.02%
Observations	988.0	989.0
Pooled Variance	0.02%	
Hypothesized Mean Difference	0	
Df	1975	
t Stat	0.38	
P(T<=t) one-tail	0.35	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.70	
t Critical two-tail	1.96	

Analysis based on Table 3:

Based on p- Value of greater than 0.05 and t value less than t critical it could be inferred that Post the introduction of weekly option expiry, there is no significant change in the daily returns of the Bank Nifty. (i.e., No evidence to reject Ho in Hypothesis I)



To test the Hypothesis II data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 4.

**Table 4 (Data for Mondays):**

	Apr12- May 16	May 16- Apr 20
Mean	0.11%	-0.15%
Variance	0.02%	0.03%
Observations	200.0	193.0
Pooled Variance	0.03%	
Hypothesized Mean Difference	0	
Df	391	
t Stat	1.55	
P(T<=t) one-tail	0.06	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.12	
t Critical two-tail	1.97	

Analysis based on Table 4

Based on p- Value of greater than 0.05 (but is 0.06) and t value less than t critical it could be inferred that post the introduction of weekly option expiry, there is no significant in change the daily returns of Monday of the Bank Nifty. (i.e., No evidence to reject Ho in Hypothesis II). However returns have reduced and volatility has increased in terms of mean value.

To test the Hypothesis III data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 5

**Table 5 (Data for Tuesday's)**

	Apr12- May 16	May 16- Apr 20
Mean	-0.14%	0.09%
Variance	0.02%	0.02%
Observations	199.0	196.0
Pooled Variance	0.02%	
Hypothesized Mean Difference	0	
Df	393	
t Stat	-1.59	
P(T<=t) one-tail	0.06	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.11	
t Critical two-tail	1.97	

Analysis based on Table 5:

Based on p- Value of greater than 0.05 (but is 0.06) and t value less than t critical it could be inferred that post the introduction of weekly option expiry, there is no

significant change in the daily returns of Tuesday of the Bank Nifty. (i.e., No evidence to reject Ho in Hypothesis III). However, returns have increased and volatility has reduced in terms of mean value.

To test the Hypothesis IV data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 6.

**Table 6 (Data for Wednesdays):**

	Apr12- May 16	May 16- Apr 20
Mean	0.02%	0.06%
Variance	0.02%	0.02%
Observations	196.0	200.0
Pooled Variance	0.02%	
Hypothesized Mean Difference	0	
Df	394	
t Stat	-0.35	
P(T<=t) one-tail	0.36	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.73	
t Critical two-tail	1.97	

Analysis based on Table 6:

Based on p- Value of greater than 0.05 and t value less than t critical it could be inferred that Post the introduction of weekly option expiry, there is no significant change in the daily returns of Wednesday of the Bank Nifty. (i.e., no evidence to reject Ho in Hypothesis IV). However, returns have increased in terms of mean value.

To test the Hypothesis V data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 7.

**Table 7 (Data for Thursdays):**

	Apr12- May 16	May 16- Apr 20
Mean	0.11%	0.10%
Variance	0.03%	0.02%
Observations	196.0	200.0
Pooled Variance	0.02%	
Hypothesized Mean Difference	0	
Df	394	
t Stat	0.04	
P(T<=t) one-tail	0.48	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.97	
t Critical two-tail	1.97	

Analysis based on Table 7:

Based on p- Value of greater than 0.05 and t value less than t critical it could be inferred that Post the introduction of weekly option expiry, there is no significant change in the daily returns of Thursday of the Bank Nifty. (i.e., No evidence to reject Ho in Hypothesis V). However, returns and volatility have decreased in terms of mean value.

To test the Hypothesis VI data was processed for “t-Test: Two-Sample Assuming Equal Variances” as shown in the Table 8.

**Table 8 (Data for Fridays):**

	Apr12- May 16	May 16- Apr 20
Mean	0.20%	0.09%
Variance	0.03%	0.02%
Observations	192.0	197.0
Pooled Variance	0.02%	
Hypothesized Mean Difference	0	
Df	387	
t Stat	0.71	
P(T<=t) one-tail	0.24	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.48	
t Critical two-tail	1.97	

Analysis based on Table 8:

Based on p- Value of greater than 0.05 and t value less than t critical it could be inferred that Post the introduction of weekly option expiry, there is no significant change in the daily returns of Friday of the Bank Nifty. (i.e., No evidence to reject Ho in Hypothesis VI). However, returns and volatility have reduced in terms of mean value.

To test the Hypothesis VII data was processed for “Anova: Single Factor for 5% level of significance” as shown in the Table 9.

**Table 9 (Data for April 2012 to May 2016):**

SUMMARY				
Groups	Count	Sum	Average	Variance
Monday	200	0.21	0.11%	0.02%
Tuesday	199	-0.28	-0.14%	0.02%
Wednesday	196	0.04	0.02%	0.02%
Thursday	196	0.21	0.11%	0.03%
Friday	192	0.39	0.20%	0.03%

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F critical
Between Groups	0.13%	4	0.03%	1.41	0.23	2.38
Within Groups	22.50%	978	0.02%			
Total	22.63%	982				

Analysis based on Table 9:

Based on p- Value of greater than 0.05 and F value less than F critical it could be inferred that before the introduction of weekly option expiry, there is no significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.). (i.e., No evidence to reject Ho in Hypothesis VII). However, returns of Friday were higher as compared to any other day.

To test the Hypothesis VIII data was processed for “Anova: Single Factor for 5% level of significance” as shown in the Table 10.

**Table 10 (Data for May 2016 to April 2020):**

SUMMARY				
Groups	Count	Sum	Average	Variance
Monday	193	-0.29	-0.15%	0.03%
Tuesday	196	0.17	0.09%	0.02%
Wednesday	200	0.13	0.06%	0.02%
Thursday	200	0.20	0.10%	0.02%
Friday	197	0.18	0.09%	0.02%

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F critical
Between Groups	0.13%	4	0.03%	1.41	0.23	2.38
Within Groups	22.50%	978	0.02%			
Total	22.63%	982				

Analysis based on Table 10:

Based on p- Value of greater than 0.05 and F value less than F critical it could be inferred that after the introduction of weekly option expiry, there is no significant difference in the daily returns of the Bank Nifty for various days of the week. (Viz. Monday, Tuesday, Wednesday, Thursday and Friday.). (i.e., No evidence to reject Ho in Hypothesis VIII). However, returns of Monday were lower as compared to any other day.

## Limitations and Future Scope for further study

### Limitations of the study

1. Study did not consider actual option prices.
2. Implied Volatility is one of the key variable from a buying or selling option decision was not considered.
3. Specific events such as Reserve Bank of India Policy, Central and State government result which might have been on Thursday were not considered.
4. Time frame considered was May 2012 to April 2020. It could be extended to other time frames as well.
5. Study did not consider monthly option expiry.

### Future Scope for further study:

1. Study could be done on NIFTY as well. Since Weekly option expiry was introduced on NIFTY starting February 14, 2019.
2. Option Prices and Implied Volatility could be considered.

## Conclusion and Suggestions

### Conclusion

Based on the period of study and research methodology following conclusion could be made:

1. Even though it was not statistically significant but there was reduction in the mean value of daily returns of Bank Nifty.
2. There was week of the day effect on Monday with reduction in the mean value of returns and increase in volatility of returns. However, based on p-value of 0.06 it still is not statistically significant at a significance level of 95%.
3. Significant news flow was getting factored in on Monday indicated by higher volatility. Also, mostly this was interpreted negatively as indicated by negative value of returns on Monday.
4. Return negativity has shifted from Tuesday to Monday.
5. Volatility is shifted from Thursday to Monday.
6. There was reduction in volatility of daily returns for Tuesday and Thursday indicating option sellers who

are long on theta and short on Vega could be looking at range bound movement.

7. Wednesday is the least volatile day in both the timeframes indicating that traders are most confident holding their positions in the middle of the week.
8. Even though there was reduction in volatility on Friday, it remains second most volatile day after Monday. Traders might be skeptical to carry their positions over the week end.

### Suggestions

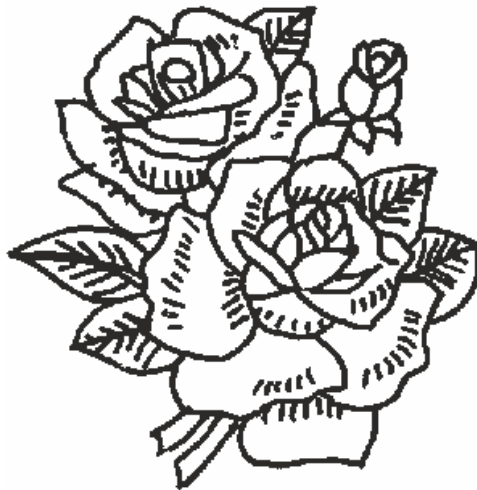
Based on above conclusions following suggestions could be made:

1. Traders could square off their position on Friday as it is not advisable to take weekend risk.
2. Option Selling on Monday with stop losses based on trend could be more advisable based on reduction in volatility in following three days.

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# BUSINESS PERFORMANCE ANALYTICS AFTER DIGITAL WORKFLOW IN IT SECTOR

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## ABSTRACT

The era of IoT (Internet of Things) and computer technology in the contemporary times has played a major role in the present situation of COVID-19 pandemic where the world is facing the worst phase. This communicable disease has led to the economic break down of several nations. The sectors such as steel, automobile and allied manufacturing sectors have faced lot of losses during the pandemic. On the other hand, the IT and telecommunication sector has seen immense growth despite the pandemic attack. The workforce of these sectors has been "Digitally Smart". The concept "work from home" has contributed a lot to the IT sector. During the FY 2020-21, the employees of the IT sector were working from home connecting to the main frame through internet. In this paper, we would quantify the increase in business and efficiency of the IT employees after working from home and also, growth of business within the key verticals of the IT sector. We would use data analytics and estimate the Economic value addition for analysing work efficiency. The paper would also compare the performance of three consecutive financial years along with current FY 2020-2021. We would conduct quantitative research by taking three sample cases studies of three companies belonging to the IT sector. This research would estimate the business generated within the key verticals and overall revenue generated by the IT sector. The comparison would focus on the percentage increase in business and meet our objective of this paper. The paper would also explain about some of the latest work-efficient technologies used by the IT sector companies for efficient and effective development of software services and software infrastructural services.

**Keywords:** IT sector, qualitative research, performance, workforce, digitally smart, IT employees, work from home, work efficiency, data analytics, IoT, COVID-19, pandemic.

## Introduction

Internet in the present era plays a key role as a platform to connect different applications and technology. Internet technology has been connecting the enterprise and the employees in the recent years. It is a key part of digital workspace even if it is virtue of the amount of data it can gather. The impact of the enterprise has resulted in the consequent slowdown of several businesses but the telecom industry and IT industry in this pandemic have geared up work from home model. Work from home model is typically a connectivity model that connects the employee to the company mainframe

through a platform via the Internet medium to perform his/her task. The following diagram represents the model.

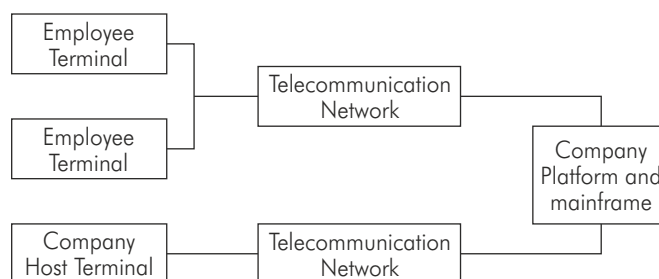


Fig 1.1: Typical representation of work from home model

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IoT technologies are of a paramount importance in driving the remote work revolution which generates the persistent flow of work data transferred from the employee terminal to the company mainframe to enable the data transaction driven workplaces to function. The organisations have added their software to the employee laptop/desktop (terminal) and some companies have sent their systems to the employees' residences where he could work from home. Thereafter, the implementation of this model has resulted in cost cutting in the areas such as buildings, maintenance, electricity, rent and other expenses. Besides, the working hours of the employees have also increased.

The Data processing is a process methodology to obtain information from data, knowledge from information and wisdom; and it involves four steps: (1) acquisition, from different data sources; (2) access, in terms of indexing, storage, sharing and archiving, enabled by integrated IT systems; (3) analytics, i.e., data analysis and manipulation; (4) application in decision-making. In last two decades companies have made significant investments in their IT systems in the form of ERP, inter-organisational sharing mechanism, databases and web-based software packages, etc. The strategic value of such IT solutions is often questioned. While their potential is generally acknowledged, organisations report significant difficulties in extracting strategically valuable insights from data focus on the inability of IT systems to provide adequate information flows. Understanding how extended IT capabilities can be best used constitutes a major performance measurement and management challenge. The model work from home is carried out in a manner at every imaginable conceptual working location, which means one can be optimally reached by others and prevents the unnecessary 'lugging' of hardware. Using the digital workspace is a matter of optimal self-service. The digital workspace makes the actual physical search for information, knowledge and expertise superfluous unless the information worker for whatever reason, feels the need to do so. Finding and searching box files and reports, going through letters and visiting colleagues is no longer a requirement after the implementation of the concept "work from home" which is a derivation of the digital workspace. Organising and planning of meetings and conferences is computerized as far as possible by means of the digital workspace. Today's manager has to work predominantly with laptops and desktops, which means that his mobility is still limited. The digital workspace is on call everywhere, possibly on

mobile devices so the manager has to lug around hardware as little as possible. COVID-19 and its subsequent expansion of work-from-home policies will have lasting implications on the data security of financial institutions.

## **IT-SECTOR: SECTORAL ANALYSIS ONWORK TECHNIQUE, INDUSTRY SIZE AND REVENUE GENERATED WITHIN KEY VERTICALS BEFORE AND AFTER THE COVID-19 PANDEMIC:**

### **2.1: IT-SECTOR: SECTORAL ANALYSIS ONWORK TECHNIQUE, INDUSTRY SIZE AND REVENUE GENERATED WITHIN KEY VERTICALS BEFORE THE COVID-19 PANDEMIC:**

The development of the Indian software industry is an archetype of how economic liberalization combined with an entrepreneurial spirit can build an industry contributes as much as 8% to the GDP of a fast-growing country like India. During the FY 2018-2019 the traditional work system was practised, where the employees were travelling to the corporate offices to work with a regular pattern of 8-man hours. The following table indicates the total revenue generated by the IT sector FY 2018 and FY 2019.

**Table 2.1: Break up of Revenue Between International and Domestic in IT-Sector**

<b>Financial Year</b>	<b>Domestic (in billion INR)</b>	<b>Exports (in billion INR)</b>
2018	2952	9072
2019	2952	9792

The IT sector in Domestic market attained a revenue of 2.95 trillion INR and exported the IT services worth 9.07 trillion INR. There was consistency in domestic usage during the FY 2019 but the demand for IT services from Indian IT companies increased by 92 billion INR. The total workforce for IT sector in these two consecutive financial years was roughly around 3.6 and 3.8 million where it is estimated that 3.34 – 3.6 million was the average contribution rate of each employee. The IT-sector is divided into different sub verticals where it drives business from. The following graph represents the contribution of different verticals to the IT sector.

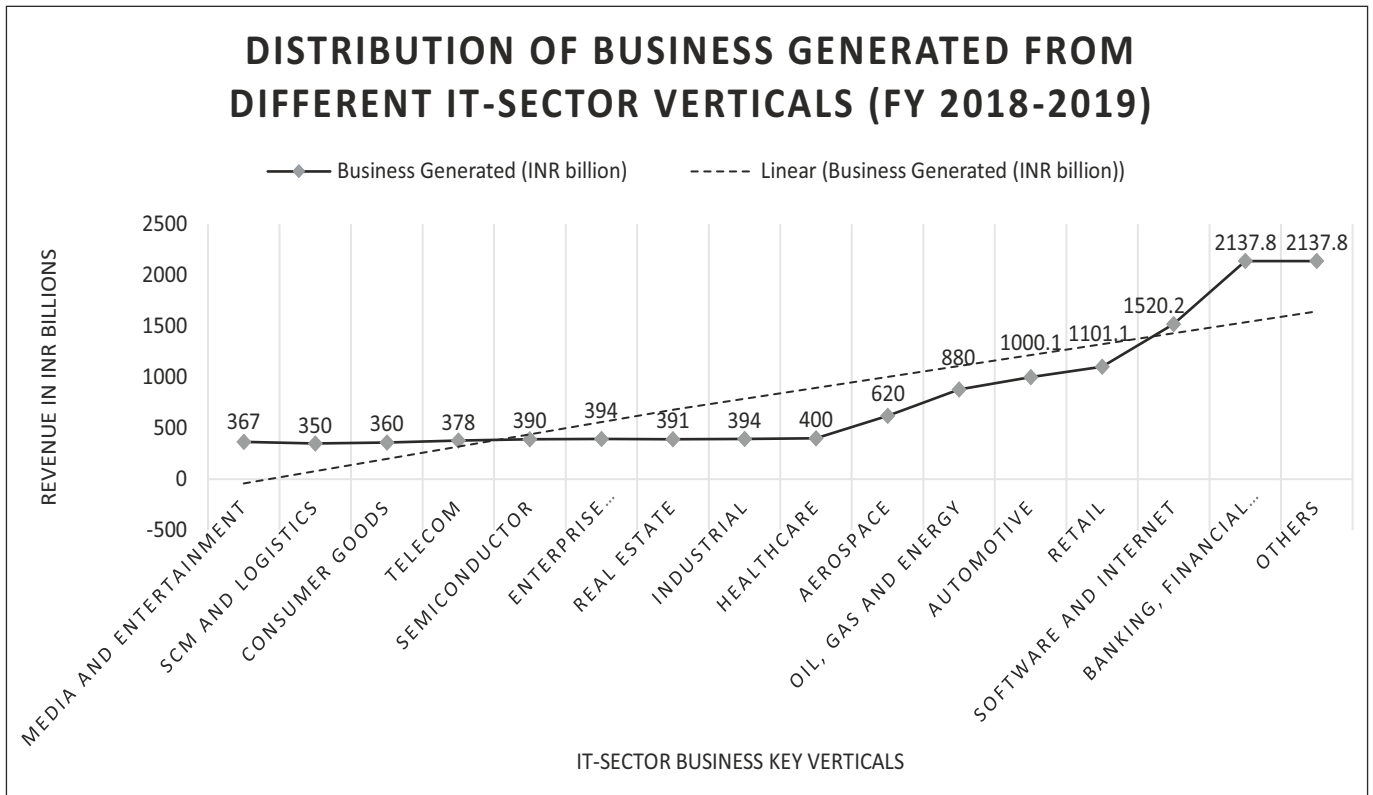


Fig 2.1: Distribution of business generated from different IT-Sector verticals (Source: NASSCOM)

From the above graph fig 2.1, it is clear that BFSI (Banking, Finance, Service and Insurance) sector has contributed 17% of the total revenue which was recorded the highest. The IT man power used for this sector is roughly estimated to be 5-8% of the total IT employees that existed, following other verticals such as Software and Internet with contribution of 9% to the total revenue, Automotive with 8% contribution to the total revenue, Oil and gas 7%, Aerospace 5% and the rest with 3% contribution to the total revenue.

**2.2 IT-SECTOR: SECTORAL ANALYSIS ON WORK TECHNIQUE, INDUSTRY SIZE AND REVENUE GENERATED WITHIN KEY VERTICALS AFTER THE COVID-19 PANDEMIC:**

Enterprises will focus on engaging people with right amalgamation of expertise and experience to achieve their objectives while implementing new methods of working. Enhancing virtual work support systems, recruiting talents on virtual on boarding process will become a new model and WFH (Work from Home) will become a new part of work culture. Henceforth, IT-business organisations would become more resilient to the nature of WFH model. It is inherently less risky and

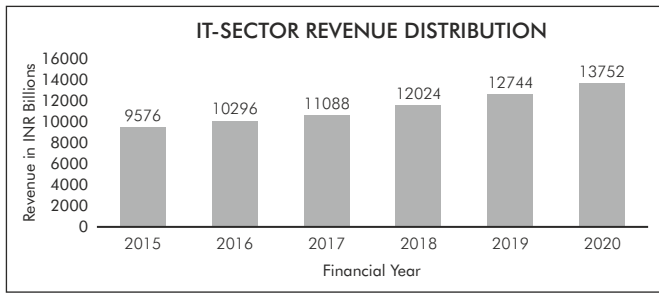
well suited for business continuity and agility. Employees would have more flexibility over their schedules.

The following table indicates the total revenue generated by the IT sector FY 2018, 2019 and 2020.

**Table 2.2: Break up of Revenue Between International and Domestic in IT-Sector FY 2018, 2019, 2020**

Financial Year	Domestic (in billion INR)	Exports (in billion INR)
2018	2952	9072
2019	2952	9792
2020	3168	10584

From the above table we observe that after the implementation of WFH model we see a 7.4% drastic increase in the revenue of the IT sector for the FY 2020. WFH model also reduces the expense like building, electricity and many other office expenses and it also gained by the increase of 3-man hours a day which means the working hours are increased after the implementation of WFH model. The below figure 2.2 clearly indicates the increase in business of the IT- sector for 5 consecutive financial years.



**Fig 2.2 IT-Sector Revenue Distribution (Source: Bloomberg)**

IT is a growing sector in the Indian economy, the above bar indicates growth during FY 2015 to 2020. The Government of India played a major role by its mission “Digital India” or simply called the IoT era of India. The telecommunication sector also contributed by offering cheap availability of the internet. This era of being “Digitally Smart” has changed the IT sector and increased the demand for IT services in the domestic Indian market. The IT sector has seen an increment within its key verticals. Especially the IT- Healthcare vertical has seen an immense growth in FY 2019 and 2020.

590 billion INR which constitutes 4% of the total revenue of the IT sector. Similarly, all verticals have slight increment from the previous financial years as represented in the above fig 2.3.

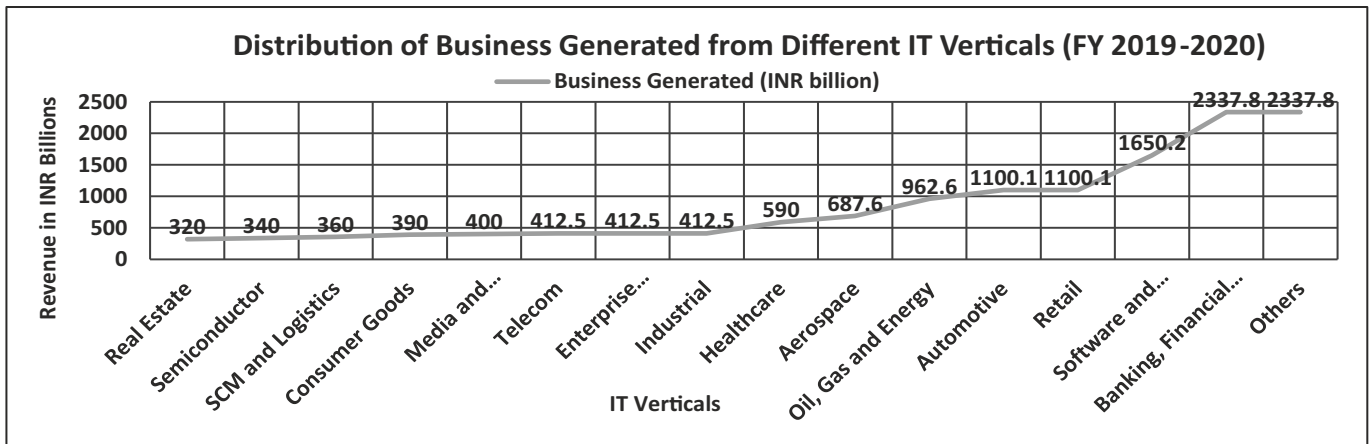
**ECONOMIC VALUE ADD (EVA) OF THE SECTOR BEFORE AND AFTER COVID-19 PANDEMIC:**

EVA is the incremental difference in the Rate-of-Return (RoR) over a company's cost of capital. Essentially, it is used to measure the value a company generates from funds invested in it. If a company's EVA is negative, it means the company is not generating value from the funds invested into the business. Conversely, a positive EVA shows a company is producing value from the funds invested in it.

The formula for calculating EVA is:

$$EVA = NOPAT - (Invested Capital * WACC)$$

- NOPAT = Net operating profit after taxes
- Invested capital = Debt + capital leases + share holders’ equity



**Fig 2.3: Distribution of business generated from different IT verticals (FY2019-2020)**

From the above fig 2.3 it is clear that BFSI vertical requires IT services at huge rate. The increase in demand for IT software solutions during FY 2020 is due to the pandemic where people preferred staying at home and transacting through net banking services. 17% of the total revenue in FY 2020 is contributed by the BFSI vertical of the IT sector. The IT sector has played an important role in the Healthcare vertical where the demand for the IT solutions in the healthcare rose to 590 billion INR, a whopping 47.5% increase from 400 billion INR in the previous financial year, the revenue of the healthcare vertical was 400 billion INR and now it is

- WACC = Weighted average cost of capital
- $S = \text{Size of the IT sector \{all IT service-based systems put together\}} = S [8]$
- Or  $S = c1 + c2 + c3 + c4 = \text{Total Sectoral output}$
- $a1 + b1 = c1$
- $a2 + b2 = c2$
- $a3 + b3 = c3$
- $a4 + b4 = c4$
- $a_i = \text{Input into the sub sector; } b_i = \text{Value added into the sub-sector; } c_i = \text{Output of the sub sector}$



**Table 3.1: Economic Value Add (EVA) of the Sector Before COVID-19 Pandemic:**

S. No.	Segment	Input into the sub sector 'a' ('a' in INR billions)	Value added in the sub sector 'b' ('b' in INR billions)	Output of the sub sector 'c' ('c' in INR billions)
1	Web based services	548	137	690
2	Application-based services	512	183	695
3	IT- infrastructural based services	450	150	600
4	Software based services	636	159	795
<b>Total</b>		<b>2146</b>	<b>629</b>	<b>2780</b>

**Table 3.2: Economic Value Add (EVA) of the Sector After COVID-19 Pandemic:**

S. No.	Segment	Input into the sub sector 'a' ('a' in INR billions)	Value added in the sub sector 'b' ('b' in INR billions)	Output of the sub sector 'c' ('c' in INR billions)
1	Web based services	542.2	135.8	678
2	Application-based services	512	188	700
3	IT- infrastructural based services	450	150	600
4	Software based services	670	170	840
<b>Total</b>		<b>2174.2</b>	<b>643.8</b>	<b>2818</b>

**Source for calculation of EVA in table 3.1 and 3.2: Bloomberg**

The business performance of the IT sector also depends on the Economic value addition given to the end user. From the above tables i.e., table 3.1 and 3.2 we see two cases of the EVA before and after pandemic. The demand for IT services during pandemic is consistently increasing, implying that value-based service is gaining market share. The IT firms have been working to increase their EVA in order to provide effective value-based services to increase business. The EVA of the sector has seen an increment of 14.8 billion INR from previous year after COVID-19 i.e., from FY 19 to FY 20. The significance and advantage of using EVA as a performance evaluation indicator is increasingly prominent. Besides, capital structure is an important factor influencing enterprise value as optimizing capital structure can enhance enterprise value. EVA does affect the formation of capital structure in IT industry, but the degree is hysteretic.

**CASE STUDY ANALYSIS****4.1 : Infosys: Flexible Hybrid work model:**

Infosys with nearly 93% of its 2,40,000 employees have been able to work from home within the first few weeks of the COVID crisis, it is focusing on introducing a 'flexible work from home model' for its employees permanently. Work from home model has not impacted the productivity of employees but rather has increased productivity and efficiency. It has been able to tide over the global crisis triggered by the COVID pandemic with 93% of its 2,40,000 employees across 46 countries working from home which was made possible within a few weeks. Remote access infrastructure was expanded for virtual private network bandwidth and back-end capacity scaled to support the increase in concurrent connected remote users. Infosys has a strong \$3.6 billion balance sheet due to increased productivity, strong EVA and increase in the digital revenues. The company's standalone revenues grew by 8.1% in FY20 to Rs 79,047 crore. 97.4% were export revenues whereas 2.6% were domestic revenues. 39% of the company's revenues came from digital services and solutions, as per the Infosys 39th annual report.

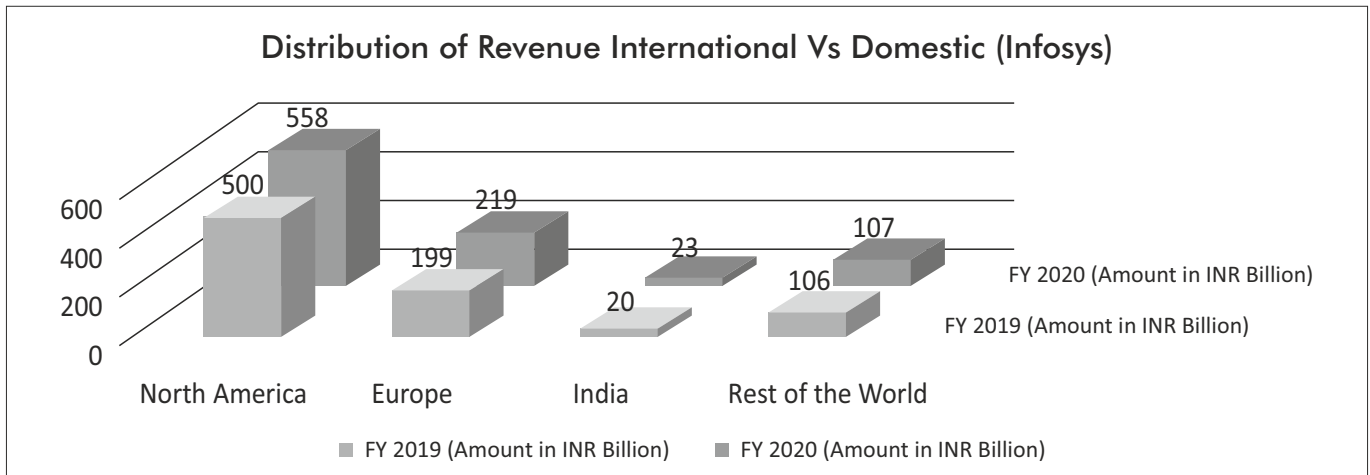


Fig 4.1: Distribution of Revenue International Vs Domestic (Infosys) Source: Bloomberg

**4.2: TCS (TATA Consultancy Services): Redefine Work from Home Process**

TCS implemented working-from-home plan for its employees with the onset of COVID-19 pandemic. from a highly centralised model, with large campuses accommodating thousands of employees, TCS was able to switch to a distributed delivery model, with 95 per cent of its 448,000-strong workforce enabled to work remotely in a matter of days through their new operating model called Secure Borderless Workspaces (SBWS).

TCS’ Secure Borderless Workspace(SBWS) is a transformative operating model framework that allows organizations to take full advantage of their talent ecosystem to maximize business opportunities. It encompasses a wide range of human functions,

including infrastructure, talent management and employee engagement; processes, tools, and governance mechanisms; and collaboration and engagement practices. Swift transition to remote working in the face of COVID-19 induced lockdowns was facilitated by SBWS operating model. This transformative model enables remote access for employees, sets up a suitable cybersecurity framework and all project management practices and systems needed to ensure that work allocation, monitoring and reporting continues as normal.

TCS has so far enabled remote working for 95% of its workforce and established cloud-based governance of over 23,000 projects, enabling high volumes of digital collaboration – 35,000 online meetings, 406,000 calls, and over 3 million messages. (information courtesy: <https://www.tcs.com/>)

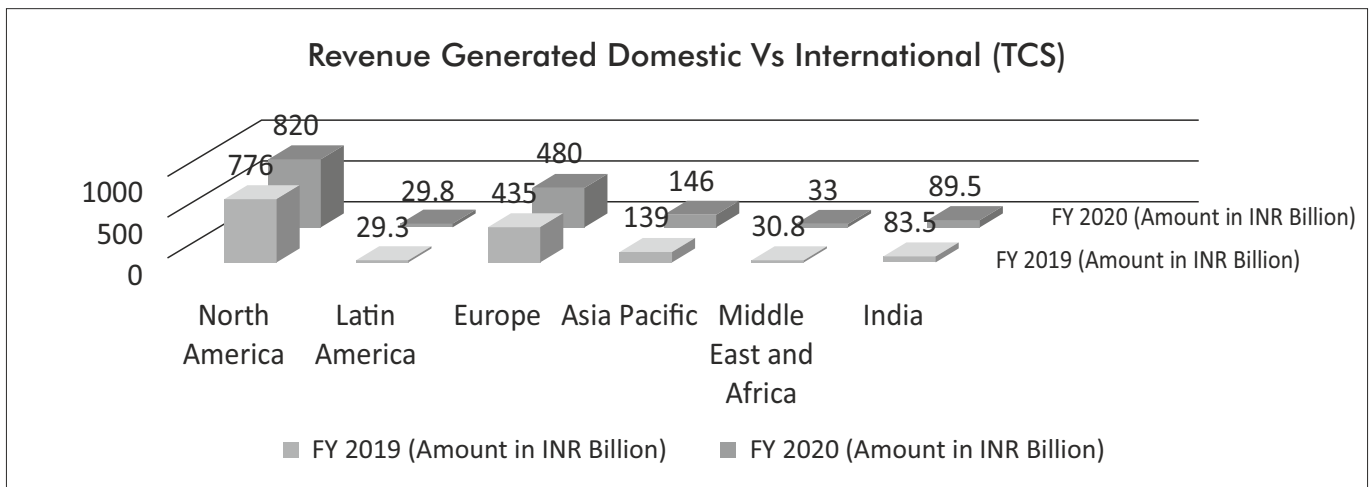


Fig 4.2: Revenue Generated Domestic Vs International (TCS) Source: Bloomberg

### 4.3: Wipro: Work from Home Suite from Wipro:

VDI (Visual Desktop Infrastructure) is a technology that enables a virtual desktop environment. In traditional server setups, an operating system is installed right on top of the hardware of a physical server. With virtualization, an additional layer is created between the hardware and an operating system, enabling the operating system to run inside each virtual machine.

A virtualization layer is an abstraction layer between network and storage hardware that creates a virtual version of a desktop, operating system, network, or server. A connection broker enables users to connect to a remote virtual desktop without sacrificing security across the devices allowed within your enterprise technology and mobile policy.

VDI integrates with existing corporate IT infrastructure for effective business continuity and to support workflows and processes already in place. It can help reduce costs by eliminating travel and storage costs in today’s high-risk infection environment. VDI also increases the agility and responsiveness of IT through cloud infrastructure and next-generation hardware, positioning for future growth as things normalize around the world. Most importantly, in today’s resource-strapped enterprises, it enables cost-effective self-service and real-time desktop management. (Information courtesy: <https://www.wipro.com/>).

corporates would embrace cloud and cloud technology. Every organisation has managed to respond and sustain during pandemic, economies of hybrid infrastructure and data. According to IDC survey 64% of Indian organisations are expected to increase demand for cloud computing and allied technology. According to this research paper the IT sector has managed to increase performance during the pandemic and also has observed a lot of cost reductive methods after the implementation of work from home model. The new reality is geographically going to be dispersed with new devices in the digital workspace. COVID era will continue to surge-in up-skilling the employees. Employees will get a better chance to develop and experiment new virtual platform coordinative strategies. Companies will invest more on their learning budgets and reskilling to strengthen companies’ future disruptions. IT corporates will take more pragmatic approach in order to continue their business efficiently and effectively.

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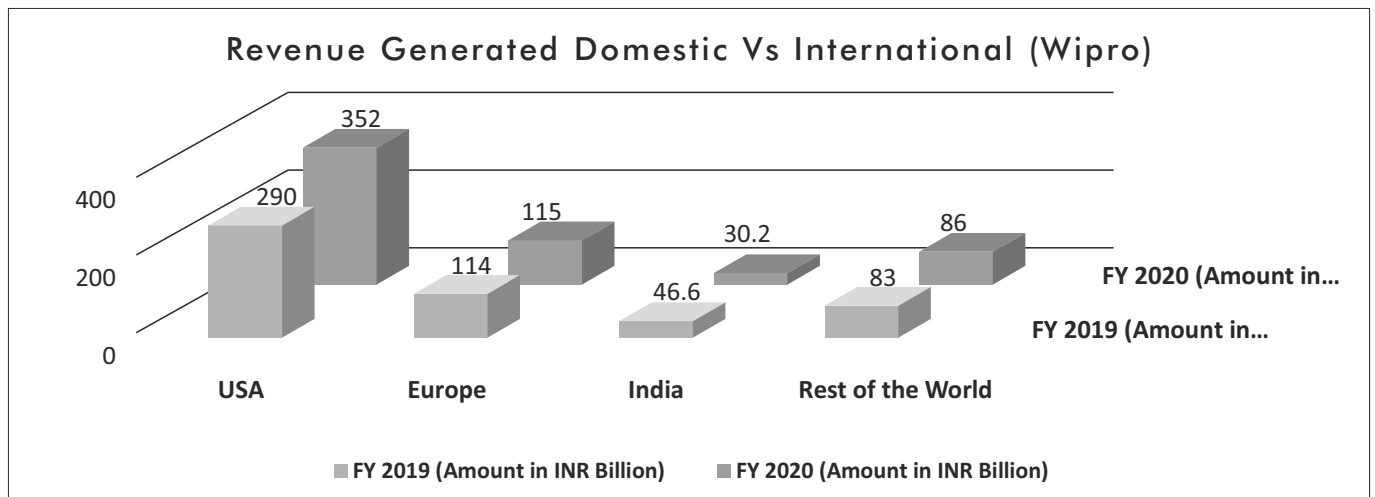


Fig 4.3: Revenue Generated Domestic Vs International (Wipro) Source: Bloomberg

### Conclusion

The IT enterprise will focus on the upcoming technologies to make work more cost effective, the WFH model is one major example of such methods. The

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# GIG WORKER : AN UNTAPPED TALENT

**\*Dr. Subhashree Panda**

## ABSTRACT

*Traditional way of doing work has been disrupted by digital technology. The advent of technology, enables an individual to work the way he/she wants to. Digitization has enabled the work-force to meet the need and demand of the customers /consumers which in turn leads to emergence of new trend. The term gig economy is the new buzzword and most widely used term. It refers to accomplishment of the task/work by hiring temporary/ part-time workers, or freelancers. It has redefined the labour market. This paper highlights the concept of gig economy, gig workers, recent trends, HR challenges, and regulation of Government of India on gig workers.*

**Keywords:** *Gig economy, Gig workers, HR issues, Regulations.*

## Introduction

Technology played a key role in facilitating to conduct business independently. According to Healy et al (2017) due to the internet, and smart phones, the day-to-day operation of the business is being accomplished in an online platform. Due to independence, flexibility and digital platform, a new category of workforce has emerged. The freelancers or gig workers are selling their services at online platform to the off-shore clients. According to Stephane Kasriel, CEO of Upwork (The world's largest freelance platform) nearly 30 per cent of the Fortune 500 companies are hiring freelancers for the various jobs of the organisation (Pofeldt, 2019). Gig economy is beneficial for the individuals as it provides employment opportunities, and reduces unemployment rate (Chappa, Varghese & Chandler, 2017).

## GIG Economy: Concept

The word Gig has gained prominence and popularity in recent years. The word gig means jazz or rock musician ([www. dictionary.com](http://www.dictionary.com)). During recession, the term gig economy was coined, as most of the workers lost their jobs, so they preferred short term employment. The other terms used for gig economy are "On demand economy", Collaborative Consumption", and "Sharing

Economy". The International Labour Organization (ILO) has defined the gig economy under two broad categories: task and services.

- i) Microtasks can be performed online and organized on a global scale,
- ii) By using websites and mobile apps, services can be facilitated by online companies.

Gig economy can be defined as a free-market system where the organization can hire the workers for a project or service on a short-term basis. The job is neither full time nor permanent one; rather the worker may join as a contractual independent worker, very popularly known as freelancers or gig workers (Techtarget 2020). It includes both temporary and part-time workforce instead of permanent workforce usually found in the traditional jobs. It opens up avenues of earnings through gig work. The various gig online platforms with registered users are: Upwork.com (17million users), Freelancer.com (31 million users), Fiverr.com (7 million user), (Werner 2020). Two categories of Gig economy exist such as:

- i) Independent gig workers : Freelancer, Online, Platform workers
- ii) Contingent gig workers: On call contract, Temporary workers.

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Organizing various tasks through gig economy is a herculean task. The visible and key players of India's gig economy in online platform are:

- Ola and Uber (Ride sharing),
- Swiggy, Zomato, Delhivery, Dunzo, and Foodpanda (Food delivery),
- Urban Clap/Company, Handy, Housejoy, and Mr. Right (House repairing and renovation),
- Upwork (high-skilled and professional tasks).

### Gig Workers: Concept

According to Chappa et al (2017), gig workers are playing a key role in gig economy. Gig workers may be contractors, freelancers, self-employed, independent contributors and part-time workers. The industry such as manufacturing, transportation and logistics, construction, and retail provide job opportunities for gig workers. Gig workers are different from non-gig (Fulltime / Regular employee in the traditional 9 to 5 jobs) in the various categories such as: demographics, work style/pattern, educational qualification, and household contribution/ service rendered. Start-ups and IT companies are also hiring consultants and freelancers for the day-to-day operation of various activities. According to Sinicki (2019), gig workers can be defined on the basis of four elements:

- i) High degree of autonomy.
- ii) Short term relation with the customers.
- iii) Payment being made on the basis of task accomplished or services rendered.
- iv) Employed and connected through digital platform.

#### Advantages :

- Independently choosing working hours.
- Preferred organizations and locations of work.
- Availing leave as per choice.
- Expertise in the domain area.
- Flexibility and accommodating workforce.

#### Disadvantages:

- Lack of stability in the job.
- Deprived of social security.
- Lack of financial security.
- Lack of team cohesiveness.

### Recent trends in GIG Economy: Research Findings

- A recent study by McKinsey Global Institute on "Independent work: Choice, necessity, and the gig economy", reveals that up to 162 million people in Europe and the United States—or 20 to 30 per cent of the working-age population engage in some form of independent work.
- Research studies have also indicated that participation in the gig economy is higher in developing countries (between five and twelve per cent) versus developed economies (between one and four per cent); and most of these jobs are in lower-income job-types such as deliveries, ridesharing, micro tasks, care and wellness.
- In USA, freelancers' number has increased from 3.7 million (2014) to 62.2 million (2019) - (Statista, 2020, Pofeldt,2019).
- According to Graham et al, (2017), the demand and supply of gig work is widely dispersed, basically demands comes from USA, Canada, UK and Australia, whereas supply comes from India and Philippines.
- Gig workers believe that knowledge and up-gradation of computer skill has competitive advantage in the industry (Werner 2020).
- According to the Payoneer Freelancer Income Survey 2018, the gig workers that are working globally, their average hourly rate is \$19 but depending on the skill, the rates also vary from \$11 to \$ 28 depending on the hiring company as well as skill set (Thibodeaux, 2020).
- In US, 85 per cent of the gig workers are preferred for contract work instead of conventional full time job (According to the Metlife's 17 Annual US Employee benefits Trend study, 2019) .
- Women gig workers are being paid less compared to their male counterparts (Barzilay & Ben David, 2016).

### GIG Economy: Indian studies

In India gig economy is in a nascent stage but is having a significant impact on Indian labour market. As technology is replacing the traditional method of doing the business, the Government of India also welcomes

the adoption of technology in doing the business with open arms. According to Verma (2018), the total number of gig workers was 15 million in 2015. Due to e-commerce and online retailing, India has emerged as the largest market in the world for the flexi staffing (Economic survey 2020-21). In India, states such as Gujarat, Andhra Pradesh, Madhya Pradesh and Telengana have ample opportunity for the growth of flexi workers.

- Nearly 3 million people in India are employed as gig workers (Banik, 2020).
- A survey by Ernest and Young states that 1 out of 4 workers in the world are gig workers from India (Nanda 2019).
- Out of two, one Indian employee prefers telecommunications (A survey on work place flexibility by Randstand India, 2016).
- Indian gig workers join in the gig economy because of flexible working hours, varied work load, being boss of their own business and choice to pursue their own interest.
- According to the report by consulting firm Boston Consulting Group (BCG) and Michael & Susan Dell Foundation, India's gig economy is expected to triple over the next 3-4 years.
- According to the report of World Economic Forum (WEF), 49.2 per cent of India's labour force is digitally skilled (www.tribune.com).

### **Gig Economy and HR Issues:**

- i) Ambiguous job description: Job description refers to the duties and responsibilities of the job incumbents. It is not clearly defined in case of hiring gig workers. As a result of which, an organization cannot plan well in advance the total number as well as the type (skilled, unskilled and semi-skilled) of manpower required.
- ii) Human resource planning: The human resource planning plays a significant role in hiring right personnel for the right job. In case of hiring gig workers, this can't be done as the workforce basically belongs to the unorganized sector with inadequate personnel inventory.
- iii) Employee performance and Training: The performance assessment of the temporary workers are also being regulated by the policies of the

staffing organization. On that basis, training (upskilling and reskilling), termination, and replacement of the gig workers is being decided without hampering the productivity of the organization. The training need of the temporary workers need to be assessed and trained accordingly.

- iv) Wage differential: There is a sharp distinction of wage / salary payment between the full-time staff and contract workers. In the past also this wage differentials lead to strike and lockdown in the industry. Sometimes, the contractual or temporary workers are being exploited by the employer. They have to work for a longer period of time and are also paid less as well as deprived of all the benefits.
- v) Working conditions of the employees: The safety of the gig workers especially women working on a project or at plant level in the remote areas is a big challenge and has to be suitably addressed. So, the indemnity clause for the project should be properly drafted by the staffing organization.
- vi) Privacy of the Information: As the organization outsources most of the task from the outsourcing agencies, the confidentiality of the information is at stake. So, the staffing firm must adhere to the nondisclosure agreement with the staff members from whom it has been outsourced.

### **Regulations by Government of India on Gig Workers:**

Since the gig workers are considered as the unrecognized workforce, the Govt. of India has framed certain rules for their safety, security and protection. The Govt. of India introduced Social Security Bill in 2019. This facility will be available for delivery partners such as Swiggy, Zamato, Dunzo and mobility start-ups like Ola, Uber, Rapido etc. Govt. of India has also planned to provide medical treatment to the workers employed in gig economy at a subsidized rate. This facility can be availed by gig workers in the Employee's State Insurance Corporation (ESIC) Hospital as well as dispensaries all over India. On January 20, 2020 Govt. of India also planned to bring in electricians, beauticians and plumbers under the category of gig workers. It proposes to set up security fund under CSR with the objective of providing welfare benefits such as gratuity, pension, compensation and medical insurance to the gig workers.

## Conclusion:

Organizations are hiring gig workers for short term engagement. Organisations are facing various challenges relating to information, privacy of data, and IPR while dealing with gig workers. Though the gig economy has pros, cons, debate and discussion, leading global corporations such as Google, Facebook and Uber consider gig worker as their employees. The growth of the gig worker increased exponentially in India, USA, China, and Europe. During the recent lockdown enforced due to Covid 19, most of the work has been executed by the gig workers. Gig economy and traditional economy can thrive together with the formulation and implementation of robust HR policies for Gig workers.

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# WELL FURNISHED: A STUDY ON THE ONLINE FURNITURE RENTAL START-UPS IN INDIA

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## ABSTRACT

Today, people are inclined towards accepting what is convenient, hassle-free and are open to experiencing different products available online. Since owning furniture requires a good investment, it may not be feasible to keep trying different furniture designs every now and then. While relocating, people need furniture for their house. Buying new furniture may be an expensive option. Taking this into consideration, start-ups have come up with the appropriate offering- rental furniture.

Customers now have access to a variety of furniture designs by just paying the subscription fee. This helps them to upgrade the look of their homes as per their changing tastes. This study has tried to understand the business models of the online rental furniture start-ups in India. It has also tried to get a glimpse of the general awareness and perception among the public regarding the offerings of these start-ups. A survey was conducted of 158 respondents. From the survey some of the findings were that majority of the respondents were aware about the concept of renting furniture online, many believed that renting furniture addressed the temporary requirements of the user and it made sense to rent furniture while staying in a rented house or apartment.

## Introduction

Earlier, if an individual rented a product, it simply denoted that the person was unable to afford it. Other views were that the individual belonged to a poor family and rarely owned anything of his/her own. During family functions the furniture had to be rented to accommodate the guests. People personally visited the store and placed orders for renting the furniture. Availing furniture on rent served the needs of a large gathering rather than individual needs. However, now the scenario has changed.

There have been a lot of online rental furniture start-ups that have emerged in the last decade. They have been able to transform the Indian mindset toward renting furniture. Their target audience includes students who have relocated for further studies and young professionals who work for organizations that need them to relocate often. It also includes newly married couples who have shifted to their new home and are

running on a tight budget. The common theme running across each of them is the need for furniture that can be rented for their home. But still, how is it different?

These start-ups offer customers a variety of products meeting quality standards. In order to rent it, customer needs to pay a subscription fee and the furniture is delivered to your place. There are companies that offer free shipping in case their customers need to relocate with the same furniture. Some others offer free maintenance for the rented furniture. This is a trend that is popular among the youth. These services are even availed by those who are able to buy or own the product. The reason being that it is less expensive, convenient to buy and there is no burden of maintaining it.

The youth are known to be open to experience new trends and fashion. One may find them switching to new products just as they switch jobs. Hence, renting furniture seems to be the best fit for their lifestyle. It gives

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them a variety of options to choose and they can conveniently switch to renting a new furniture as and when they find it in 'vogue'. Some companies are offering this feature where customers can buy the furniture that they rent. As a result, the consumers can try out these products and can own them whenever they are ready. Through this research we will study the business model of these start-ups as well as understand the general awareness and the customer perception regarding the idea of renting furniture.

## Literature Review

### Factors influencing consumer demands for Furniture Rentals in India

(Pooja Agarwal, March 30)

The findings stated that there was more scope for these rental businesses as majority of the respondents stated that they would need to relocate once in a period of three years. The respondents stated that it was better to rent than to own a furniture because the former offer puts them at ease while shifting to another place/city. There were respondents who stated that owning furniture was better as renting would be apt only to solve a temporary problem.

### Status of Rent Economy in the Capital of India

(Karan Sabharwal, September 2017)

The findings of the study stated that a handful of the respondents rented products online. Very few were aware about the websites that offered products on rent. It highlights that there is a need to ensure that the customers are made aware about these developments.

### The Math Behind Furniture Rental: The Start-ups And Their Business Models

(Kopal Cheema, Inc42, March 05, 2020)

There are three types of models that the rental start-ups use. In the first type, the business owns or buys the furniture which is then given on rent. The second model refers to a marketplace where furniture providers get a platform to sell their products. The third type is where the business is engaged in manufacturing and delivering the product to the consumer. If businesses adopt the third model, they need to maintain a warehouse which has adequate capacity to store the furniture.

**Renting furniture is now the default option for many people in tier I cities**

(Sabari Saran, Mint, July 16, 2018)

Furlenco follows a subscription-based model. The customer can either choose the products as displayed online or they can create their own furniture set. The minimum subscription period is 3 months. The furniture is delivered to the customer within 72 hours of placing the order. The furniture is manufactured in-house. They have multiple vendors and different warehouses across 8 cities. They operate in tier 1 and tier 2 cities and offer their products to 5000 houses per month.

### India's transition towards rental economy

(Deccan Chronicle, February 27, 2020)

The emphasis of consumers has shifted from possession to experience. This rental market is expected to reach \$5 Billion by 2025. One executive from Cityfurnish states that people look out for ways to upgrade their lifestyle. However, the fact that they already 'own something' blocks the 'upgradation'. Individuals may need to visit different locations to pursue their career aspirations. At that point, renting them seems to be a better option and provides the user with more flexibility.

### Never need to buy: The boom in renting everything from furniture to vehicles

(Mamata Sharma, ET Contributors, April 30, 2018)

The entry of these rental furniture start-ups has brought a change in Indian mindset. They offer everything from furniture to appliances. The Indian youth can rent what they like and this makes it affordable. These rental start-ups are making the deals attractive by offering customers free home delivery, pickup and cleaning. This business is expected to get 2-3 lakh new customers every year.

## Need for study

Renting furniture is a convenient choice for consumers who are keen on trying out new furniture designs after every subscription period. Since they do not own furniture, they can cancel their subscription at any point. The Startup India 2015 has paved a way for a lot of fresh ideas and budding entrepreneurs to make their mark in the industry and define trends. Some benefits like Income tax exemption for three years, 80% rebate on filing patents and easy winding up has encouraged many start-ups to emerge in India. The market for rental furniture in India is approximately \$800-850 million. This particular concept has changed the Indian mindset. This research will help us understand the

manner in which this online furniture rental start-ups operate. It will also help us get an understanding of the reaction of the public towards this concept.

## Research Objectives

1. To study the business models followed by the online furniture rental start-ups in India.
2. To understand the general awareness and perception among the public about the offerings of these companies.
3. To analyse the effect of gender on perception about online furniture rental start-ups.

## Research Methodology

- **Type of research:** Descriptive research.
- **Sample size:** 158 respondents.
- **Sampling technique:** Convenience sampling.
- **Data type:** Primary data: The data was obtained in the form of responses given by the respondents. Secondary data: The data regarding the business model of the online rental furniture start-ups was collected from the internet as well as other articles.
- **Method of data collection:** A structured questionnaire was prepared to seek responses. Considering the pandemic, the questionnaire was prepared using Google forms.
- **Graphical representation:** Responses were graphically represented using Google forms.
- **Statistical software used:** MS Excel was used to run the analysis and hypothesis testing.
- **Testing of hypothesis:** A Z test was undertaken to check the difference in perception of males and females with respect to certain Likert scale questions. As a result, there were 9 Hypotheses which were formulated and tested.

## Data Analysis & Interpretation

Research Objective 1:

Furlenco

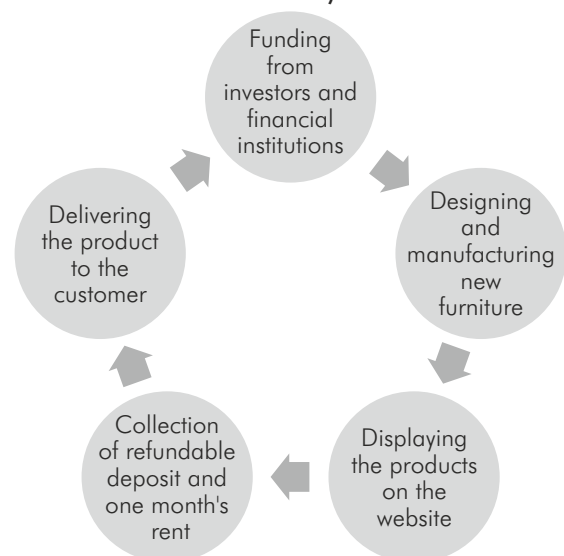
Furlenco works on an asset heavy model. The furniture is designed by the company's in-house team of designers. Since most of the products contain solid wood, it can be refurbished time and again to ensure a great user experience. People can visit the website to

explore various furniture options to choose from. One can either create their own furniture package or select pre-existing packages put together on the website.

Then the customer needs to fill out a form and upload the required documents to proceed with the transaction. The minimum subscription period ranges from three to six months depending upon the product subscribed. A security deposit of one month is needed for all bookings. This amount is refundable. In case the furniture is damaged during the subscription tenure, it is insured up to INR 10,000. If the damage is more, the amount is utilized from the security deposit.

The customer also needs to pay one month's rent in advance before delivery of the product. There are no delivery charges. The customer can avail free relocation of the furniture once a year on completion of minimum subscription period. A free deep cleaning service can be availed once a year. The company is funded by investors and venture capitalists. Most of the revenue goes into building the company, acquiring customers, paying salaries to employees and creating new assets.

**Figure 1: Business Model: Furlenco (Asset heavy Model)**



Businesses operating on an asset heavy model would function on lines similar to Furlenco (Figure 1). Since it is asset heavy, these companies require funding from investors and financial institutions. The company would have an in-house team of furniture designers. They would manufacture the furniture themselves. They will take a security deposit before the commencement of the subscription period. The customers will have to pay one month's rent in advance. On the submission of the documents, the products will then be delivered to the

customer. The start-ups operating on this particular model include Furlenco, Fabrento and CityFurnish.

### Pepperfry

The business model of Pepperfry is a managed marketplace. They offer a platform for small and medium business artisans to sell their products through their website. These sellers provide a list of items they have for sale to Pepperfry. Pepperfry then helps in advertising and merchandising the products for those sellers.

People can visit the website to explore various furniture options and choose their product. When an order is placed on the website, the furniture artisan is notified. The artisan would then initiate the transaction by sending the furniture to fulfilment hub of Pepperfry. This hub checks for the product quality of the furniture. If it meets the quality standards, it is packaged as per the requirement of the courier partners and delivered to the end customers. These hubs are located where the furniture merchants operate. The payment is made while placing the order. Pepperfry earns revenue in the form of commission taken from these merchants. This commission also includes the marketing expense, last mile delivery expense along with other expenses.

**Figure 2: Business Model: Pepperfry (Marketplace Model)**



Businesses operating on a marketplace model will function on similar lines as Pepperfry does (Figure 2). These companies provide a platform for vendors, artisans and merchants to sell their products to the customers. These merchants will provide a list of their products to the company. The company will then

advertise and merchandise the product on the website and other platforms. Once a customer places an order for a product, the concerned merchant is notified. The merchant then sends the product to the company. After the necessary quality checks and packaging, the product is delivered to the customer. The payment for the product is made while placing the order. Some companies require the customers to pay a deposit amount before availing the service. The revenue is earned in terms of commission received from the furniture merchants. The start-ups operating on this particular model include Pepperfry, RentoMojo GrabOnRent and RentOne.

### Questionnaire

#### Gender

Out of the respondents, 45.6% were Male and 51.9% were female. The rest preferred not to say.

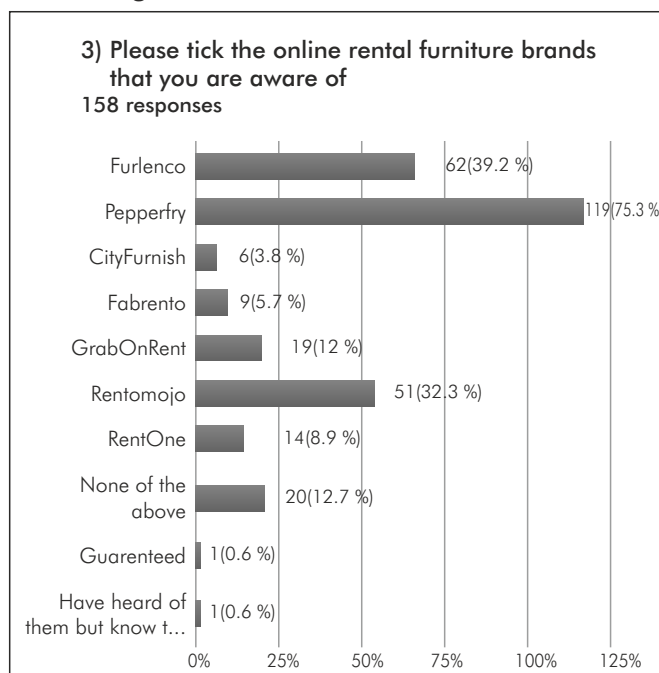
#### Frequency of relocation

Majority of the respondents (57.6%) stated that they had never relocated to another place/city in the last three years. 19% stated that they had relocated once. 8.9% stated that they relocated twice.

#### Awareness about renting furniture

Majority of the respondents (76.6%) stated that they were aware about the concept of renting furniture online. 23.4% were not aware about it.

**Figure 3: Awareness about brands**



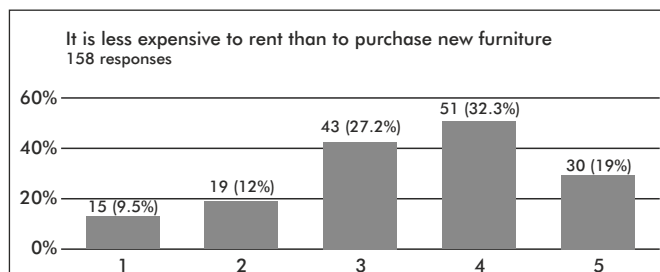
Majority of the respondents (75.3%) stated that they were aware of Pepperfry. 39.2% stated that they were aware of Furlenco. 32.3% stated that they were aware of RentoMojo.

**Whether they have rented Furniture online?**

Majority of the respondents (86.1%) stated that they had not rented furniture online.

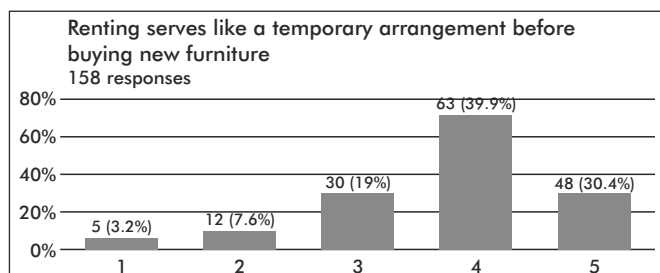
In the following questions, the respondents were asked to rate the statements on a scale of 1-5. (1- Strongly Disagree, 2- Disagree, 3- Neutral, 4-Agree, 5-Strongly Agree)

**Figure 4: Renting and purchasing expense**



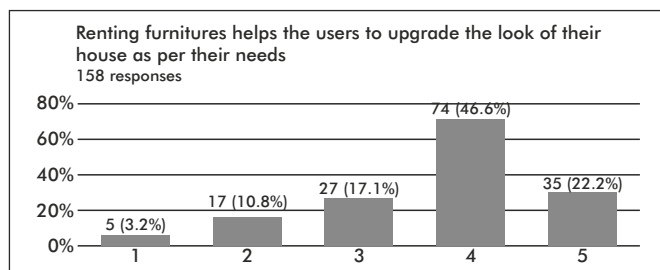
32.3% of the respondents agreed that it was less expensive to rent than to purchase new furniture. 19% strongly agreed with the statement and 27.2% rated it as neutral. 12% disagreed with the statement.

**Figure 5: Renting- A temporary arrangement**



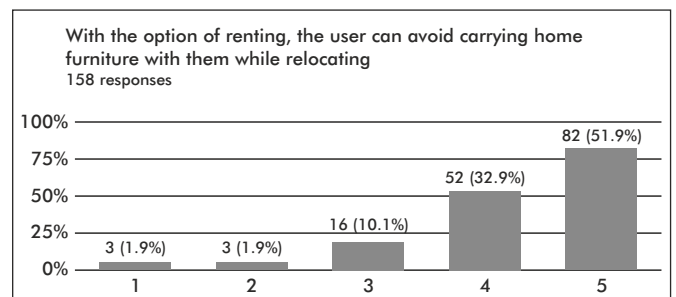
39.9% of the respondents agreed that renting served like a temporary arrangement before buying new furniture. 30.4% strongly agreed with the statement and 19% rated it as neutral.

**Figure 6: Upgrading the look of the house**



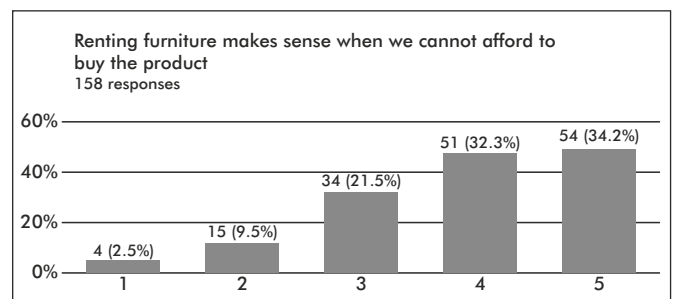
46.8% of the respondents agreed that renting furniture helped the users to upgrade the look of their house as per their needs. 22.2% strongly agreed with the statement and 17.1% rated it as neutral.

**Figure 7: Avoid home furniture on relocation**



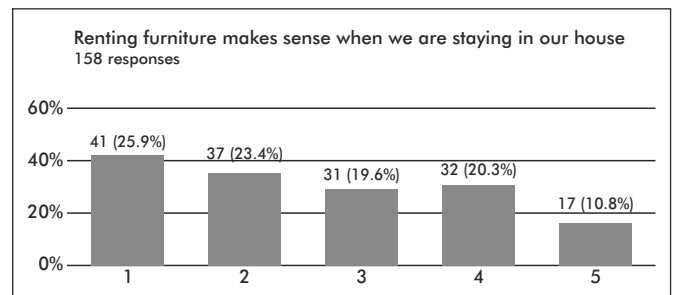
Majority of the respondents (51.9%) strongly agreed that with the option of renting the user could avoid carrying home furniture with them while relocating. 32.9% agreed with the statement and 10.1% rated it as neutral.

**Figure 8: Renting when unable to afford**



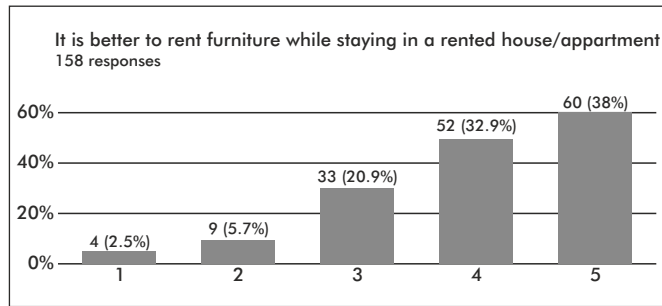
34.2% of the respondents strongly agreed that renting furniture made sense when they cannot afford to buy the product. 32.3% agreed with the statement and 21.5% rated it as neutral.

**Figure 9: Renting when staying in own house**



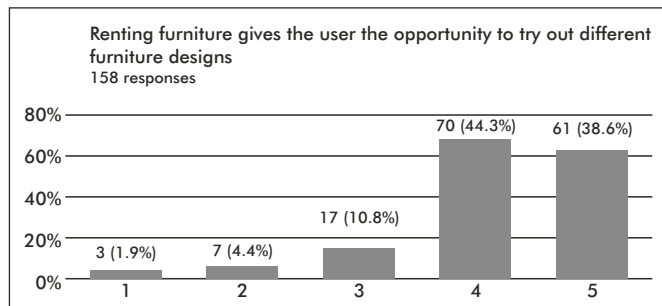
25.9% of the respondents strongly disagreed that renting made sense even when they were staying in their own house. 23.4% disagreed with the statement and 20.3% agreed with the statement.

**Figure 10: Renting in rented house/apartment**



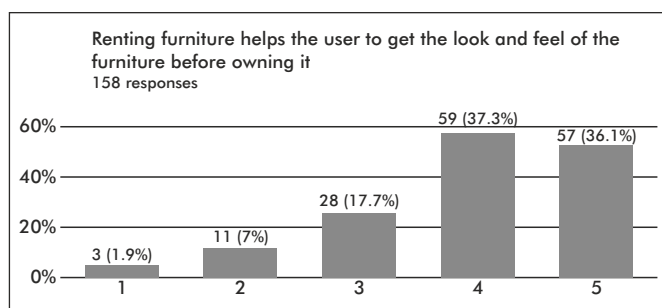
38% of the respondents strongly agreed that it was better to rent furniture while staying in a rented house/apartment. 32.9% agreed with the statement and 20.9% have rated it as neutral.

**Figure 11: Trying different furniture designs**



44.3% of the respondents agreed that renting furniture gave the user the opportunity to try out different furniture designs. 38.6% strongly agreed with the statement and 10.8% rated it as neutral.

**Figure 12: Getting the look and feel**



37.3% of the respondents agreed that renting furniture helped the user to get the look and feel of the furniture before owning it. 36.1% strongly agreed with the statement and 17.7% rated it as neutral.

**Duration of renting**

31.6% of the respondents stated that they would prefer to rent furniture for a duration of 6 -12 months. 25.3% stated that they would prefer a duration of up to 3

months. 23.4% stated that they would prefer a duration of 3-6 months.

Ranking the factors considered before renting furniture (12 Factors)

The following table denotes the factors arranged in ascending order of the ranks.

**Table 1: Ranking of factors**

Factors	Rank
Free delivery and pick up services	3.58
Variety of furniture designs to choose from	4.01
Easy return/refund on delivery	4.04
Can cancel subscription anytime	4.94
Free relocation	5.82
Flexibility to upgrade furniture when needed	6.11
Free maintenance	6.68
Ability to get ownership during rental tenure	7.78
Subscription fee	8.15
Product reviews	8.44
Accurate product image	8.94
Product comparison with other brands	9.45

**Table 2: Ranking of factors (Males)**

Factors	Rank
Free delivery and pick up services	3.66
Variety of furniture designs to choose from	3.84
Easy return/refund on delivery	4.13
Can cancel subscription anytime	4.94
Free relocation	5.75
Flexibility to upgrade furniture when needed	5.90
Free maintenance	6.73
Ability to get ownership during rental tenure	7.54
Subscription fee	7.98
Product reviews	8.86
Accurate product image	9.02
Product comparison with other brands	9.59

**Table 3: Ranking of factors (Females)**

Factors	Rank
Free delivery and pick up services	3.63
Easy return/refund on delivery	4.02
Variety of furniture designs to choose from	4.24
Can cancel subscription anytime	5
Free relocation	5.90
Flexibility to upgrade furniture when needed	6.29
Free maintenance	6.65
Ability to get ownership during rental tenure	7.98
Product reviews	8.01
Subscription fee	8.26
Accurate product image	8.76
Product comparison with other brands	9.20

## Hypothesis Testing

A Z test was undertaken to check whether there were any differences in the responses stated by males and females to the Likert Scale statements.

Note: Rejection area (for H0) contains all values smaller than -1.96 & all values larger than 1.96 for  $\alpha = 0.05$

**H1: The perception that it is less expensive to rent than to purchase new furniture differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	3.41	3.42
Sigma	1.2	1.18
<b>Z</b>	<b>-0.05</b>	

Since the z score is outside the rejection area, we will reject H1.

**H2: The perception that renting serves like a temporary arrangement before buying new furniture differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	3.58	4.13
Sigma	1.15	0.85
<b>Z</b>	<b>-3.35</b>	

Since the z score is within the rejection area, we will accept H2.

**H3: The perception that renting furniture helps the users to upgrade the look of their house as per their needs differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	3.65	3.18
Sigma	0.99	1.06
<b>Z</b>	<b>2.84</b>	

Since the z score is within the rejection area, we will accept H3.

**H4: The perception that with the option of renting, the user can avoid carrying home furniture with them while relocating differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	4.2	4.39
Sigma	0.94	0.88
<b>Z</b>	<b>-1.28</b>	

Since the z score is outside the rejection area, we will reject H4.

**H5: The perception that renting furniture makes sense when they cannot afford to buy the product differs between both genders.**

	Male	Female
n	72	82
Sample Mean	3.77	3.95
Sigma	1.17	0.96
<b>Z</b>	<b>-1.03</b>	

Since the z score is outside the rejection area, we will reject H5.

**H6: The perception that renting furniture makes sense even when they are staying in our own house differs between both genders.**

	Male	Female
n	72	82
Sample Mean	2.58	2.73
Sigma	1.3	1.37
<b>Z</b>	<b>-0.69</b>	

Since the z score is outside the rejection area, we will reject H6.

**H7: The perception that it is better to rent furniture while staying in a rented house/apartment differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	3.79	4.17
Sigma	1.13	0.89
<b>Z</b>	<b>-2.29</b>	

Since the z score is within the rejection area, we will accept H7.

**H8: The perception that renting furniture gives the user the opportunity to try out different furniture designs differs between both the genders.**

	Male	Female
n	72	82
Sample Mean	3.87	4.37
Sigma	1.04	0.69
<b>Z</b>	<b>-3.46</b>	

Since the z score is within the rejection area, we will accept H8.

**H9: The perception that renting furniture helps the user to get the look and feel of the furniture before owning it differs between both genders.**

	Male	Female
n	72	82
Sample Mean	3.79	4.17
Sigma	1.02	0.95
<b>Z</b>	<b>-2.38</b>	

Since the z score is within the rejection area, we will accept H9.

## Findings

1. Awareness about renting furniture online:  
Approximately 76.6% of the respondents were aware about the concept of renting furniture online. So, majority of the respondents were aware about renting furniture online.
2. Upgrading the look of the house:  
Approximately 68% of the respondents felt that renting furniture helps the users to upgrade the house as per their needs. Individuals who are keen on upgrading the look of their house as per their needs may prefer renting furniture.
3. Renting furniture while staying on rent:  
Approximately 70% of the respondents stated that it

was better to rent furniture while staying in a rented house/apartment. So, individuals prefer to rent than to buy furniture while staying on rent.

4. Opportunity to try out different furniture design:  
Approximately 82% of the respondents felt that renting furniture gives the opportunity to the user to try out different furniture designs. It denotes that the majority of the respondents agree that the opportunity to try out different furniture designs can be availed by renting furniture.
5. A temporary arrangement:  
It was found that approximately 69% of the respondents felt that renting serves like a temporary arrangement before buying new furniture.
6. Top priorities:  
From the responses received it was found that free delivery and pick-up services, variety of furniture designs to choose from and easy return/refund on delivery were the top three priorities of the respondents. This indicates that these three factors may have a significant role in influencing the decision to rent a product.
7. Duration of renting furniture:  
From the responses it was found that, the percentage of participants opting for a duration of 6-12 months was slightly higher than those opting for a duration of 0-3, 3-6 months. This denotes that the participants are ready to rent the furniture for a longer time.
8. Difference in the perception between males and females  
From the Z tests conducted, it has been found that there exists a difference in the perception between both males and females in the following.

**Table 5: Difference in perception**

Sr. No.	Statements
1.	Renting furniture serves like a temporary arrangement
2.	Renting furniture helps the users to upgrade the look of their house
3.	It is better to rent furniture while staying in a rented house/apartment
4.	Renting furniture gives the user the opportunity to try out different furniture designs.
5.	Renting furniture helps the user to get the look and feel of the furniture before owning it.



## Recommendations

Based upon the data analysis and the findings, the following are being recommended.

### 1. A temporary arrangement:

Majority of the respondents stated that renting furniture served like a temporary arrangement before buying new furniture. There would be a point where they would invest in buying something which they can own. As a result, customers may gradually start purchasing their own furniture. Hence, it is recommended that these furniture rental start-ups must explore other opportunities as well which would help them sustain in the market.

### 2. Renting in your own house:

Around 48% of the respondents stated that it made no sense to rent furniture while staying in their own house. Here is where the rental furniture start-ups have to frame a plan of action in order to respond to this mindset. They have to come up with different offerings which will induce the customers to avail their services.

### 3. Considering the priorities:

Free delivery and pick-up services, variety of furniture designs to choose from and easy return/refund on delivery were the top three priorities of the respondents. Although the furniture rental companies are providing all of these, they must take steps to enhance these offerings since the respondents have placed a lot of emphasis on them.

### 4. Subscription fee:

To avail the furniture on rent, the users need to pay a certain subscription fee. Some of the respondents stated that the subscription fee should be competitive. There are times where they would want to rent the furniture for a longer duration. So, it is recommended that the subscription fee be revised or made more competitive when the user is renting it for a longer duration.

### 5. Customer Service:

Apart from the subscription fee, some respondents felt that the quality of customer service played an important role while availing services from a company. Hence, it is recommended that the companies must provide good customer service to its customers.

### 6. Servicing the product:

Some companies provide a free maintenance service after the completion of the minimum subscription period. Some customers stated that they would prefer this service every 3 months. So, it is recommended that a provision could be made wherein such requests could be accommodated.

## Limitations

This study was undertaken during the Covid-19 pandemic. Hence, Google forms had to be circulated to the respondents. This was a convenient option however it was difficult to ensure maximum participation from everyone. Since the respondents were not met in person, it was difficult to persuade them to respond to the questionnaire. Participation from more respondents would have strengthened the results of this study.

## Future scope

This study can be further extended in the future by seeking responses from the public regarding the improvement in the performance of these start-ups in terms of the top three priorities stated by the respondents (free delivery and pick-up services, variety of furniture designs to choose from and easy return/refund on delivery). Secondly, this study can be further explored by considering the impact of the Covid-19 pandemic on the performance of these online rental furniture start-ups.

## Conclusion

“There will be a time when people will be able to shop online”. This statement was introduced on the completion of a computer class in schools. Though this idea seemed exciting, there was always scepticism about it being a reality. Almost 17 years down the line, here we are reading this paper online, waiting for the delivery of the products we shopped online or browsing the different OTT (over-the-top) platforms to watch our favourite content.

The online furniture rental start-ups are helping the consumers experience a variety of products which they can acquire by paying a subscription fee. It has been around a decade and there are sufficient users of rental furniture. The whole idea behind this offering is ‘never own anything’. This gives the customers the flexibility to switch to different products as per their needs. These

furniture rental companies cater to users who need to relocate, newly married couples and people staying on rent.

To sum it up, there is a lot of scope for these start-ups to increase their customer base as well as establishing their presence in the different parts of India. There are many online players who are offering these rental services. Hence, it may be difficult for one player to dominate the market. This competition keeps these start-ups on their toes to offer their best services to all the subscribers because it gives the consumers the freedom to switch if they find the service inadequate.

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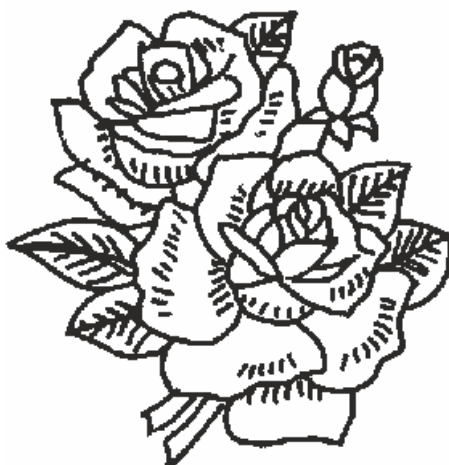
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# INNOVATIVE TEACHING-LEARNING PRACTICES FOR HIGHER EDUCATION INSTITUTES - MUMBAI (INDIA)

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## ABSTRACT

The education sector has undergone a massive change right from the tradition methods of teaching that involved to learn through memorization and recitation techniques to the current modern pedagogies that induce critical thinking and problem-solving methods. The entire change in the system of teaching- learning has ensured that a student becomes rational thinker, knowledgeable, and self-sufficient. The creativity and innovation in the teaching pedagogy has ensured that both students and teachers benefit and have changed the landscape of the education with more empowered individuals, stronger governance, and development of human capital in the country. The current disruption in the education sector is due to the Covid-19 pandemic, which has further opened gates to creativity and innovation increasing the use of online platforms and change in teaching-learning pedagogy for both teachers and students. The paper focuses on secondary data and discussion with faculties of other institutes. This research paper focusses on studying the different teaching-learning practices proposed by universities and technical bodies and adopted by higher educational institutes in the Mumbai district. This research paper focusses on the innovative teaching-learning practices at the institutes in Mumbai District.

**Keywords:** Innovation, Teaching Learning, Higher education, Technology, Teaching Pedagogy.

## Introduction

Education is that light that can change the entire society and improve the standard of living. Education not only makes an individual literate but also makes him or her independent, rational thinker and self-sufficient. Thus, harnessing the whole concept of education with innovation can create a more conducive teaching-learning environment for both students and teachers. The use of multimedia devices and use of games/ activities for teaching-learning practices, impart knowledge without defeating the objective of the course. The use of innovative teaching-learning pedagogies can further enhance the experience of the session and increase the receptiveness of the student. The constantly changing landscape of industry has made it necessary for the students to be a rational thinker, a strategist, innovator, and a problem-solver at

the same time. Hence, to develop these skills and core competencies among the students is now a necessity for every technical education program. Thus, the faculty members of higher education institutes have started looking at developing new pedagogy or adopting multimedia to enhance the imparting of some technical skills to meet industry standards. The choice of innovative pedagogies or methods adopted by each faculty or institute is dependent on several factors namely, (i) relevance of the subject matter or educational theory, (ii) the expected effectiveness of the proposed style of teaching, (iii) the expected industry skill development, (iv) the innovation of teaching-learning practice, and (v) its level of adoption in the teaching industry.

Innovative teaching means doing something new in order to improve the whole teaching method or use of a

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new technique to impart the required skill or knowledge. Every teacher agrees, that the attention of students in the class has been reducing and capturing their attention for a higher span of time and putting across the theory or skill to be taught, is one of the most challenging tasks. The unexpected change in the teaching industry with the sudden outbreak of Covid-19 has further poised a bigger challenge to ensure an effective and conducive environment. The entire teaching fraternity has started adopting a number of new teaching-learning pedagogies and styles, using multimedia to match the expectations, of students to gauge the maximum knowledge and the industry demand for a skilled employee. Faculty is now more motivated to redefine the classroom experience with their innovative ideas, by implementing more effective teaching-learning methods. The outcome of each course is determined prior to the start of the session, and each faculty records the effectiveness of the teaching-learning outcomes using several outcome-based models. Hence, this captures the impact created on the students using a number of assessment methods. This ensures adoption of the best methods, as well as planning the usage of these methods in the next batch, as the faculty member gets first-hand feedback with the help of the assessment methods. The teachers invent and reinvent their teaching methods to make class interesting to empower the young minds with the sole objective of human development in the country.

The purpose of this paper is to understand the teaching-learning practise recommended by the university or technical education bodies that are governing institutes in India, and to study the use of innovative teaching methods adopted by faculty member in higher education institutes, for imparting the required skill and knowledge to the students.

The research paper intends to attain the objectives of understanding the innovative teaching practices as a tool for learning. Secondly, it also seeks to comprehend the traditional teaching-learning pedagogies recommended by technical bodies and universities. Thirdly, it intends to analyse the new teaching-learning pedagogies used by faculty members in higher institutes. Lastly, it looks forward to discuss the adoption of new pedagogies and the adaptability of innovative teaching practices.

### **Traditional Teaching-learning Practices**

The traditional teaching-learning techniques and

methods suggested by higher educational bodies, that can be adopted by the teachers and used for the internal assessment of the student's course are –

- A. **Class Test** – The university or technical bodies suggest use of mid-term test or class test to assess the progress in learning and receptiveness of the student. These tests are conducted by each course faculty using the guidelines set for the examination mode. These are used by most of the teachers to gauge the teaching-learning outcome in the mid of the course and understand the preparedness of the student prior examination.
- B. **Viva Voce** – This is one of the teaching-learning assessment tools that is used by teachers for assessment of student's preparedness or feedback of their teaching-learning methods. In this method the teacher is involved in direct face to face communication, to check the understanding of the concepts of the subject matter.
- C. **Presentation** – The assessment of students through presentation given individually or in a group is also used to inculcate reading habits among students and harness their young minds. This method helps them to get in-depth knowledge of the concept and brainstorm while making the presentation.
- D. **Case Study** – The use of case study from reference books and educational sites is another highly used teaching-learning pedagogy by faculty members to discuss the business problems faced by companies and their probable solution.
- E. **Assignments**– One of the traditional methods used by each teacher over the years is development of assignments to revise concepts for the students. Use of questions banks and concepts notes for assignments have been the teaching-learning style used by teachers for ensure the student remembers and recollects the concepts learnt.

### **Contemporary Teaching-learning Practices**

The above-mentioned techniques have been the traditional styles of teaching-learning methods used by most of the faculty members in higher educational institutes in India. However, the teaching fraternity has noticed that the students' attention span and their focus levels in the classroom has been dropping drastically. Thus, in-order to grab the attention of the student and make impactful teaching-learning experience, knowledge and skill imparting, teachers have adopted

a myriad of innovative teaching-learning practices as mentioned under –

- A. **Video Case Study** – These are digitally available content cases in video format with alternative teacher instruction modules (Bayram, 2012). There are several videos available online which provides a medium for enhancing the sense of context and realism in case studies. (Perry and Talley, 2001). Teachers are now using them in the higher education institutes to teach management concepts as these videos enjoy the power to combine images, audio, and texts.
- B. **Movies** – Movies for teaching helps the teacher trigger the affections of the students to promote their real feelings and link the life experiences into learnings (Gonzalez et al., 2015). Teaching through movies can trigger emotions among both teacher and students for them to have an open conversation allowing questions, expectations, and dilemmas to come in forefront. This teaching practice plays a vital role, especially where the teacher requires more evidence-based paradigms to be addresses and discussed.
- C. **Role Play** – The role play method is one of the effective methods of innovative teaching especially for topics where the teacher wants the student to gauge an opportunity, assuming the role of the character and come up with an act to take decisions or solve business problems. This teaching pedagogy helps students take rational decision and make more realistic choices, while taking actions for business problems as they practice a number of behaviours during the role-playing exercises (Chesler and Fox, 1966). This pedagogy makes teaching-learning a fun activity for students.
- D. **Moot Court** – A moot court is an artificial court setup or use of role play for teaching students the importance of the judicial system in the country, to understand the perspective of mooting or lawyer-ing and to drive decisions. The real court cases are framed and presented to students for them to understand the regulatory bodies' role and the actions required while performing business activities. Therefore, this teaching methodology is believed to be highly student-centric, and has active students' participation making it more effective than the traditional legal education teaching methods (Tang, 2021).
- E. **Pear Deck** – Pear deck is educational web-based application teaching tool used for interactive presentation during live classes and sessions. This digital tool creates powerful learning experience with students, as one can send individual responses for the question posted on the presentation slides, which can be collected and discussed with the class.
- F. **Digital Studio for Lecture Delivery** – This is a setup created by institutes for enhancing the teaching-learning experience with use of studios and technology backed systems. These studios help teachers prepare activities and projects that require design solutions giving a student experimental learning by doing concept. These are primarily used for teaching concepts like design thinking, engineering, and digital communication.
- G. **Use of Communication Lab** – Dedicated laboratories where the students have access to audio-visual content in a real-time teaching event, similar to a language class for teaching communication skills to students in campus are important. The modern language labs are computer classrooms or virtual environments using special language lab software to teach a particular language. This mode is found to be more effective pedagogy for communication training as it enhances the quality of language proficiency, as learning from the multimedia, digital and computerised language labs (Deepika et al., 2015).
- H. **Use of Finance Labs / Software's / Industry Database** - Finance labs are laboratories created where in computer labs are integrated with industry database, real time data boards, live market quotes, terminals and software for real-time mock stock trading or creating financial analytical reports. Bloomberg labs, Computer labs with ProQuest and CMIE database and Ticker market are some examples of Finance labs created by higher institutes in Mumbai. Teaching financial market analysis and trading using these labs is found to be more effective and value adding for students, however the usage is still less (Noguera, et al., 2011).
- I. **Project Based Learning** – This technique involves student involvement in a particular activity for a longer period giving them a fair chance to understand and study the problem as they are actively involved in a real-life situation or problems. It helps a student to use theoretical knowledge skills

acquired in the class for application to real time scenario and provide solution or develop a product. It has been observed that project-based teaching-learning approach, helps in students' professional development, and have developed new generation teachers for the classrooms of the future (Rosessingh & Chambers, 2011).

- J. **Group Discussion** – This technique is a student centric technique where topics are discussed among the defined group of students where they share their ideas and discuss their viewpoints with the members of the group and/or instructor. This technique has been highly effective especially for teaching and improving the performance and skills level of underperformers (Bose and Jehan 2018).
- K. **Gaming Techniques, Crosswords, Management games** – This technique uses set rules defined by the instructor for the student participants which enhances the teaching-learning process and develop skills like creativity, critical thinking, teamwork, and sportsmanship. A number of online tools are available for instructors to create quizzes, surveys, flashcards, and games. Several games can be developed in both physical and online classrooms for making the teaching interesting through games for problem solving, simulation, crosswords, and puzzles.
- L. **Workshop** – Educational Workshops gives a hands-on training to students as the instructors give them an opportunity to attempt the concept during their sessions. This technique is used for teaching subjects that require usage of office tools for development of models by students. The teachers should plan multiple-session approach to impart adequate educational knowledge to the students.
- M. **Case Scenario analysis** – The case scenario analysis is the teaching pedagogy that has student involvement for solving problems which do not have a single solution. The students group discusses the scenario with the underlying factors and come out with expected outcomes for each scenario. This critical thinking learning pedagogy makes students self-directed and self-reflective learners (Bradfield et.al., 2015).
- N. **Story Telling** – Story Telling is a powerful tool to instil imagination among the students. This pedagogy has teachers as a storyteller to inform, engage and entertain the students while teaching the concepts,

as students create mind images, draw inferences and predictions to investigate the case discussed. Since, storytelling is done using emotions by the instructor, it stimulates emotion among the students and have a better receptivity than theoretical concepts.

- O. **Smart Classroom** – Smart classrooms are technically enhanced classrooms or theatres which integrates use of computer, internet, and other multimedia devices for lecture delivery. This is a useful pedagogy for students who are keen in studying research and technology studies. A right mix of advanced pedagogy with usage of technological tools for teaching could enhance the teaching-learning experience (Yang et, al., 2018).
- P. **Google Classroom** – Bloomberg News reported a surge in number of active Google classroom users post the outbreak of Covid-19 in March 2019. Google classroom is a web-based classroom which supports the teacher with ease in assigning work, collecting responses, grading students, or announcing results. Most of the teachers need to groom themselves to learn the google classroom tools for teaching and learning practise, however they are aware of collaborative tools for a cloud-based class (Sidhu et. al., 2019).

## Literature Discussion

Education a social institution, is imperative for society to endure and flourish. The Institution should be comprehensive, sustainable, and must evolve to meet the challenges of the fast-changing and impulsive globalized world. The literature discussion elucidates a systemic discussion of educational innovations, barriers to innovation and outline future directions for effective innovations in teaching-learning process. Innovation and evolution are essential for a nation, for prosperity and progress. Innovations in education plays a crucial role in creating a sustainable future. "Innovation resembles mutation, the biological process that keeps species evolving so they can better compete for survival" (Hoffman and Holzhuter, 2012). Innovation is regarded as an instrument of positive change.

Education systems are required to be both effective and efficient, (Cornali, 2012, p. 255). According to Organization for Economic Cooperation and Development (OECD) report, "the pressure to increase equity and improve educational outcomes for students

is growing around the world” (Vieluf et al., 2012). “Education not only needs new ideas and inventions that shatter the performance expectations of today’s status quo; to make a meaningful impact, these new solutions must also “scale,” that is grow large enough, to serve millions of students and teachers or large portions of specific underserved populations” (Shelton, 2011).

### Educational Innovations

Innovation is generally understood as an introduction of a new thing or method” (Brewer and Tierney, 2012). Innovation has two subcomponents. First, there is the idea or item which is novel to a particular individual or group and, second, there is the change which results from the adoption of the object or idea” (Evans et.al., 1970). Hence, innovation requires three major steps: an idea, its implementation, and the outcome that results from the execution of the idea and produces a change. For example, Khan’s Academy and MOOCs have opened new, practically unlimited opportunities for massive, more efficient learning.

According to the *US Office of Education*, “There are innovations in the way education systems are organized and managed, exemplified by charter schools or school accountability systems. There are innovations in instructional techniques or delivery systems, such as the use of new technologies in the classroom. There are innovations in the way teachers are recruited, and prepared, and compensated. The list goes on and on” (US Department of Education, 2004). Innovation can be categorized as evolutionary or revolutionary (Osolind, 2012) and sustaining or disruptive (Christensen and Overdorf, 2000; Yu and Hang, 2010). Evolutionary innovations lead to incremental improvement but require continuity; revolutionary innovation bring about a complete change, while disrupting innovation such as a national reform, radically changes the whole field. Further, there is an excitement about online learning, mobile learning, social networking learning, MOOCs, virtual reality, virtual and remote laboratories, 3D and 4D printing, and gamification.

### Research methodology

This research paper uses both secondary data and primary data for understanding the innovative teaching-learning practices by higher education institutes in Mumbai. The traditional teaching practices

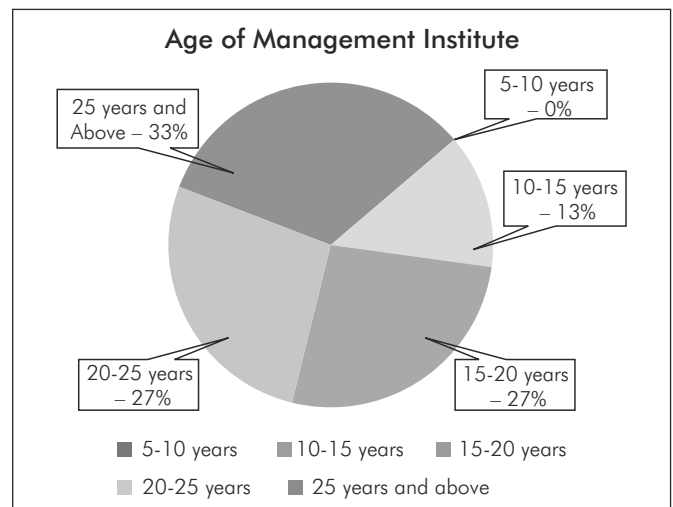
used as recommended by technical bodies and Universities has been collated using secondary sources of data namely, model syllabus of AICTE and Universities in India. A literature study using research journals, articles, book and websites was conducted to study the innovative teaching-learning pedagogy and the same has been introduced in the paper.

Primary research was conducted for collating information of new innovative teaching-learning practices by 15 senior faculty members of different management institutes in Mumbai using Google form and their adaptability to new practices and technological use for innovation in teaching. The sampling technique used was Convenience Sampling to understand the usage of teaching-learning practices in higher education institutes in financial capital of India.

### Data analysis and Findings

The data collected was analysed and the following inferences can be drawn from each question -

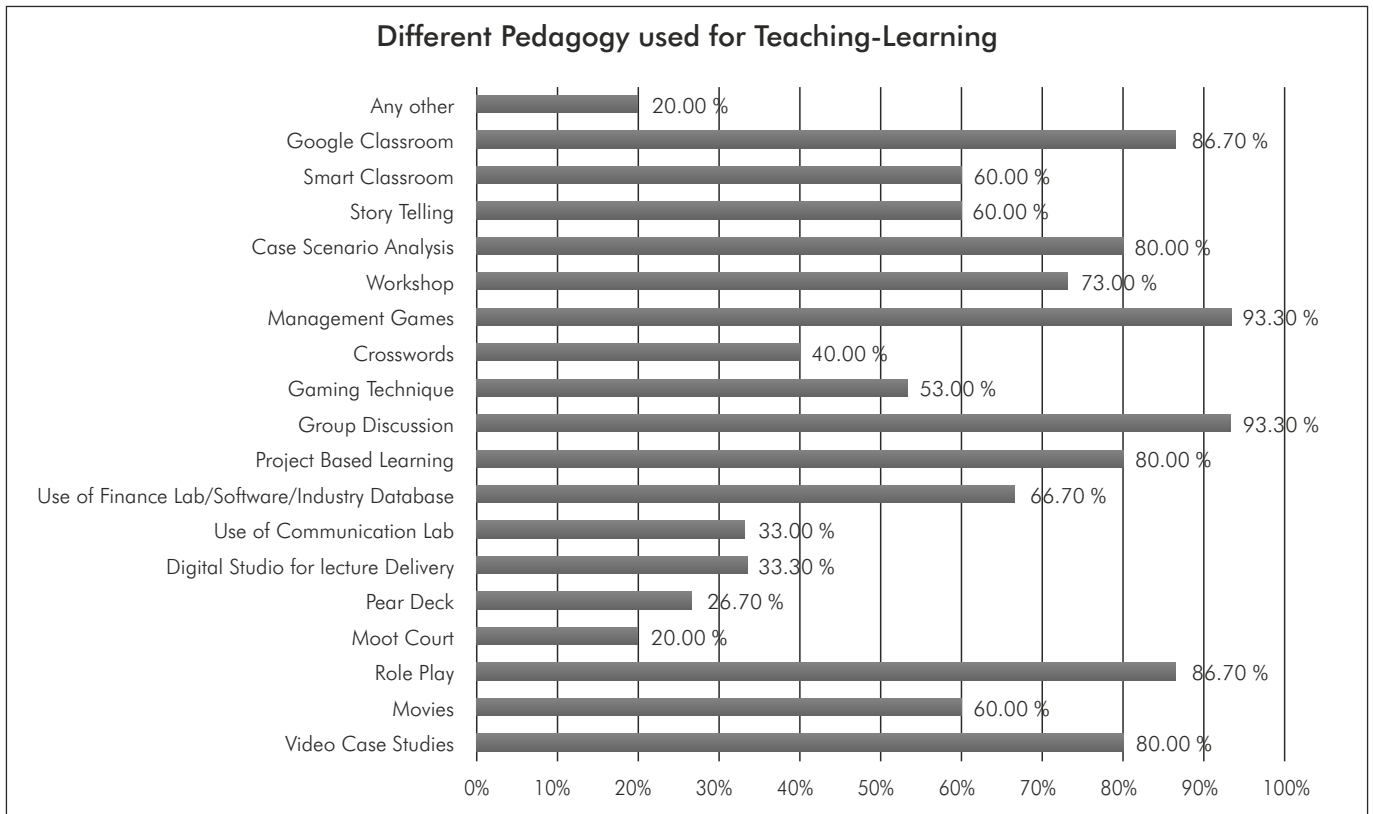
#### 1. When was the Management Institute established in Mumbai?



The data sample collected constituted of institutes which were running management programs mostly for more than 10 years. Around 60% of institutes were running management program for more than 20 years, while only 13% of the institutes comprised of running the program for around 10-15 years.

As we can see that more than 80% institutes were imparting management education for more 16 years, the data used could be inferred to be showcasing usage of several teaching-learning pedagogies.

2. What is the different pedagogy used for teaching-learning in higher educational institutions?

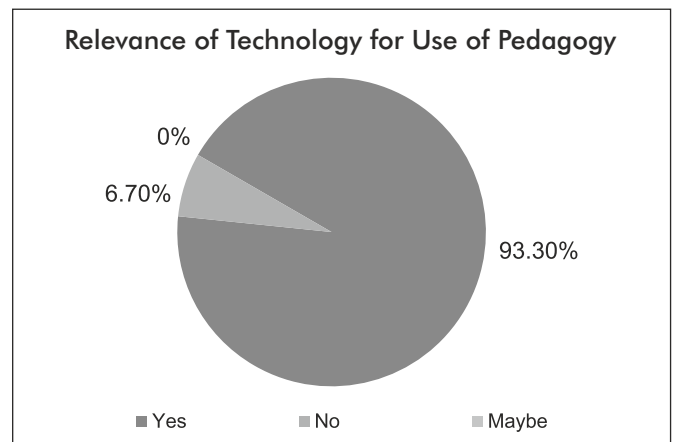
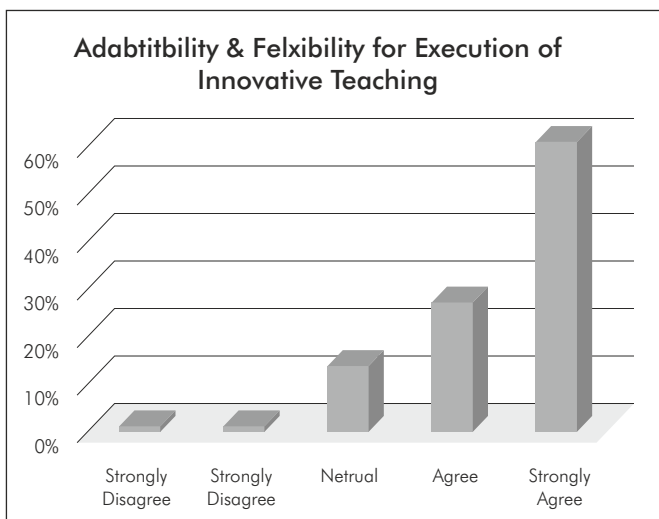


There is different pedagogy used in the teaching-learning process. However, management games, group discussion, google classroom, and role play were effectively used by the faculty for teaching-learning process. The least teaching tool used was crossroads followed by use of communication lab, moot court, and pear deck.

The faculty were highly efficient in adopting and implementing innovative teaching practices in the higher educational institutions in Mumbai.

3. How adapted and flexible is the faculty for executing innovative teaching-learning tools?

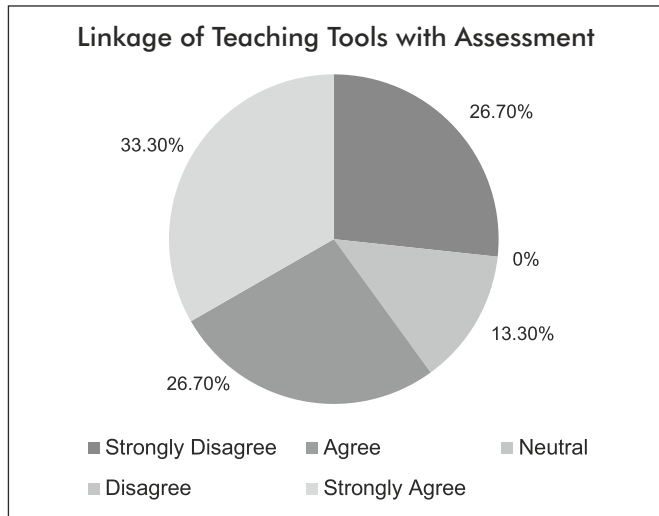
4. Does technology play a pivotal role in the pedagogical approach/ process?



Most of the faculty members agreed that technology was required, and eased the process for development of innovative teaching-learning practices while only 6% of them felt that technological advancement was not necessary to develop, and use new teaching pedagogies.

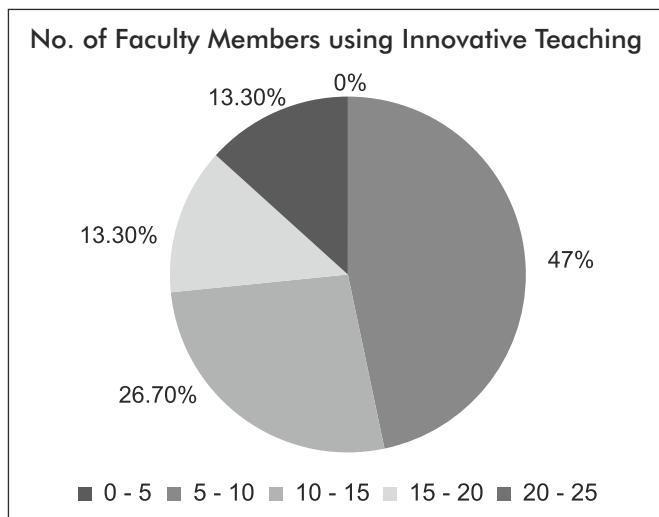


**5. Are the innovative teaching tools linked to assessment / grades for the management students?**



Around 60% of the faculty members believed that it was necessary to link new innovative teaching pedagogies to assessment/grades while a 27% believed that there was no link between use of new teaching-learning pedagogy to assessment; and the techniques could be used just to make the lesson more effective. A few of the faculty members believed that it is the individual faculty and subject choice to link pedagogy to assessment/grade and the same was not necessary and were neutral in their opinion for the same.

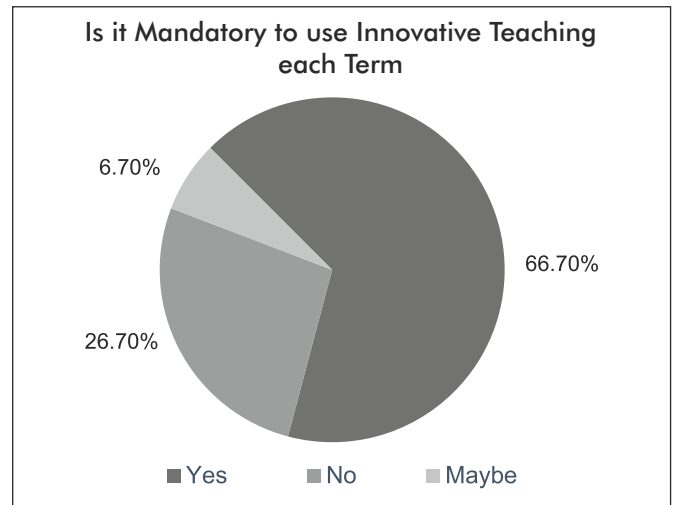
**6. How many faculties in the institute are using innovative teaching-learning pedagogy?**



It was observed that though the data comprised of institutes with experience of running the program for more than 20 years, only 5-10 faculty members in these institutes were using innovative teaching-learning

pedagogy. The number of usages of innovative pedagogies among more than 20 faculty members was seen in around 13% institutes. We can infer that amid no regulation or compulsion to use innovative teaching-learning practices, maximum faculty members preferred usage of traditional style and assessment tools for teaching and grading students.

**7. Is it mandatory in your organization to use new innovative teaching-learning tools every term?**



More than 65% reported that the institutes made it compulsory for faculty members to use new innovative tools for teaching each term, however around 45% responded that there was no such compulsion or criteria set by their respective institutes.

**Conclusion**

In this research paper, we have studied the different teaching-learning practices used by higher institutes in Mumbai and the use of new innovative teaching tools adapted and used by faculty members. The study discusses that although the faculty members used several teaching practices but the number of teachers who adopted them was comparatively less. The use of technological tools like Google Classrooms increased post covid-19 across the world, while the add on of Google classroom and the other teaching practices requiring support of technology like development of crosswords, puzzles, gaming techniques were not highly used by faculty members.

The institutes saw an under-utilisation of communication labs, financial labs, or studios by the faculty members in Mumbai and thus several institutes are now making it compulsory for usage of new teaching-learning practices each term. This showcases

the growing importance of evidence in transforming the education practices.

Our study showcases the study of different teaching-learning innovative pedagogies and their usage and adaptability among the teachers to be growing in the higher education institutes. Several institutes and faculty members who adopted the innovative practices also used them for assessment or grading of students, however 50% just used this for testing of learning interventions or improving the teaching approach to meet course outcomes and keep-up with industry expectations. We wish that this piece of work initiates a dialogue among the researchers and faculty members across the globe towards the necessity of evidence-based professional development in this area and enhance the teaching practice. Thus, the usage of an unutilized technological tools and number of available innovative teaching-learning practices would get a complete transformation in the education industry in the coming years.

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# A STUDY ON CRISIS MANAGEMENT BY NESTLÉ'S MAGGI NOODLES IN THE INDIAN MARKET

\* Ms. Riddhi Agarwal \*\* Prof. Rupesh Siyodia

## ABSTRACT

*The primary objective of this research is to investigate a crisis seen by Nestlé India for its much-loved brand Maggi Noodles and their actions to overcome the same. This research also focuses on understanding the safety crisis of Maggi Noodles and the controversy it faced in India and to study the consumer perception towards Maggi Noodles after its re-launch.*

*Study outlines how a global organization with longer than four decades of its presence in the nation attempts to adjust itself to the intricacies of Indian market. It also depicts how well a company took a crisis management decision.*

*Study gives a summary of the challenges faced by Maggi after the Safety Crisis in India and how did it overcome them. This paper attempts to comprehend Maggi Noodles' controversy and inspects the action taken by the organization to overcome the crisis faced by them in 2015 in the Indian Market and to understand how this brand handled this situation through a proper crisis management decision as well as managing the re-launch of their much-loved product.*

*The research consists of both primary and secondary source of data collection. Primary source of data collection consists of an interview of official who is associated with the Nestlé India, during the crisis. The secondary data is taken from various websites, research papers, case studies and journals.*

**Keywords:** *Crisis Management, Maggi Noodles Controversy, Re-launch Management, Consumer Perception.*

## Introduction

Nestlé's relationship with India goes back to 1912, when it started importing items to the Indian market. After India's freedom in 1947, the Indian Economy focused on goods made in India. Nestlé India set up its first manufacturing plant in 1961 at Moga, Punjab. Maggi Noodles did not struggle for long as it became widely popular among children and bachelors, being served as a quick, on the go snack for the people, capturing the Indian hearts today.

## Literature Review

1. The essential target was to get to the purchaser's

- discernment towards the brand in the post boycott re-dispatch situation. The investigation of the essential field-based study and the centre gathering investigation of the respondents demonstrate a solid steadfastness among the Maggi buyers. This additionally adjusts to a portion of the brand models on Brand value, Brand Personality, feelings (Muthuseshan, Guruprasad & Tandon, (2020)).
2. This investigation advises about the issue identified with the restriction on Maggi and how clients change their view about Maggi post boycott. The specialist has taken the information of 93 respondents and this investigation shows that clients are still prepared to purchase the Maggi after its relaunch. Additionally,

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in this examination the exploration has not referenced about the respondent profile like Gender, age and inclination which generally affects dynamics and preference varies in various states. Thus, this examination has attempted to cover greatest possible factors which influences the conduct of the client (Mustiary Begum (2016)).

3. Secondary information has been utilized in this examination by the researcher hence inclinations are out of the extent of the investigation. The principal standards of the study are customer conduct and effect on Maggi after its boycott (Neha Gard (2015)).
4. The analyst has accepted near investigation as humble of Maggi at global and Indian market. Auxiliary information is utilized and it tells the inclinations of Maggi at global market when contrasted with Indian market (Ramesh Sardar (2015)).

## Research Methodology

A Research is an unbiased, structured and sequential method of enquiry directed towards a clear implicit or explicit objective in order to derive new conclusions used for decision making.

## Research Objectives

- A. To study and understand the safety crisis of Maggi Noodles in India.
- B. To study the consumer perception towards Maggi Noodles after its re-launch.

## Research Design

This paper is descriptive research paper, a descriptive Research is used to describe various aspects of a phenomenon. This research is characterized by attempting to determine, describe and identify the results and information.

## Data Collection Method

1. Primary Source of Data Collection: It consisted of an interview. The interview is taken of an industry expert who has worked with the company. The data was collected through a structured questionnaire and set of answers given by the interviewee. The questions were open ended for industry expert interviewee to gain maximum knowledge from him.

2. Secondary Source of Data Collection: It is assessed to gain information and knowledge about our research problem that may be previously discussed by some other researchers. We could study various aspects of different researchers which gave us an idea about the factors being previously discussed and also the conclusions drawn from them.

## Findings and Analysis

### The Interview

#### Introduction

- Prof. Sourav Choudhury is the ex-Category Head of Nestlé Maggi in India.
- His notable contribution to Nestlé India is 26 years in which he handled Nestlé Foods (Maggi), Nestlé Nutrition and Nestlé Dairy in his corporate journey with Nestlé along with Kohinoor Basmati Rice and Kohinoor Spices in his journey with McCormick.

*The interview Questions and Answers are as follows: -*

### Question 1: What kind of things make a product a mega Brand in case of Nestlé's much loved Maggi Noodles?

#### Answer

- Nestlé's Maggi Noodles are by far the most favourite food for our youth today. Mr. Sourav said that he joined Nestlé in 1986 and when Maggi was just launched in India and at that time it was not a great brand as it is today.
- He joined Nestlé India as a Sales Promoter whose work was to stand in front of a Kirana store and cook Maggi. Then, he would make all the customers of the Kirana store taste the Maggi Noodles that he prepared. When people used to taste Maggi for the first time, it was not very appreciated and accepted in the market because nobody knew much about Noodles at all in India. It was something new and it took time to develop a taste for Maggi.
- Nestlé has always believed in "Tasting is believing." They have faith in this and they continued using this as a master strategy for making it into the kitchens of the consumers by giving them Maggi Noodles to taste. Maggi noodles was introduced and launched in 1983 and till date Maggi Noodles make sure that every child in India gets to taste it. The strategy continues even today. Back then during his time he

had a target of sending about 5 million samples of Maggi Noodles in India.

- This is how Maggi became Maggi. A 1600 Crore Rupees brand that it is today.

**Question 2: What were the Challenges faced by Maggi after the Safety Crisis in India and How did it overcome them?**

**Answer**

- The biggest challenge faced by Maggi after the crisis was that it was banned for a period of four months from 15th June to 18th October in 2015. It had taken MSG off from its product way back in 1988 when the first case happened in Jamshedpur in Jharkhand. They also decided to use HPP which is a plant protein which is safe and edible. Nestlé India employees visited Barabanki, to meet the FSSAI inspector and talk about the issue after which they decided to collect all the samples from the market for research and testing purposes. The most shocking thing that Nestlé India did with its much-loved product in the country was that they burnt the entire stock of the 10,000 tons of Maggi Noodles which were worth INR 500 crore in total. They fought this matter in the court against the Food Regulatory Authority (FRA) and won every case, getting clearance for every accusation.
- They also got Suresh Narayanan as the Chairman and Managing Director who took over Nestlé India and connected with the senior level food ministry and political bureaucrats and within a span of three months, Maggi was back. This brand had a 95% market share in 2010 and during the crisis Maggi went down to almost 65% and then to a 50% market share in 2015. Currently, in 2020, the market share of Maggi is 63% and Yippee Noodles manage a 22% of the market share. The rest of the Noodles brands have a total of 11% of market share.

**Question 3: Why did other brands who had a golden opportunity to replace Maggi from being a Market leader and grab the first position still could not capture the Market?**

**Answer:**

- This being a very interesting question had the simplest and yet the most difficult to gain answer. However, it can be all explained in just one brilliant word that is "TRUST."

- Trust has played the most important role in the highest market share of Maggi in India even today in spite of the many noodles brands that have been coming since 2011 and further.
- Maggi once enjoyed the monopoly of the noodles industry in India as it was the most widely known brand that the consumers loved and trusted. After the crisis, as per the research carried out by the company, 70% of the respondents were waiting to see the product back on the shelves after the crisis that took place. Every year Maggi noodles are tested by 5 million new students from class 6th to 8th grade. Every year, hence, Maggi gets new customers.
- Even Patanjali tried to take over Maggi, but it failed badly because it could not gain the same trust which Nestlé spent in building in the last 40 years.
- Nestlé is a very honest brand and people have trusted this brand for many years. It is not only Nestlé's Maggi Noodles but also all the other products like Nescafe, KitKat, Milky bar, Milkmaid where people have put their trust.

**Managerial Implications**

**Emphasis on Quality and Innovation:** The consumer value equation today is Health, Wellness and Responsibility. The worldwide new pattern focuses on creating food which is healthy to eat, has nutritional value and a premium sensory appeal with high shelf life.

**Eco-consumer:** Many companies aim to have 100% recyclable packaging within a few years. Companies should design their products in such a way that it does not harm the environment.

**Brand Image:** One thing we learned from this case is that a slight remark or question on the brand's quality had cost Millions to Nestle India and Companies should focus on constantly building its trust and reputation among its customers by interacting with them.

**Loyalty:** Most companies fail to paint a true picture of their product and therefore the consumers eventually lose the interest as well as the loyalty towards the company.

**Communication:** Packaging information should be easily understood. For a better communication, one must provide images, brand certificates, QR code

where a consumer can have a quick access to all the information of the product at one place.

## Recommendations and Conclusion

- The Maggi Noodles crisis in India illustrates the harm on its reputation that can befall companies that fail to understand and align their activities with the culture of the host country.
- Companies should focus on building a good brand reputation and trust among its consumers by constantly keeping food quality tests, analysing trends, taking actions based on customer feedback, research on new ways to improve quality, reduce preservatives and try to keep the food fresh and healthy. The Nestlé Maggi crisis was as much about the perceived quality of the product as it was about the way communication was handled in the media, especially on social media. Nestlé India has always been a low spender on promotions. From 2010 to 2014, its net expense on promotion and advertising was 4.2 - 4.8% of its total income. In 2015 during the crisis, the company spent INR 525.21 Crore, or 6.42% of its total sales, on advertising and promotions, (This data is according to its annual reports).
- Nestlé had to undergo a reverse supply chain in order to pick up all the packets. It was a huge frustrating task to pick up all the samples from the market and burnt each one of them. This task was not only very difficult but also affected the minds of the employees.
- In calendar year 2014, Nestlé India had a revenue of Rs 9,854.84 crore. Sales for the year 2015 stood at Rs8,175.31 crore.
- In the quarter ended 30 September, it reported a revenue of Rs. 2,190.2 crore. It was Rs 2,332.6 crore in the quarter ended 31 March 2015 (the quarter before the Maggi ban).
- One of the key reasons why Nestlé failed to tackle the Maggi mess which was estimated to have caused the company a half a billion-dollar loss is a communication failure.
- Even after this crisis, Maggi Noodles is again the Market leader till date. This shows the kind of trust people have towards this brand and its products.

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