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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
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- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

IMPACT OF WAREHOUSING ON AGRICULTURE SUSTAINABILITY

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ABSTRACT
Agriculture is the back bone of Indian economy and 54.6% of the Indian population is engaged in agriculture sector. Agriculture Ministry estimates 30% loss in the total agricultural production in India. The post harvesting loss of the country is Rs 92,651 in the year 2016. But country's agriculture marketing process (warehousing) is not sufficient. Farmers do not have proper public or private facilities to retain their entire product or surplus product when there is no good price during harvesting period. Establishment of warehousing for farmers to store their goods will result in reduced post-harvest loss and increase the availability of food in the country. Therefore, warehousing is important in the agriculture marketing and agriculture sector. The main objective of the paper is to study the agriculture production in India and to identify the warehousing capacity and utilization in India. This paper has used the data collected from secondary sources. This paper reveals that if the farmers store their surplus agriculture products in warehouse it will reduces the post harvesting loss, which will automatically increase the farmer's income and also increase food availability of the country therefore warehousing leads to consistent supply of food crops leading to sustainable agriculture. The paper suggests that increase in the number of warehousing facility with proper technology and services will lead to betterment of crop, improvement in agriculture status, leading to agriculture sustainability.

KEYWORDS
warehousing, agriculture sustainability.

JEL CODES
Q13, Q16.

INTRODUCTION
Agriculture occupies the most important position in Indian economy. According to sector wise Indian GDP composition in 2017 are as follows: Agriculture (15.4%), Industry (23%) and Services (61.5%). With production of agriculture activity of $375.61 billion, India is the second largest producer of agriculture product. India accounts for 7.39 percent of total global agricultural output. India is way behind China which has $991 billion GDP in agriculture sector. GDP of Industrial sector is $560.97 billion and world rank is 6. In Service sector, India ranks 8th at world level and its GDP is $1500 billion. Share of primary, secondary and tertiary (services) sectors have been estimated as 18.57 per cent, 27.03 per cent and 54.40 per cent.

This sector also contributes much to sustainable economic development of the country. The sustainable agriculture development of every country depends upon the judicious mix of their available natural resources. The big objective for the improvement of agriculture sector can be realized through rapid growth of agriculture which depends upon increasing Agriculture marketing (warehousing). Thus we can go for the second system which may potentially cause environmental degradation in the economy and affect its sustainability. Therefore, there is a need for tackling the issues related to sustainable agriculture development.

The main aim of any agricultural Programme is to maintain sustainable growth in agricultural production for ensuring food security to the growing population and also to generate adequate surplus for exports. To many, entering a sustainable development path for agriculture and food seems like a daunting challenge. We believe that it is feasible. The overarching motive for this report is to encourage people to act, despite the enormous challenges, or as John F. Kennedy said: "By defining our goal more clearly, by making it seem more manageable and less remote, we can help all people to see it, to draw hope from it, and to move irresistibly toward sit."

DEFINITION OF SUSTAINABLE AGRICULTURE
Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. The concept of sustainability is composed of three pillars: economic, environmental, and social also known informally as profits, planet, and people.

Sustainable agriculture can be defined in many ways, but ultimately it seeks to sustain farmers, resources and communities by promoting farming practices and methods that are profitable, environmentally sound and good for communities. Sustainable agriculture fits into and complements modern agriculture. It rewards the true values of producers and their products. It draws and learns from organic farming. It works on farms and ranches large and small, harnessing new technologies and renewing the best practices of the past.

According to John E. Ikerd "A sustainable agriculture must be economically viable, socially responsible and ecologically sound. The economic, social and ecological issues are interrelated, and all are essential to sustainability. An agriculture that uses up or degrades its natural resource base, or pollutes the natural environment, eventually will lose its ability to produce. It's not sustainable. An agriculture that isn't profitable, at least over time, will not allow its farmers to stay in business. It's not sustainable. An agriculture that fails to meet the needs of society, as producers and citizens as well as consumers, will not be sustained by society. It's not sustainable. A sustainable agriculture must be all three - ecologically sound, economically viable and socially responsible. And the three must be in harmony."

Sustainable agricultural development seeks not only to preserve and maintain natural resources, but also to develop them, as future generations would have much more demand quantity-wise and quality-wise for agricultural and food products. Such goals should ensure a balance with the development of livelihoods enjoyed by the individuals concerned. Livelihood should not be restricted to an indicator of sufficient income levels but should also include public health concerns and education standards.

IMPORTANCE OF WAREHOUSING IN AGRICULTURE SUSTAINABILITY
Warehousing is an independent economic activity and is closely linked with production, consumption and trade. Development of agricultural marketing and Agric, ulture sustainability need strong warehousing system. Warehousing is the important support service for development of agriculture. Increasing volume of commodity trade, especially of agricultural products, has been one of the major sources of growth of merchandise demand and has seen impressive growth after the formation of the World Trade Organization (WTO) and ratification of GATT treaty in 1995. With many developing countries, having predominance of agriculture

in their economy, with their macro growth strategies and with growth of agricultural incomes and employment, a steady increase in agricultural trade volumes is likely in the coming years.

Normally, small farmers do not have the financial strength to retain the produce with them for getting good returns when prices are high. Absence of scientific storage system leads to post harvest loss, wastage and quality deterioration. Heavy loss to the extent of 25% to 30% in fruit and vegetables is observed. Absence of institutional credit mechanism in rural areas and absence of formal mechanism for securitization of commodities leads to either debt trap and exploitation by money lenders or a compulsion to sell immediately after harvesting. A structured warehousing system backed by warehouse receipt financing mechanism is relevant to solve such issues faced by Indian farmers.

country's agriculture marketing process (warehousing) is not sufficient. Farmers do not have proper public or private facilities to retain their entire product or surplus product when there is no good price during harvesting period. Establishment of warehousing for farmers to store their goods will result in reduced post-harvest loss and increase the availability of food in the country. Therefore, warehousing is important in the agriculture marketing and agriculture sector.

STATEMENT OF PROBLEM

Food security is the major problem in the world. So agricultural sustainability is very important and after reviewing the literature it is found that most of the studies have been done by organic farming in agriculture development. Some of the other studies have been done by agricultural sustainability through the agriculture production and productivity and we use the fertilization for agricultural sustainability but few studies have been done on **Impact of warehousing on agriculture sustainability.** There is hardly any work on **Impact of warehousing on agriculture sustainability** on the possible increase in the food availability in the country by reducing wastage of produced crop and also increase the farmer's income of the country.

OBJECTIVES OF THE STUDY

1. To study the trends of agriculture production India.
2. To assess the warehouse capacity in India.

METHODOLOGY OF THE STUDY

This study based on the Secondary data. The secondary data has been collected from comptroller and auditor general of India Report on storage management, FCI, CWCs, and SWCs reports com, Annual Report of Ministry of Consumer Affairs and Public Distribution, Government of India, Assocham-National Summit on Warehousing in India and the Directorate of Agricultural Marketing and Inspection, Government of India. journals, articles, papers and conference volumes.

SCOPE OF THE STUDY

This paper is based on the Secondary sources of data only. This paper mainly studied on India level only. This study is not focusing on the Private warehouse, co-operative warehouse. This paper not study the programmes related to warehouse.

REVIEW OF LITERATURE

Sarah Velten and Julia Leventon et. al (2015) study in their article "What is Sustainable Agriculture? A Systematic Review" tried to highlight the objective of understanding the concept of sustainable agriculture, especially from a social science and governance point of view and identifying the ideas and aspects that are associated with sustainable agriculture. This study used cluster analysis and the secondary data. The study reveals the strategies to progress by understanding and implementation of sustainable agriculture. Since the beginnings of the debate about sustainable agriculture, there has been a great variety of conceptions of the term.

V. Basil Hans (2013) in study on "An Analysis of Sustainable Agricultural Development in India" with the objective of ensuring equity and sustainability declares that agriculture must change to meet the rising demand, to contribute more effectively to the reduction of poverty and malnutrition, and to become ecologically more sustainable. This paper asserts the issues related to sustainable agriculture development.

Mohammad Sadegh Allahyari (2009) analyse in his research paper "Agricultural sustainability: Implications for extension systems" the new extension model to achieve sustainable agriculture. This study found that re-thinking in agricultural extension components is mandatory and we must strive to find new functions, strategies and objectives for extension systems toward sustainability.

Ewa Siemianowska and Andrzej Wesołowski et. al (2017) in their study "Sustainable agriculture and protection of the environment" observes the farmers' awareness of the principle of sustainable agriculture and balanced fertilization and their influence on the environment. This study used the primary data. The farmers declared that they were aware of the influence of agricultural activities on the environment. The study reveals that declared knowledge on the above–mentioned matter bears no relation to the fertilization practice. There is a need of greater and greater indoctrination of agricultural society of the necessity of putting into practice the principles of sustainable growth, and particularly of balanced fertilization.

Prakash Shankar Kamble and Dipak Gopinath Chavan (2018) examined in their study "Sustainability of Indian Agriculture: Challenges and Opportunities" the current situation of Indian agriculture at various dimensions and to identify the existing challenges before India's agriculture sector. The study reveals that current position of Indian agriculture, the major challenge is to secure sustainability of agriculture. Global warming and climate change are having adverse impact on overall agriculture productivity and production in India.

Waseem Hassan Khan and Aamir Jamal (2018) in their study on "Sustainable Agricultural Development in India with Special Reference to Jammu and Kashmir: A Macro Analysis" discuss about ensuring equity and sustainability. Agriculture must change to meet the rising demand, to contribute more effectively to the reduction of poverty and malnutrition, and to become ecologically more sustainable. The study used the secondary data. Study concluded that there are various limitations in agricultural sector of Jammu and Kashmir State. It is due to its Geographic's, limited irrigation, and marketing and transportation problem. But, there is a potential for sustainable agricultural development.

Soumya.K.M (2015) analysis "Organic Farming: An Effective Way to Promote Sustainable Agriculture Development in India" The study reveals the possibility of espousing Organic agriculture as an effective strategy to promote sustainable agriculture in India. A sustainable agricultural sector strategy can contribute to a broader development of agricultural productivity, food security, generation of rural employment and poverty reduction while promoting the conservation of the natural resource base.

Nazeerudin (2016) examined "Organic Farming in Karnataka: Practitioners Perspectives" objective of the paper is to review the need assessment of the contemporary alternate agriculture and to find out perception about meaning of organic farming and specific features of organic farming as understood by the farmers. This study used the primary data and purposive sampling the selection of sample organic farmers for the cases studies. The paper found that the personal attributes towards environment quality of agro eco system and food security are the significant ecological factors which influenced and motivated the farmers to understand the unique features of organic farming where the micro-level sustainability of the farming system has been ensured.

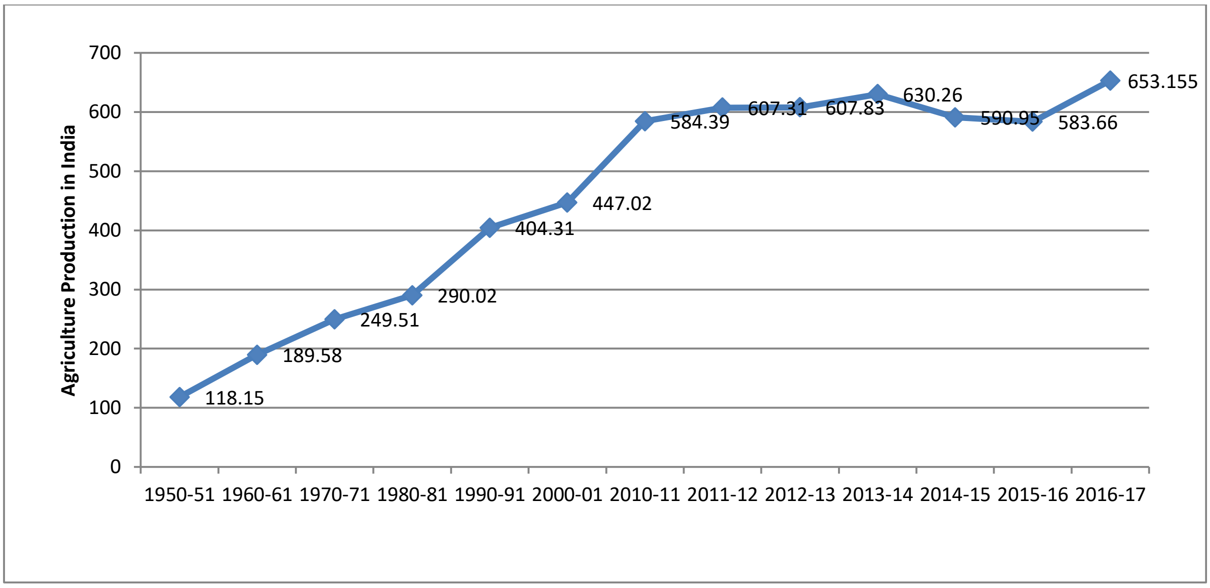
AGRICULTURE PRODUCTION IN INDIA

TABLE 1: PRODUCTION OF MAJOR AGRICULTURAL CROPS IN INDIA (Million tonnes)

Crops	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Food grains	50.82	82.02	108.42	129.59	176.39	196.81	244.49	259.29	257.13	265.04	252.02	251.57	275.68
Rice	20.58	34.58	42.22	53.63	74.29	84.98	95.98	105.30	105.23	106.65	105.48	104.41	110.15
Wheat	6.46	11.00	23.83	36.31	55.14	69.68	86.87	94.88	93.51	95.85	86.53	92.29	98.38
Maize	1.73	4.08	7.49	6.96	8.96	12.04	21.73	21.76	22.26	24.26	24.17	22.57	26.26
Nutri cereals	15.38	23.74	30.55	29.02	32.70	31.08	43.40	42.01	40.04	43.29	42.86	38.52	44.19
Pulses	8.41	12.70	11.82	10.63	14.26	11.08	18.24	17.09	18.34	19.25	17.15	16.35	22.95
Gram	3.65	6.25	5.20	4.33	5.36	3.86	8.22	7.70	8.83	9.53	7.33	7.06	9.33
Tur(Arhar)	1.72	2.07	1.88	1.96	2.41	2.25	2.86	2.65	3.02	3.17	2.81	2.56	4.78
Lentil(Masur)	___	___	0.37	0.47	0.85	0.92	0.94	1.06	1.13	1.02	1.04	0.98	___
Oilseeds	5.16	6.98	9.63	9.37	18.61	18.44	32.48	29.80	30.94	32.75	27.51	25.25	32.10
Groundnut	3.48	4.81	6.11	5.01	7.51	6.41	8.26	6.96	4.70	9.71	7.40	6.73	7.565
Rapeseed and Mustard	0.76	1.35	1.98	2.30	5.23	4.19	8.18	6.60	8.03	7.88	6.28	6.80	7.98
Soy Bean	___	___	0.01	0.44	2.60	5.28	12.74	12.21	14.67	11.86	10.37	8.57	13.79
Total	**118.15**	**189.58**	**249.51**	**290.02**	**404.31**	**447.02**	**584.39**	**607.31**	**607.83**	**630.26**	**590.95**	**583.66**	**653.155**

Source: Directorate of Economics and Statistics, DAC and FW

CHART 1



The above Table.1 and diagram shows the agriculture production trends in India. Agriculture is the back bone of Indian economy. Agriculture Sector share of GDP is 15.4%. Agriculture production which was 118.15 million tonnes in 1950-51 was consistently increased till 2013-14. In 2014-15 there was a dip in the total production from 630.26 million tonnes to 590.95 million tonnes which later recovered to 653.15 during 2016-17. There is a substantial increase in the overall production but the rate of increase has been very less and in some years it was negative also. This seems to be a threat to sustainability of agriculture.

PUBLIC SECTOR WAREHOUSING AGENCIES IN INDIA

At the present, there are three main agencies in the public sector in India engaged in the field of building large-scale storage infrastructure and warehousing namely;

- Food Corporation of India (FCI).
- Central Warehousing Corporation (CWC) and
- State Warehousing Corporations (SWCs)

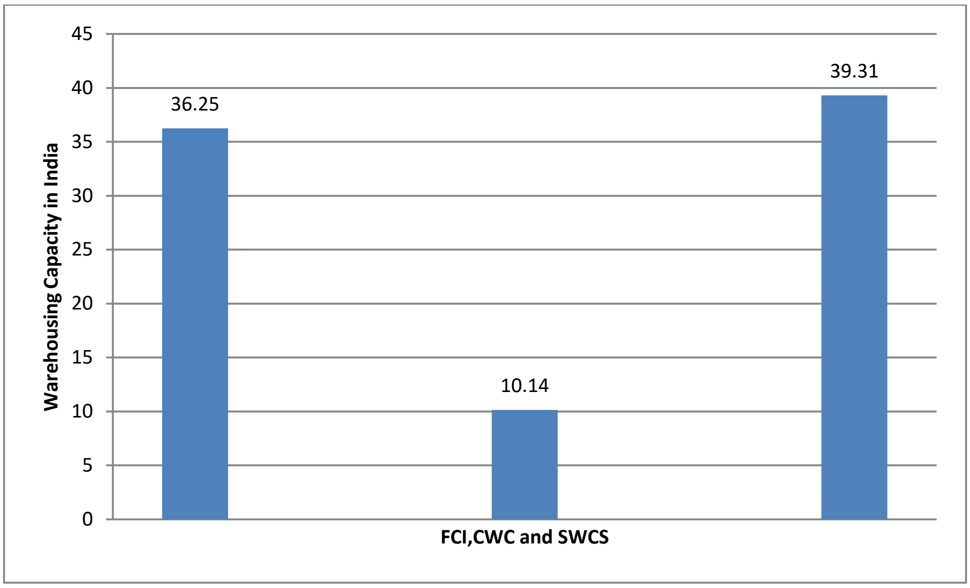
The Food Corporation of India (FCI) is the main agency responsible for the execution of food related policies of the Central Government. The function of Food Corporation of India primarily relates to the procurement, storage, movement, transportation, distribution and sale of food grains on behalf of the Central Government.

TABLE 2: CURRENT STATUS OF WAREHOUSING CAPACITY IN INDIA AS ON 2018

Sl. No	Name of the Organization/Sector	Storage Capacity in Million tonnes
1	Food Corporation of India (FCI)	36.25
2	Central Warehousing Corporation (CWC)	10.14
3	State Warehousing Corporations(SWCs) and State Agencies	39.31
	Total	85.7

Source: FCI portal, Department Food and Public Distribution, Government of India Portal, Assocham-National Summit on Warehousing in India and the Directorate of Agricultural Marketing and Inspection, Government of India

CHART 2



The Above Table.2 and diagram shows that the Current Status of Warehousing Capacity in India as on 2018. The State Warehousing Corporations (SWCs) and State Agencies own 39.31 Million tonnes is highest storage capacity beyond that all the sector. Then Food Corporation of India (FCI) own 36.25 Million tonnes warehousing storage capacity in India. The Central Warehousing Corporation (CWC) 10.14 Million tonnes warehousing storage capacity in India.

TABLE 3: WAREHOUSING CAPACITY OF THREE MAJOR PUBLIC SECTOR UNDERTAKINGS IN INDIA (Capacity in Lakh MT)

Year	FCI	CWC	SWCs	Total
1998-99	191.56	72.28	113.89	378.93
1999-00	254.08	73.48	123.74	452.61
2000-01	314.26	74.79	149.05	547.22
2001-02	279.01	83.91	185.49	553.67
2002-03	265.87	89.17	199.31	556.32
2003-04	236.65	91.14	199.85	530.66
2004-05	233.70	93.59	200.38	535.95
2005-06	255.56	101.87	197.05	552.99
2006-07	252.57	100.38	192.20	546.97
2007-08	238.94	102.20	187.32	525.04
2008-09	252.79	98.78	196.87	554.91
2009-10	288.36	105.25	209.26	603.60
2010-11	288.36	103.51	216.12	504.48
2011-12	316.10	100.32	228.37	544.47
2012-13	336.04	102.34	250.93	586.97
2013-14	377.35	105.55	266.96	644.31
2014-15	368.8	106.21	270.95	639.75
2015-16	356.63	115.11	270.03	626.66
2016-17	357.89	99.65	270.04	627.93

Source: Annual Report of Ministry of Consumer Affairs and Public Distribution, Government of India

The above Table 3 indicates that the total warehousing capacity in India held by three major public sectors. The capacity held with FCI undertakings as on 1998-99 was 191.56 lakh MT (metric tonnes) and the capacity as on 2016-17 was 357.89 lakh MT (metric tonnes) and Food Corporation of India holds the major share of the total capacity. The capacity held by Central Warehousing Corporation as on 1998-99 was 72.28 lakh MT while the capacity of CWC in the concluding year of the 2016-17 was 99.65 lakh MT. The state warehousing corporations is the second major capacity holder among the three public sector undertakings. The capacity held with state warehousing corporations as on 1998-99 is 113.89 lakh MT and the capacity as on 2016-17 is 270.04 lakh MT.

The total warehousing capacity held with the three public sector undertakings in the concluding year of the study stood at 627.93 lakh MT in the year of 2016-17. The data reveals trends in the FCI, CWC and SWCs Capacity in India. All Warehousing Organization of FCI, CWC and SWCs shows the fluctuation trend.

TABLE 4: YEAR WISE AGRICULTURE PRODUCTION AND WAREHOUSING CAPACITY IN INDIA

Year	Agriculture production in million tonnes	Growth rate of Agriculture Production	Warehousing Capacity in Lakh MT	Growth rate of Warehousing Capacity
1990-91	404.31	0.00	328.04	0.00
2000-01	447.02	0.095544	547.22	0.400534
2010-11	584.39	0.235066	504.48	-0.08472
2011-12	607.31	0.03774	544.47	0.073448
2012-13	607.83	0.000856	586.97	0.072406
2013-14	630.26	0.035588	644.31	0.088994
2014-15	590.95	-0.06652	639.75	-0.00713
2015-16	583.66	-0.01249	626.66	-0.02089
2016-17	653.155	0.106399	627.93	0.002023

Source: Annual Report of Ministry of Consumer Affairs and Public Distribution, Government of India

The above table.4 shows that The Rate of Growth of Agricultural production and the warehousing capacity growth rate were studied to know their consistent growth over the year's. The agriculture production growth rate in 2000-01 was just 0.009% which got better in 2010 but worsened in almost all other years. On the other hand, the warehouse capacity increasing in even worse rate and negative in many years.

The data finally concluded the fluctuation trend of Growth rate of Agriculture Production and the fluctuation trend of Growth rate of Warehousing Capacity. Both are not positive enough to maintain agriculture sustainability.

CONCLUSION

The paper discussed the Agriculture production and warehousing capacity in India. It identifies and compares the growth rate of warehousing capacity and the growth rate of Agriculture production which is increasing but at a very low pace leading to a threat to agricultural sustainability. If agricultural production increases in a greater pace and the produce are protected in better warehouses, then there is no food scarcity in the country and also no threat to the agriculture prices. For this both farmers and government should take proper measures. There is hope for positive changes as more and more farmers are becoming open-minded and government is coming up with new initiatives. The study recommends that problems – largely institutional, structural, and administrative – need to be overcome for development in general and sustainable agricultural development in particular.

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MERGERS & ACQUISITIONS IN BOMBAY STOCK EXCHANGE: TESTING FOR MARKET EFFICIENCY USING PANEL REGRESSION

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ABSTRACT

Mergers and Acquisitions (M&As) are the inorganic growth strategies which have become important in today's corporate world due to increase in competition and complexity. M&As are not only related to accounting measures of performance of firms but they also affect the wealth of the shareholders either positively or negatively. According to Hubris hypothesis given by Roll (1986), the merger and acquisition announcements result in a decrease in stock price of acquiring firm, leading to a fall in its value. On the other hand, Synergy Hypothesis states that the two firms merge to take advantage of economic gains that result from sharing of resources, resulting in increased returns to the shareholders of both firms. The purpose of this paper is to find out whether there is any difference in the stock price and returns before and after the announcement of merger and acquisition. To capture short run/immediate effect of M&A announcement on the stock price and shareholders return, this study has used Market Model to calculate abnormal returns and semi-log regression equations have been estimated to support the analysis. This paper is an attempt to investigate the efficiency of Indian stock market in the semi-strong form in the event of successful merger announcements. The finding from this research is that the Indian stock market is efficient in semi-strong form in the event of merger announcements.

KEYWORDS
M&A, abnormal return, event- study, announcement effect, market efficiency, semi- strong form.

JEL CODES
G14, G34.

I.0 INTRODUCTION

Mergers and acquisitions are the most common routes taken by corporations for inorganic growth all over the world. In fact the last two decades have been known as the M&A waves. Mergers and Acquisitions take place when two or more companies are brought under the same effective control and are managed by the same group. It can be done in two ways: (i) acquisition of one business unit by another or, (ii) creation of a new company by complete consolidation of two or more units.

M&As have always been concerned with bringing benefits including operating efficiency, financial strength and an increase in profitability of the survived firm because of more gains, reduction in expenses, reduction in earnings volatility, achievement of economy of scale and scope and increased market power as well.

Many research studies from the beginning of M&A have focused on approximately every aspect of firm affected by such events. These issues include firm profitability, efficiency, liquidity and share performance to some extent as well. But mostly studies- in developing countries like India, have focused on examining the operating performance of survived firm in context of profitability, solvency and efficiency etc. "This approach is not accurate in economic sense because data used is based on historical figures which more likely to ignore the current market value. Other drawback is that, changes in results could be due to factors other than M&A solely".

Since the main goal of a firm is to achieve the objective of shareholder's wealth maximization, we must evaluate the performance of bidding company in stock market as well. Moreover, the studies which have focused on the impact on firm value are not comprehensive in nature and results are neither consistent, nor able to generalize or to accept /reject the hubris (and synergy) hypotheses. Some studies have documented significant increase in abnormal returns of bidding companies after event, while others have given results consistent with hubris hypothesis. Therefore, there is a need to scrutinize it more.

Besides this, most studies in emerging economies have focused only on the long term impact on acquiring firms rather than analyzing the immediate effect of M&A announcement on shareholders' wealth. There is a need to examine the short run effect as well; such an approach helps us to capture the immediate stock market reaction which highlights the true benefits and real economic effect due to consolidation announcement. This can be done through technical analysis. Technical analysis is based on apparent trends in share prices and these trends are generated as short run phenomenon, not reflecting the long term fundamentals of the company. So in this paper, through event study, we are measuring only the immediate effect/ trend and not the fundamental value.

Further, by making use of panel data analysis, we have investigated the efficiency of Indian stock market in semi- strong form in case of merger announcements (i.e. publicly available information). In an efficient market, security prices fully reflect all available information. "Thus, an information regarding the prospect of the company will affect the stock price to react quickly, which makes it impossible for the investors to earn excess return or abnormal return". On the other hand, if market is not efficient, it will not be able to discount the event/ available information; therefore, there will be some kink in the price or return trend.

Thus through this paper, we intend to study the effect of M&A announcement on acquiring firm value in the short run and examine market efficiency. A sincere attempt has been made to capture the effect of M&A announcement on stock price and returns for the immediate time after the event has occurred. This exercise will provide useful information about the effects of M&A to the management and owners of business firms who are continuously searching for potential partners to implement mergers in future and to the investors of stock markets as well.

This paper is organized as follows: Section 2 discusses the objectives of study, Section 3 details the Literature Review, Section 4 presents the research hypotheses, Section 5 discusses the data and methodology, Section 6 presents the Empirical Analysis and Results, Section 7 contains Conclusions and, lastly References are given in Section 8.

II.0 OBJECTIVES OF THE STUDY

The main objectives of this study are to determine the impact of M&A announcements on the stock price and return of acquiring firms in the short run and to examine market efficiency for Indian Stock Market in the event of M&A announcement. To put it differently, the objectives are as follows:

1. To find out whether there is any difference in stock price before and after merger and acquisition announcement.
2. To find out whether there is any difference in log return in pre-announcement and post-announcement periods.
3. To analyze if the Indian stock market is efficient in semi-strong form in the event of merger and acquisition announcements using abnormal return.

III.0 LITERATURE REVIEW ON ANNOUNCEMENT EFFECT OF MERGERS AND ACQUISITIONS

Mergers and Acquisitions are important strategic decisions that affect the profitability and wealth of shareholders of the company. Researchers, especially in developed economies such as USA and UK have conducted numerous studies to answer the basic question: Do mergers and acquisitions create any value for the company and its shareholders? Studies focusing on the post-merger performance and value-creation effect of M&As usually follow either of the two general approaches: first is share price analysis- using data regarding share prices to identify gains and losses to shareholders of acquirer and target firms, and second is operating performance analysis- using accounting data to analyze long-run operating and financial performance of acquirers in a merger deal.

The studies falling under these two approaches can be further divided into three categories:

- Announcement Period studies,
- Studies focusing on long term share price performance and,
- Studies focusing on operating performance**.**

This section discusses some important announcement period studies conducted across the globe to draw a general conclusion on the impact of M&A announcements on the corporate performance as well as on the shareholders' wealth**.**

ANNOUNCEMENT PERIOD STUDIES

Such studies follow event study methodology and consider the short term returns earned by the shareholders surrounding the announcement period of the event. Whenever there is an announcement regarding merger of two firms, the market adjusts rapidly to this information and this new information is incorporated into the share prices of firms. The returns generated by shareholders on the days around the announcement that are specifically due to the announcement of event are called Cumulative Abnormal Returns and have been studied by the researchers to determine the gains or losses to the shareholders. A large number of such studies conclude that the target firms earn positive returns while shareholders of acquiring firms experience loss of wealth. Some important studies are as follows:

TABLE A

AUTHOR(S) & YEAR	OBJECTIVE(S)	COUNTRY & PERIOD & METHODOLOGY	RESULTS
Dodd1980)	To determine the impact of both accepted and rejected merger proposals on the wealth of shareholders.	US (1970-77) Market model Abnormal returns	Shareholders of target firms earn positive abnormal returns while bidder shareholders earn negative abnormal returns over the duration of proposal in case of both completed and canceled proposals.
Firth(1980)	To determine the impact of takeover on shareholders wealth and management benefits.	UK (1969-75) Market model Control group	Shareholders of acquired firms and managers of acquiring firms benefit while shareholders of acquiring firms suffer a loss of wealth.
Asquith et al. (1983)	To determine if mergers are value enhancing strategies for the shareholders of bidding firms.	US (1975-83) Excess returns Regression	Shareholders of bidding firms earn significant positive returns during the 21 days before the announcement of each of their first four merger bids. These abnormal returns are directly correlated with the relative size of the target firm's equity.
Datta, Pinches and Narayana (1992)	To determine how shareholders' wealth is influenced by factors such as number of bids (single vs. multiple), type of financing (cash vs. stock), and type of acquisition (conglomerate vs. non-conglomerate).	US (Meta-Analysis) Event study Multiple regression	Stockholders of acquiring firms on an average earn nil or statistically insignificant gains from the announcement of merger while stockholders of target firms experience positive abnormal returns of over 20%. Both acquirer and acquired firms lose in stock-financed transactions. Also, there is a positive effect of related or non-conglomerate mergers on wealth of acquiring firms' shareholders.
Davidson and Cheng (1997)	To test – (i) bid premium is greater for cash- financed acquisitions than stock-financed acquisitions, (ii) excess returns generated to the target firms in the announcement period depend upon the bid premium and not the method of payment.	US(1981-87) Market model Abnormal returns Cross sectional regression	Cash financed takeovers, are associated with larger bid premiums, these larger premiums are positively related to abnormal returns generated to target shareholders.
Ocana, Pena, and Robles (1997)	To examine the share price returns generated to the shareholders of target firms in Spain.	Spain(1990-94) Average abnormal returns (AARs) and Cumulative AARs	Target shareholders did not earn significant abnormal returns during first part of the year before the announcement period, but significant excess returns were experienced in the two months before the bid. Thus, small markets (Spain) respond in the same way as the larger US and UK stock markets.
Cybo-Ottone and Murgia (2000)	To analyze the impact of mergers in banking industry in Europe.	Europe (1988-97) Market model (AR and CAR) Bivariate & Multivariate Regression analysis	Significant increase in shareholder value in case of within-country acquisitions, deals involving two or more domestic banks and, banks with insurance companies. But M&A deals with securities firms or with cross-border institutions were not valued positively by the market.
Floreani and Rigamonti (2001)	To analyze the impact of mergers in Insurance industry in US and Europe.	Europe and US (1996-2000) Event study Abnormal returns	Mergers resulted in an increase in the wealth of shareholders of acquiring firms. Direct positive correlation between the abnormal returns for acquirers and the deal size. Significant increase in the shareholders' wealth in case of cross-border deals, while mergers concluded between insurance companies located in the same European country did not gain a positive market's expectation.
Billett, King, and Mauer (2003)	To determine the impact of mergers and acquisitions on the wealth of bondholders of target and acquiring firms.	US (1979-97) Monthly Abnormal bond returns	Bonds issued by the target firm earn significant positive announcement period returns of 1.09% while, bondholders of acquiring firm experience negative announcement period returns.
Choi & Russell (2004)	To examine the effect of M&A in the construction sector in U.S. on firms' performance and investigate factors that may affect post M&A performance.	US(1980-2002) Market adjusted model & CARs Multiple regression	Acquiring firms experience insignificant improved performance. No evidence was found that either acquisition time, method of payment, or target status impact the reported performance. Related diversifications performed slightly better than unrelated diversifications.
Cummins and Weiss (2004)	To examine the wealth effects of mergers and acquisitions in the European insurance industry.	Europe (1990-2002) Average abnormal returns & Cumulative average abnormal returns	Acquiring companies experienced negative cumulative average abnormal returns (generally less than1%) but targets experienced significantly positive CAARs in the range of 12-15%. Geographically diversifying mergers tend to create more value for acquiring firms, and focusing mergers are more beneficial for target firms.
Rosa, Limmack, & Woodliff (2004)	To analyze the impact of method of payment (i.e. cash or issue of shares) in takeover of private and public companies.	Australia (1990-98) Event study Continuously compounded market excess returns	Shareholders of acquiring firms realized significantly positive abnormal returns on announcement of bids for private targets but not for public targets. These positive returns accrue to the acquiring firms in the takeovers in which payment to the target is made through cash, rather than shares.
Ismail and Davidson (2005)	To determine the response of stock market to M&A announcements and compare the results to the previous studies undertaken in Europe and US.	Europe (1987-99) Event study Abnormal returns Bivariate analysis	Target firms realized positive returns but the returns to acquiring firms varied across - the deal type and the various event windows. Specifically, merger deals were more value enhancing than acquisition deals and bank-to bank deals provided higher returns to the shareholders than cross-product deals. European market generally reacts more favorably to cross-border mergers than to domestic mergers.
Gersdorff and Bacon (2009**)**	To test the efficiency of the U.S stock market vis-a vis announcement of M&As.	US (2000- 07) Event study Paired sample t-test	US stock market is efficient in its semi-strong form vis- a –vis announcement of M&As. No significant difference between actual and expected returns showing that investors are not able to outperform the market.
Khan and Ikram (2012)	To determine the effect of merger announcement in banking industry in India on stock performance.	India (2003-09) Event study methodology, ARs, CARs	Indian stock market is efficient in its semi-strong form as both the historical and publically available information are disseminated in the stock prices andno investor is able to earn abnormal/excess return.

IV.0 RESEARCH HYPOTHESES

This section details the hypotheses formed for the purpose of testing market efficiency of entire Indian Stock Market in event of M&A announcements, by using trends in stock price, log return and abnormal return of four sample acquiring companies listed on Bombay Stock Exchange Sensex. So the various hypotheses framed on the basis of research objectives are as follows:

H_{10}: There is no significant difference in stock price before and after merger announcement.

H_{11}: There is significant difference in stock price before and after merger announcement.

H_{20}: There is no significant difference in log return in pre – announcement period and post announcement period.

H_{21}: There is significant difference in log return in pre – announcement period and post announcement period.

H_{30}: The Indian stock market is not efficient in semi-strong form in the event of M&A announcements in terms of abnormal return.

H_{31}: The Indian stock market is efficient in semi-strong form in the event of M&A announcements in terms of abnormal return.

V.0 DATA AND METHODOLOGY

This section describes the data used for analysis and the various steps forming part of the methodology undertaken for examining the data.

V.1 Data

We have used daily adjusted closing stock prices of the sample acquirer companies and BSE SENSEX historical prices to calculate the abnormal return around the merger announcement date from the year 2012 to 2014. Stock prices of sample companies and BSE Sensex prices have been obtained from yahoo finance website (http://finance.yahoo.com).The dates of formal announcements of acquisitions to be made by sample companies have been obtained from BSE website. In this study, we have studied four cases of acquisitions made by Indian firms. They have been chosen through the following criteria:

a. The stock price and index price are available in yahoo finance.

b. The index price and stock price of each firm are available for the duration of the event study, which is from (-)180 to (+)20 days.

c. The stock is actively traded.

Thus we have dropped thinly traded stocks from our sample and have included only the stocks with high volume of trading. Since we intend to check the efficiency of Indian Stock Market with respect to M&A announcements, it is better to consider only actively traded stocks listed at BSE Sensex. This is so because BSE Sensex comprises of well-established, actively traded and financially sound companies, and hence it can be considered as a representative of Indian Stock Market.

Based on the above criteria, Table 1 consists of the companies that have been chosen for analysis.

TABLE 1: LIST OF SAMPLE COMPANIES

NO.	ACQUIRING COMPANY	TARGET COMPANY	ANNOUNCEMENT DATE
1.	SUN PHARMACEUTICALS	RANBAXY INC.	07.04.2014
2.	ASIAN PAINTS	ESS ESS BATHROOM PRODUCTS	29.05.2014
3.	JINDAL STEEL	CIC MINING CORP.	25.07.2012
4.	THOMAS COOK INDIA	STERLING INDIA RESORTS	10.02.2014

V.2 Event Study Methodology

To analyze the impact of merger and acquisition announcements on the wealth of shareholders of acquiring company, event study method is being used. This study uses this method because it can directly measure the capital gain earned by shareholders resulting from any event of merger and acquisition.

Event study is an empirical research technique that can see the effect of a particular event on a firm's stock price. Event study uses abnormal return over the event window to test for market efficiency. An abnormal return, which implies the difference between actual return and expected return will be positive or negative - depends on the information if the market is not efficient. In an efficient market, it is not possible to find abnormal returns because it is impossible for investors to earn excess return. There are many approaches to find abnormal return. In this paper, we have used statistical model of market model. The steps of conducting event study are as follows:

1. The first step is to define the event and the event window. The event in this research is announcements of successful merger and acquisition. Announcements of successful mergers are categorized as positive news which will make the stock prices to increase after the announcement. The event window in our study is 20 days prior and after the announcement day (-20 to +20). The day of official announcement of acquisition is known as the event day, denoted as 0. Since market model is used, there is a need to establish estimation window as well. Figure 1 depicts the timeline of event window which uses day (-)180 to (-)21 as the estimation window.

ESTIMATION WINDOW	EVENT WINDOW		
-180	-20	0	20

2. Gather the daily closing adjusted historical prices of stocks and BSE SENSEX from yahoo finance and calculate the daily stock log return (R) and daily market log return (Rm). The returns of each stock along the estimation and event window is calculated using the formula below:

$$R_{it} = ln\left(\frac{P_{it}}{P_{it-1}}\right) = ln(P_{it}) - ln(P_{it-1})$$

Where R_{it} is the log return of stock i at day t, and P_{it} and P_{it-1} is the closing adjusted price of stock i at day t and the closing adjusted price of stock i at day t-1 respectively.

Then calculate the market return using BSE SENSEX daily price. The corresponding market return is also calculated along the estimation and event window using the formula:

$$R_{mt} = ln\left(\frac{P_{mt}}{P_{mt-1}}\right) = ln(P_{mt}) - ln(P_{mt-1})$$

Where R_{mt} is the market log return at day t, P_{mt} and P_{mt-1} is the closing price of market index at day t and the closing price of market index at day t-1 respectively.

Reason for using Logarithmic Returns:

The empirical studies have found that simple return of financial asset exhibit limited liability, which is contrary to the normal distribution. Limited liability means that the largest loss an investor can make is his total investment; so that the smallest net return achievable is (-)1 or (-) 100%. Since the normal distribution stretches from (-)$\infty$to (+)∞ and this lower bound of (-)1 violates this property of normality, the log return takes care of this drawback. In addition to this, the multi-period log return, can have some useful economic interpretations. Because of these reasons, this study makes use of the logarithmic return and not the simple return.

3. A regression analysis is conducted using the actual daily log return of each stock (R) as dependent variable and the corresponding daily market log return (R_m) of BSE SENSEX as independent variable over the estimation window (180 days prior to the event window) to obtain the intercept - alpha and slope - beta for each stock separately. Table 2 shows alpha and beta that are used for each stock.

TABLE 2: ALPHA AND BETA FOR EACH STOCK

ACQUIRING COMPANY/ STOCK	ALPHA	BETA
SUN PHARMACEUTICALS	0.0004	0.656
ASIAN PAINTS	0.001	0.943
JINDAL STEEL	(-)0.001	1.411
THOMAS COOK INDIA	0.002	0.608

4. Calculate the expected return of each stock for each day during the event window (day -20 to +20) using the formula:
$R_{it} = f(R_{mt})$ (FUNCTIONAL FORM OF EQUATION)
$R_{it} = \alpha_i + \beta_i . R_{mt} + U_t$ (ESTIMATING EQUATION)
$\hat{R}_{it} = \hat{\alpha}_i + \hat{\beta}_i . R_{mt}$ (ESTIMATED EQUATION AS PER MARKET MODEL APPROACH)
Where $\hat{R}_{it}$ is the expected return on stock i at time t, R_{mt} is the corresponding market return i.e. BSE SENSEX, $\hat{\alpha}_i and \hat{\beta}_i$ are OLS parameters estimated through regression equation.
5. Then, the Abnormal Return is calculated as:

$$AR_{it} = R_{it} - \hat{R}_{it}$$

Where R_{it} is the actual log return on stock i at time t.
6. Further, we have used semi- log regression equations to test the effect of time and nature of industry on closing adjusted stock prices and actual returns. We have tried to find out in what time phase these dependent variables are significant. The time phases are namely pre- announcement and post- announcement. The functional form of semi-log regression equation used (with log price as dependent variable) is as follows:
Log Price = f (D_1, T, D_1T, ID)
Log Price = $\beta_0 + \beta_1 D_1 + \beta_2 T + \beta_3 (D_1 T) + \beta_4 ID$
Where,
β_0 = Intercept for Pre-announcement period
$\beta_0 + \beta_1$ = Intercept for Post-announcement period (provided β_1 is significant)
β_2 = Growth rate of price for Pre-announcement period
$\beta_2 + \beta_3$ = Growth rate of price for Post-announcement period (provided β_3 is significant)
D_1 (EVENT DUMMY) = 1, If announcement period is post announcement, otherwise 0
T = Time Period (1 for day (-)20, 2 for day (-)19 ………. 41 for day 20)
β_4 = Coefficient for Industry Dummy
ID (INDUSTRY DUMMY) = 0, If industry is manufacturing, otherwise 1
So in this model, the intercepts and slopes vary with the time period- pre and post announcement. β_1 i.e. differential intercept coefficient gives the difference in intercepts between pre and post announcement period and β_3 i.e. differential slope coefficient gives the difference in slopes between the two periods.
Similarly, we have estimated semi log regression equation for Returns. The functional form of equation is as follows:
Log Return = f (D_1, T, D_1T, ID, AR, D_1.AR)
Log Return = $\beta_0 + \beta_1 D_1 + \beta_2 T + \beta_3 (D_1 T) + \beta_4 ID + \beta_5 AR + \beta_6 (D_1 AR)$
Where,
β_0 = Intercept for Pre-announcement period
$\beta_0 + \beta_1$ = Intercept for Post-announcement period (provided β_1 is significant)
β_2 = Growth rate of stock return for Pre-announcement period
$\beta_2 + \beta_3$ = Growth rate of return for Post-announcement period (provided β_3 is significant)
D_1 (EVENT DUMMY) = 1, If announcement period is post announcement, otherwise 0
T = Time Period (1 for day (-)20, 2 for day (-)19 ………. 41 for day 20)
β_4 = Coefficient for Industry Dummy
ID (INDUSTRY DUMMY) = 0, If industry is manufacturing, otherwise 1
β_5 = Coefficient for Abnormal Return in pre- acquisition period
$\beta_5 + \beta_6$ = Coefficient for Abnormal Return in post- acquisition period (provided β_6 is significant).
7. Thus, using the data for four sample companies, we have formed two regression equations for each company individually- one for price and second for returns as dependent variables. In such regression equations, we have ignored ID (Industry Dummy) variable as we are concerned with making conclusions regarding individual companies and not for the market as a whole. Also, we have compared the predicted stock price (and predicted return) obtained through regression, with the actual stock price (and actual return) during the event window by drawing line charts for the same. Such an analysis helps us to understand M&A activity undertaken by sample companies in a better way.
8. However, with such an analysis we cannot make any conclusion about Indian stock market trends and behavior i.e. is the market efficient, are investors able to exploit market, what is abnormal return and change in abnormal return- all such questions cannot be answered through analyzing data for sample companies individually. Therefore, we have pooled the data for sample companies, making it panel data and used fixed effects model. Then we have tried to observe the behavior of market, is market able to absorb news, does it lead to further abnormal return or abnormal returns are ironed out etc. …All this will tell us about nature of Indian stock market with sample of the four companies that we have chosen for study.
9. With respect to above points, an important feature of our methodology that needs a mention is the use of generic dates. In our study, main independent variable is time (T) but M&A event for our sample acquiring companies have taken place at different points of time. Hence instead of taking the specific dates on which these events have taken place for individual acquiring companies, we have considered generic dates (i.e. time variable (T) ranging from 1 for day (-)20, 2 for day (-)19 ……….to 41 for day 20 in event window), making it possible for us to pool the data and apply panel regression.

VI.0 EMPIRICAL ANALYSIS AND RESULTS
This section details the results of panel regression as well as the conclusions drawn from analysis of each individual sample acquiring company.
VI.1 PANEL DATA ANALYSIS
This section contains the results of panel regression using Log Price and Log Return as dependent variable one by one.

TABLE 3: PANEL REGRESSION: LOG PRICE

SUMMARYOUTPUT					
Regression Statistics					
Multiple R	0.985708943				
R Square	0.971622121				
Adjusted R Square	0.970908212				
Standard Error	0.140184181				
Observations	164				
ANOVA					
	Df	SS	MS	F	Significance F
Regression	4	106.9824642	26.74562	1360.989	8.042E-122
Residual	159	3.124605136	0.019652		
Total	163	110.1070693			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	6.248119797	0.032340644	193.1971	1.6E-190	
D_1	-0.04415725	0.092640087	-0.47665	0.634263	
T	-0.00155831	0.002525944	-0.61692	0.538168	
D_1T	0.001912893	0.003710554	0.515528	0.6069	
ID	-1.86507796	0.025279964	-73.7769	6.7E-125	

The analysis shows us that the coefficient of industry dummy is negative and statistically significant at 5% level, this means that the share prices of service industry are lower than those of manufacturing industry. But, as such the M&A event does not have any significant impact on share price because post- acquisition, the share price falls but the fall is not statistically significant at 5% level and also it is very marginal (4.41 of a percent).

Taking a look at coefficient for time, we can notice that growth rate of share price for the pre- acquisition period is (-)0.15 of a percent but this fall in share price in pre-acquisition period is not statistically significant. However, after the event, there is a slight revival in share prices; in actual terms as compared to pre-acquisition period, the revival after the event is 0.34 of a percent, but again this increase is not statistically significant at 5% level.

Thus, we can conclude that the Indian Stock market is efficient in semi- strong form because from the sample under study, the analysis shows that the trend of stock prices is actually falling in pre-acquisition period, but the combined effect is that post-event, the growth rate of prices starts rising; as a result net effect is 0.34 of a percent increase in growth rate. But because this change in share prices is very low in magnitude and is not significant in terms of p-value, we can only conclude that the market is efficient and it is discounting the event; the information of event is being absorbed completely in the market. Moreover, because the growth rate of prices has reversed from being negative in pre-acquisition period to positive in post-acquisition period, it can be said that the M&A event has been treated as a good news by the investors.

TABLE 4: PANEL REGRESSION: LOG RETURN

SUMMARYOUTPUT					
Regression Statistics					
Multiple R	0.929170621				
R Square	0.863358043				
Adjusted R Square	0.858136057				
Standard Error	0.008024626				
Observations	164				
ANOVA					
	Df	SS	MS	F	Significance F
Regression	6	0.0638787	0.010646	165.3314	3.33115E-65
Residual	157	0.010109955	6.44E-05		
Total	163	0.073988654			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	0.003047177	0.00186699	1.632133	0.104656	
ABNORMAL RETURN	1.080134548	0.041983755	25.72744	3.45E-58	
D_1	-0.00157923	0.005336651	-0.29592	0.767681	
T	-0.00015885	0.000145063	-1.09505	0.275173	
D_1T	0.00020482	0.000213066	0.961294	0.337882	
ID	0.000446023	0.001449745	0.307656	0.758752	
D_1AR	-0.16530244	0.065996792	-2.5047	0.013276	

The analysis shows that coefficients for all variables except Abnormal Return are not statistically significant at 5% level. Starting with the intercept, we can notice that the log return was positive in pre-acquisition period but it has become negative after the event. However, this change is not statistically significant at 5% level.

Taking a look at coefficient for time, we can notice that growth rate of returns for the pre- acquisition period is (-)0.015 of a percent but this falling trend in returns in pre-acquisition period is extremely small and not statistically significant. Therefore, it can be said that the return series is leveled. However, after the event, there is a slight revival in returns; in actual terms as compared to pre-acquisition period, the rise after the event is 0.035 of a percent, but again this rise is miniscule and not statistically significant at 5% level. So, return after event as such, is not increasing.

The coefficient for industry dummy is positive and extremely small (0.044 of a percent), favoring service industry but again it is not statistically significant.

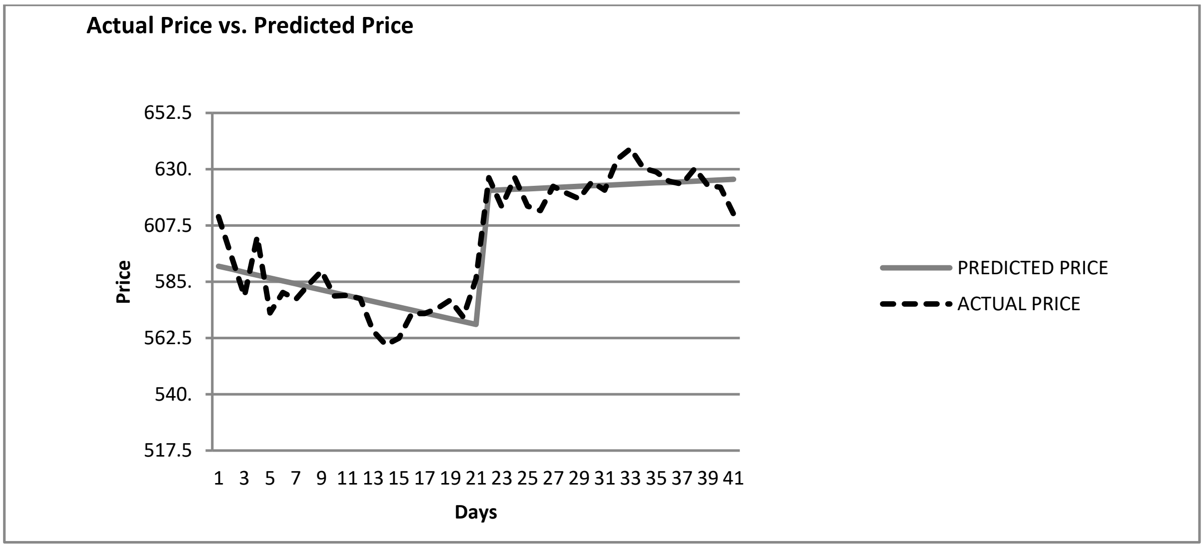
But very surprisingly before event, abnormal return is positive and statistically significant at 5% level and, after event also it is still significant but it has fallen significantly by 16.53%. Thus, before event, AR was strong and significant but after the event, AR has fallen significantly. This means that there was anticipation of the event in market prior to the event, and after event, there has been complete absorption of news in the market due to which AR has fallen after the event. In other words, prior to the event, investors in market were exploiting information which was only anticipated and was not being absorbed in market and by using such information, they were able to earn extra-normal returns and hence out-perform the market in pre-acquisition period.

VI.2 INDIVIDUAL COMPANY ANALYSIS

This section describes the results obtained from the analysis of stock price and return data of each sample acquiring company individually.

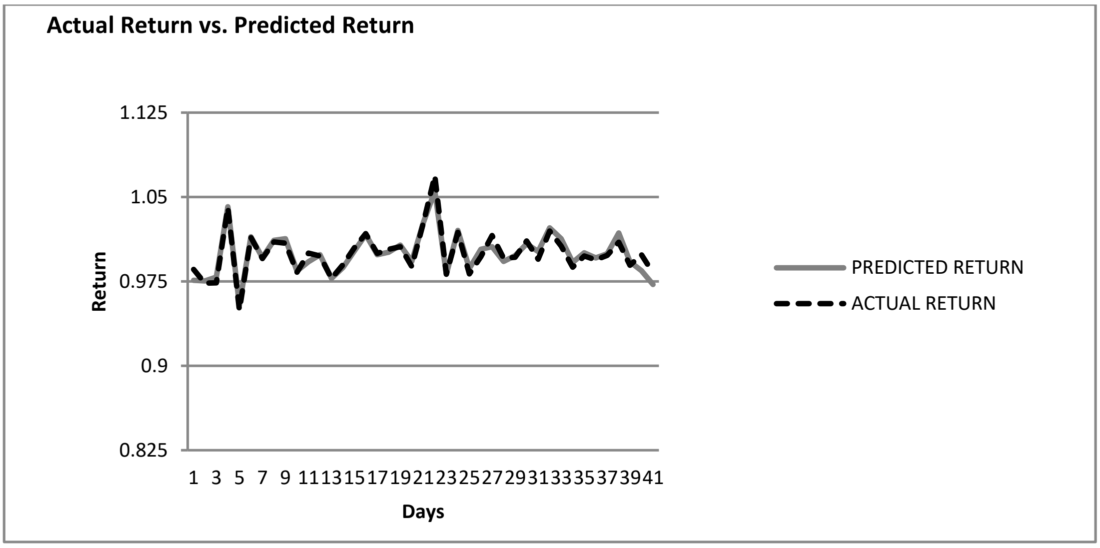
VI.2.1 SUN- PHARMACEUTICALS

FIGURE 1: ACTUAL PRICE Vs. PREDICTED PRICE



The stock price of Sun Pharmaceuticals shows a clear trend. Prior to the announcement of acquisition by company, the stock prices have been showing a falling trend. On the announcement day, there has been a strong revival in stock prices. Thereafter, the stock price has been increasing but at decreasing rate.

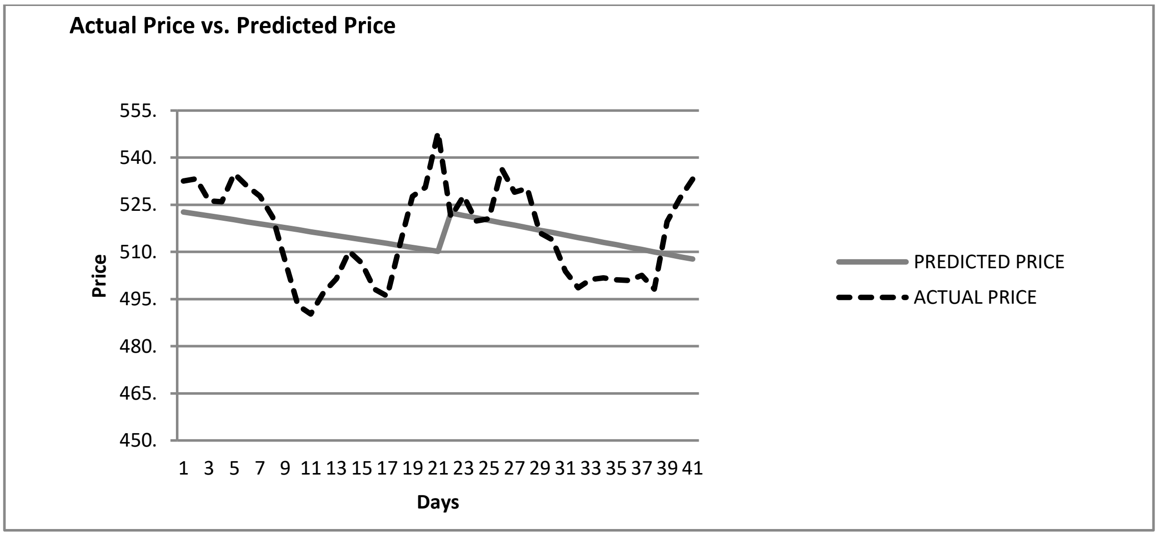
FIGURE 2: ACTUAL RETURN Vs. PREDICTED RETURN



The return generated by Sun Pharmaceuticals shows a mixed trend. Prior to the announcement of acquisition by company, the return has been showing a mixed pattern. On the announcement day, there has been an increase in return. Thereafter, again the return is not showing any consistent pattern.

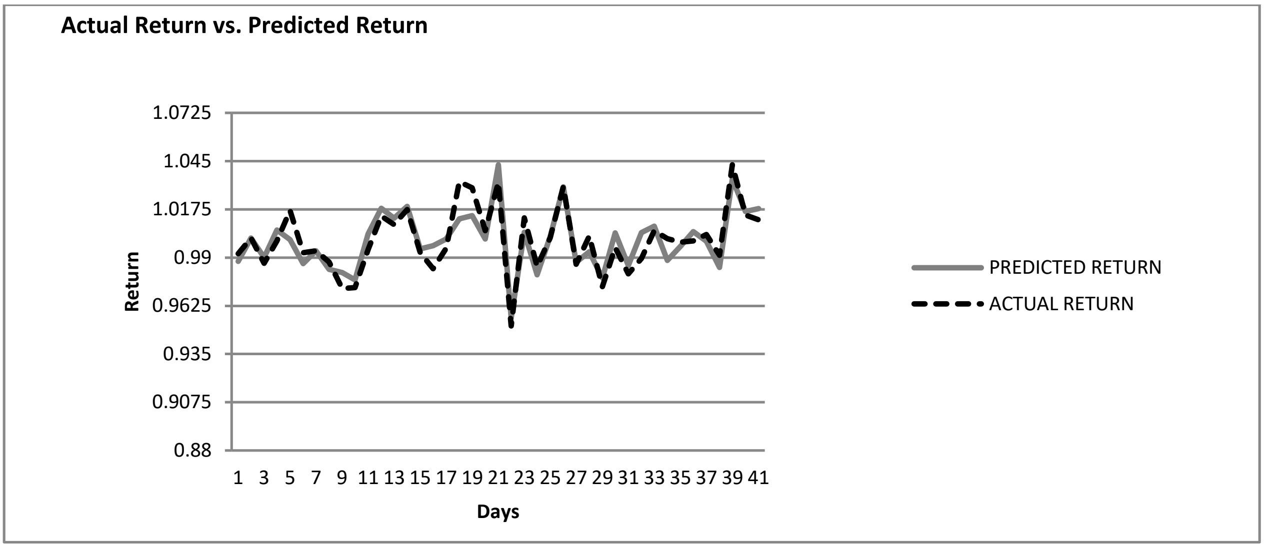
VI.2.2 ASIAN PAINTS

FIGURE 3: ACTUAL PRICE Vs. PREDICTED PRICE



The stock price of Asian Paints shows a clear trend. Prior to the announcement of acquisition by company, the stock price has been showing a falling trend. On the announcement day, there has been a strong revival in stock price. However, after announcement again stock price has been falling.

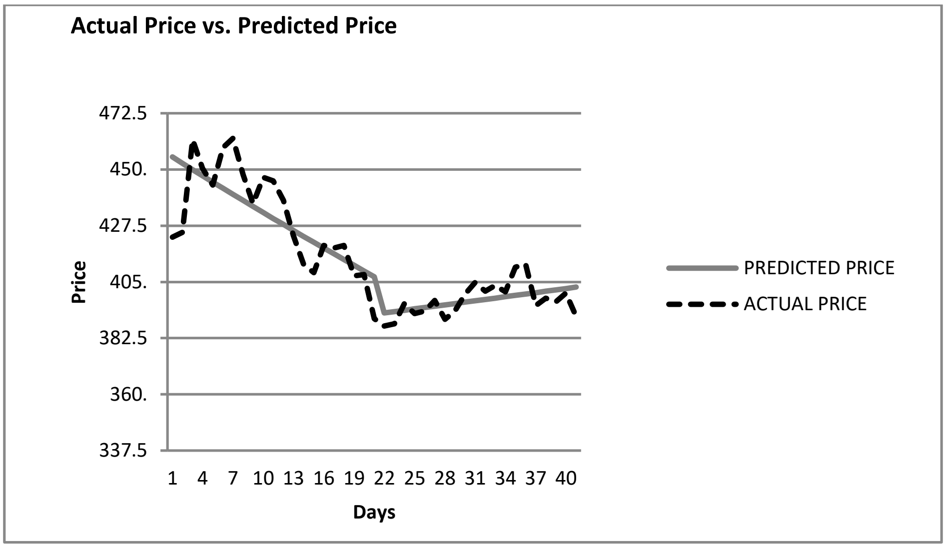
FIGURE 4: ACTUAL RETURN Vs. PREDICTED RETURN



The return generated by Asian Paints shows a mixed trend. Prior to the announcement of acquisition by company, the return has been showing a mixed pattern. On the announcement day, there has been an increase in return. Immediately after announcement, the return has decreased sharply. Thereafter, again the return is not showing any consistent pattern.

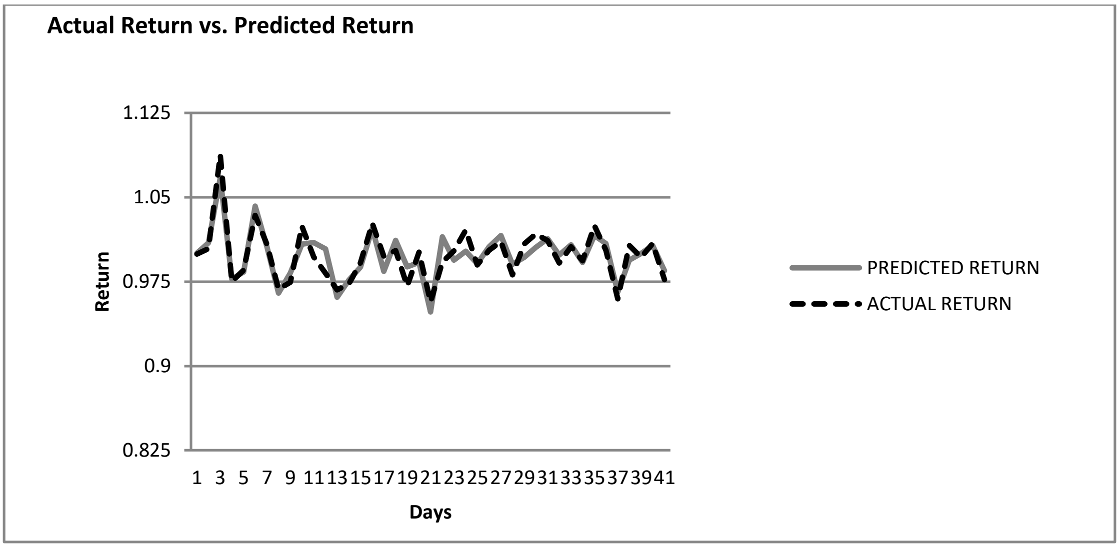
VI.2.3 JINDAL STEEL

FIGURE 5: ACTUAL PRICE Vs. PREDICTED PRICE



The stock price of Jindal Steel shows a clear trend. Prior to the announcement of acquisition by company, the stock price has been showing a falling trend. On the announcement day, there has been a decrease in stock price, which is continuing on day next to announcement day. Thereafter, again stock price has been increasing.

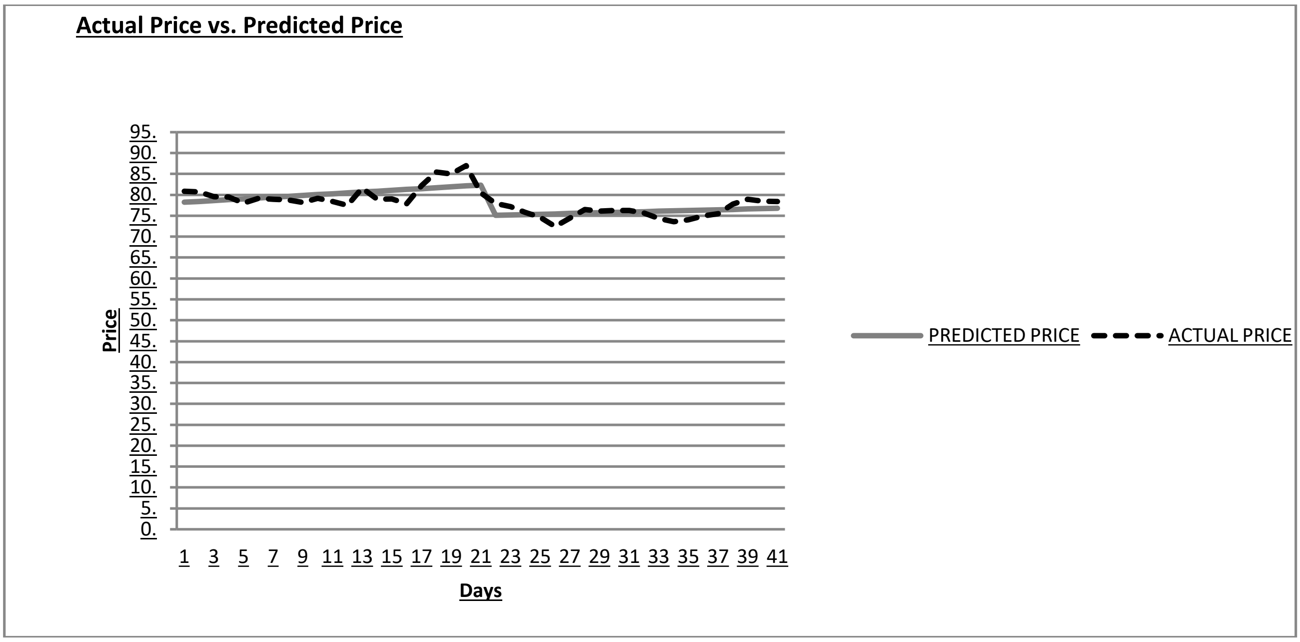
FIGURE 6: ACTUAL RETURN Vs. PREDICTED RETURN



The return generated by Jindal Steel shows a mixed trend. Prior to the announcement of acquisition by company, the return has been showing no consistent pattern. On the announcement day, there has been a decrease in return. Thereafter, again the return is showing a mixed pattern.

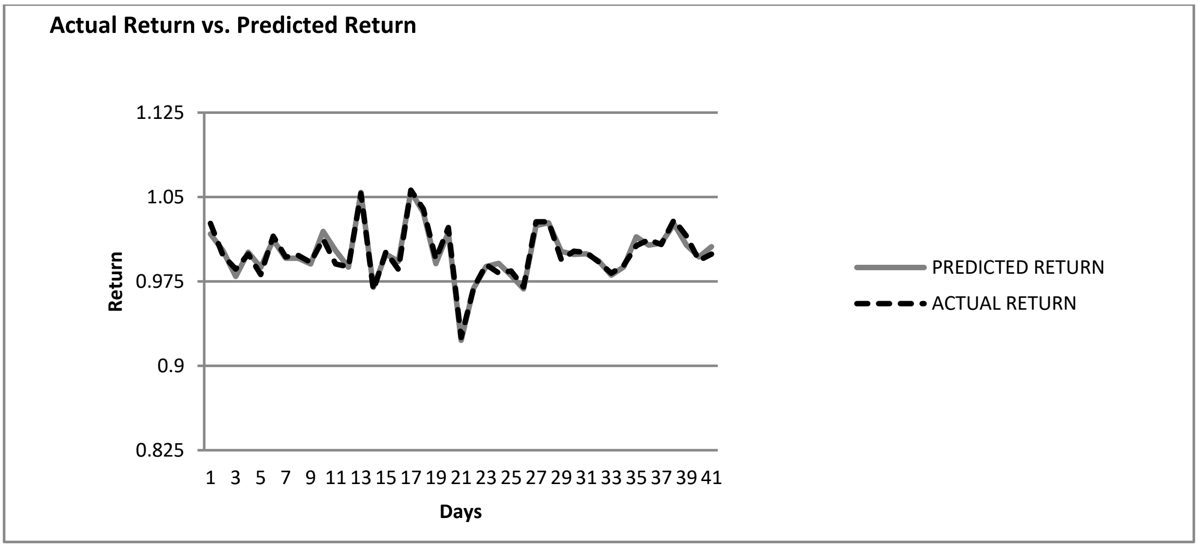
VI.2.4 THOMAS COOK INDIA

FIGURE 7: ACTUAL PRICE Vs. PREDICTED PRICE



The stock price of Thomas Cook shows a clear trend. Prior to the announcement of acquisition by company, the stock price has been showing an increasing trend. On the announcement day, there has been a strong fall in stock price. Thereafter, again stock price has started increasing but at a miniscule rate.

FIGURE 8: ACTUAL RETURN Vs. PREDICTED RETURN



The return generated by Thomas Cook shows a mixed trend. Prior to the announcement of acquisition by company, the return has been showing no consistent pattern. On the announcement day, there has been a decrease in return. Thereafter, again the return is showing a mixed pattern.

As seen for all four sample acquiring companies, the predicted values of stock price (and return) come closer to the actual values, the points on the dotted line fall closer around the black line. Because the actual stock price (and actual return) is very close to predicted stock price (and predicted return) in case of our four sample companies, we can say that share price and return generated by these four sample companies have not changed significantly after their respective M&A event. Moreover, the investors of none of these four companies have been able to outperform the market by investing in their respective companies.

VII.0 CONCLUSION

The main goal of a firm is to maximize the wealth of its shareholders. In this light, an important issue in the area of corporate restructuring is to determine the effect of M&A on the wealth of shareholders of the company.

In past many researchers have tried to address this issue by using event study methodology and have documented that the shareholders of acquiring firm suffer due to the announcement of M&A by their company. However, a large no. of such studies have been carried out only in developed countries so the results cannot be inferred directly without being investigated in developing economies.

This study has taken a sample of four acquiring companies listed on Bombay Stock Exchange, which made acquisition announcement during the period 2012-14. We have chosen stocks listed on BSE Sensex because through this study we intend to test the market efficiency of Indian Stock Market in event of M&A announcement. Such an objective can be well accomplished through study of companies listed on BSE Sensex because Sensex comprises of actively traded and financially sound companies and hence it can be taken as a representative of Indian Stock Market.

To capture short run/immediate effect of M&A announcement on the stock price and shareholders return, this study has used Market Model to calculate abnormal returns and involves estimation of semi-log regression equations to test the effect of time and nature of industry on closing adjusted stock price and actual returns. We have tried to find out in what time phase these dependent variables are significant. The two time phases being pre- announcement and post- announcement periods.

The analysis shows that the trend of stock prices and log returns is actually falling in pre-acquisition period, but the combined effect is that post-event, the growth rates of prices and returns start rising. But because these changes in share prices and returns are very low in magnitude and are not significant in terms of p-value, we can conclude that Indian stock market is efficient in semi-strong form in the case of M&A announcements. This implies that the news/ information resulting from the event of announcement of merger are fully discounted by the market. Thus, we fail to reject our null hypotheses 1 and 2, and hence we can conclude that there is no significant difference in stock price (and log return) in pre – announcement and post announcement periods. Accordingly, we fail to make any generalized conclusion about operation of hubris and synergy hypotheses in the market for corporate control in India.

Also, we have seen that before event, AR was strong and significant but after the event, AR has fallen significantly. This means that there was anticipation of the event in market prior to the event, and after event, there has been complete absorption of news in the market due to which AR has fallen after the event. In other words, prior to the event, investors in market were exploiting information which was only anticipated and was not being absorbed in market and by using such information, they were able to earn extra-normal returns and hence out-perform the market in pre-acquisition period. Thus, we can reject null hypothesis 3 and conclude that the Indian stock market is efficient in semi-strong form in event of M&A announcement in terms of abnormal return.

However, we have considered only 4 cases of M&As and have studied the stock prices and log returns of acquiring firms (biding firms) only and not of target (acquired firms) due to data unavailability. There is a need to study a larger sample and explore in future, the results for the acquired firm where merger and acquisition are not for the 100% ownership.

Also, since M&A events for our four sample acquiring companies have taken place at different points of time, so instead of taking the specific dates on which these events have taken place, we have considered generic dates. Thus although we have not taken actual dates, we have used generic dates for our independent variable time, making it possible for us to pool the data and apply panel regression.

Thus, a plethora of literature is available on M&As, studying the impact of such activities on the wealth of shareholders of acquiring companies. But what makes our study different from all such studies is the use of panel data analysis and log returns. While earlier studies have analyzed stock prices and cumulative abnormal returns to make a conclusion about M&A events, our study is different in the sense that we are using stock prices, log returns and abnormal returns to conclude about market efficiency of Indian Stock Market through use of panel regression.

The management of firms can use this information regarding the impact of M&A announcement while deciding about/ carrying out these corporate restructuring activities. Since takeovers do not necessarily increase the shareholders' wealth, therefore the decision needs much scrutinization before entering in any M&A, because the main aim of a firm is to increase shareholders' wealth. On the other hand, investors and other stakeholders, particularly in India, may get an idea of the impact of M&A announcement on their wealth and can act accordingly.

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DYNAMICS OF GIG-ECONOMY WITH SPECIAL REFERENCE TO DIGITAL PLATFORMS IN INDIA

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ABSTRACT

Our country is emerging as the third largest on-line labour market according to On-line Labour Index Survey and India-based employers represented 5.9 per cent of all projects/tasks posting for online labour of which 45.0 per cent were for software development and technology projects. The highly informal and micro nature of our economy provides impetus to digitally-enabled independent employment opportunities. These forms of work have gained momentum in recent years with the emergence of native and international freelancing platforms. These trends show that the nature and structure of employment in our economy has been undergoing a reformative change towards more independent, freelance on-line jobs. "Gig Economy" is such a new trend in the employment models in these days of digital influences. The present paper deals with this concept of "Gig Economy" with special reference to our economy. The gig economy can be defined as "a free market system where organizations and independent workers engage in short-term work arrangements. Technology has lowered the barriers to entry so much that "gigs" have become easily accessible to an unprecedented number of people. Based on secondary sources of information and statistics, this paper briefly discusses about the traditional job market and the job necessities in the context of the present 4th Industrial Revolution. An attempt is made to discuss about gig and freelance work in India and gig workers' earnings in Top-10 countries along with India. Types of gig work rise of gig economy with its broad segmentation and subsectors. Discussion was also presented about the converging factors responsible for thriving the gig economy in our country, the motivational factors acting as growth drivers of gig economy. The high paying tech-savvy gig jobs in advanced countries and in our country is also present to provide a comparative picture of gig works. The paper concludes with a remark for the necessity of encouragement to be provided for the development of gig economy, keeping in view the unemployment rates both in urban and rural areas with specific reference to women.

KEYWORDS

GIG economy, on-line employment, freelancers, independent work, growth drivers, motivational factors, unemployment rates.

JEL CODES

O32, J22, Q55.

INTRODUCTION

In recent years, the traditional job market and the work-dynamics have been changing allowing greater autonomy and flexibility. The technological disruption has been potentially reshaping the employment landscape by generating opportunities to earn income on-line and better matching of workers with opportunities through digital platforms. The demographic shift and technological developments that are taking place today are demanding rapid job creation to be matched with workers and employers. These shifts are acting as potential drivers of creating opportunities for generating new, relevant and decent jobs for the future of our country. It is argued that the present demand for jobs should be accompanied by the need to create high quality employment opportunities in general and for aspiring youth and women specifically. Digitalization and technological adoption are sound supporting the growth of decent jobs and greater economic inclusion, since employment-generation strategy of our country aims at inclusion of women in the labor market, to erase the gender-bias, which is both a social and economic imperative.

Keeping the approach to strategy of economic development in our country, today, most of the companies are adopting industrial technology and machinery to improve the quality of their output, to maintain their current market position, associated with qualitative improvements in supply-chain management as well as are planning to introduce digital tools and services to attract new customers.

In the context of fast changing business environment and rapid developments in technology, it is necessary for employers to prepare for changes at the workplace. The experts have been observing that there are 10 important workplace trends that are taking place in our country and the companies are found preparing the work force for the future by embracing new developments in labor-market like "Gig-Economy". Gig-Economy consists the gig workers or freelance workers, who work without the frills and collars of traditional jobs, who are called as "Blue Collar Workers". Defined as "Gig Economy", this recent trend presents a distinct strategic opportunity for the organizations of the future, with a specific focus on "Digital Skills" and also on "Digital Platforms". In other words, the "Gig Economy" refers to "labor market activities that are coordinated via digital platforms". Workers take on particular "gigs" without any guarantee of further employment, and the persons who mediate in between these workers and employers, are called as intermediaries, independent contractors and not employers. Generally, the companies operating these platforms are intermediaries, who enable purchasers to order a timed and monetized task from an available worker, by taking a commission, whenever the service is paid for or completer. The Gig Economy operates through two kinds of platforms – "Crowd Work" and "On-demand Work" (Hunt et.al.2017). Crowd Work refers to jobs which are commissioned and carried out virtually, via internet. On-demand work refers to activities which are generally organized through mobile platforms and the jobs are carried out locally with the purchaser and the provider in physical proximity. These jobs are also carried out by text messages or phone calls instead of a mobile platform. Increasing access to internet, increasing number of mobile and smart phone usage and improvements in digital infrastructure have significantly influenced the proliferation of on-line market places and transactions, facilitating a forward movement towards physical world to the digital world. Social networks and cloud computing are found supporting the access to e-commerce transforming cross-border trade in merchandise and services.

As a positive sign being driven by these transformations, "independent work" (flexible work) has gained momentum, both in advanced and developing countries. Independent work is not new to our country since we have the tradition of self-employment- the other term used for independent work, is deeply engrained in our economy and this is reflected in micro-nature of organizations of our country. In this sense, we can use the term "self-employment" as alternative term for "independent work" or gig-based "freelance work".

THE IMPACT OF 4th INDUSTRIAL REVOLUTION

The present century has been witnessing and experiencing the 4th Industrial revolution being propelled by the convergence of a cluster of technologies representing physical, digital and biological impact factors. Machine learning, artificial intelligence, advanced robotics, cloud computing, the IoTs, and block chain etc., are evolved and employed for profoundly transforming the future and nature of work in developing and developed economies. Many traditional employment opportunities are found outdated and many are created newly influenced by these modern technologies, embracing and influencing the production processes, business models, service delivery mechanisms, establishing a relationship between generation of employment, flexible working environment, autonomy in working opportunities and decent remuneration to meet the increasing cost of living. Under these transformative conditions, experts, economists, entrepreneurs, employment-model strategists and technocrats are striving to analyze the impact of 4th industrial revolution and are arriving at different arguments and observations, with a specific focus on employment conditions, job displacement and inequalities in labor market in the economies around the globe.

The technology-led employment models that were designed and evolved to suit the requirements of 4th industrial revolution, as they have thought, provide solutions to improve the low productivity and output in the key economic sectors. A variety of strategies were designed for shaping the emerging technologies to play out in the complex socio-economic and cultural contexts of work, among which digital literacy and ICT were recognized as the basic skills required in the current environment of work and to access the public goods and services.

Use of technology has become the major driving force for the present 4th industrial revolution to displace as well as replace the traditional employment opportunities, particularly in India. Of late, the concepts like “Uberization”, “Gig-workers” “Independent work”, “Freelance Industry”, “On-demand Jobs”, “Flexible Staffing”, “Leased work” and “On-call Workers” are gaining currency in advanced as well as advancing economies. Independent work is on the rise in many advanced economies of Asian, European, North America, Africa, South America and Oceana economies. Asian economies are providing gig work to the estimated tune of 62.0 percent, 18.0 per cent in European economies, and 16.0 per cent in North American economies (On-line labour Index Worker Supplementary-2017). These gig workers are found engaged in software development and technology, creative and multimedia, sales and marketing support, writing and translation, critical and data entry and professional services. According to the On-line Labour Index-2017, India is the largest supplier of online labour and also traditional outsourcing destination. It is estimated that 24.0 per cent of workers are gig workers in India, followed by Bangladesh (16.0 per cent), United States (12.0 per cent), Pakistan (8.0 per cent), Philippines (6.0 per cent) and UK (5.5 per cent). There are four largest online labour outsourcing platforms namely Fiverr, Freelancer, Guru and People Per Hour, which are English language platforms, covering 40.0 per cent of the global gig labor market for platform-based online work. Research efforts were also made to understand the “Gender-dynamics” of Gig Economy for identifying the existing critical knowledge gaps, which are useful of policy makers (Abigail Hunt and Emma Samman, 2019). The research findings indicate that a smaller proportion of women than men are involved in gig work; less regularly work than men and are more likely exit the gig economy. Van Dorn (2017) has analyzed that the gender, racial and class inequalities were acting as dragging forces in the low-wage gig workers. It was estimated that the proportion of women in the gig economy of US accounts to 33.0 per cent to 55.0 per cent, in UK this proportion works out to 31.0 per cent to 52.0 per cent, Germany (39.0 percent), Sweden (39.0 percent) Austria (41.0 per cent) Switzerland (43.0 per cent) and Netherlands (44.0 per cent). The evidence suggests that in many of the economies, women earn less than men through gig work.

MATERIALS AND METHODS

The present paper is exclusively based on secondary sources of information collected from different national and international published reports, research papers and newspapers. The primary purpose of this analytical paper is to explain the concept “Gig-Economy”, its features, segmentation, nature of jobs and income offered in general and in our country in particular. The paper focuses on the following objectives:

1. To define and explain the concept “Gig-Economy”, its types and segmentation.
2. To introduce the rise of Gig-Economy in India.
3. To analyze the Motivational Factors that drive the performance of Gig-Economy in India.
4. To present the estimates of income offered for the Gig Jobs in India.

RESULTS AND DISCUSSION

GIG-ECONOMY AND FREELANCE WORKERS IN INDIA

The term “Gig” refers to the concept of ‘engagement’ coined during the financial crisis-2009., when the unemployed made a living by “gigging” or working in several part-time jobs wherever they were available and they could. It was observed that “Gig-Economy” was a sharing economy, open talent economy, freelance economy and also on-demand economy, representing the new paradigm of work. Gig work is characterized by the prevalence of short-term contracts or freelance work as contrary to the permanent jobs in the organized sectors. Technology has been playing an important role in gig-economy as a new business and employment model. The current cutting edge digital on-line platforms along with the proliferation of mobile and smart-phone penetration and application are treated as the important influencing factors for thriving of this gig-economy. By these digital aids, the work assigned to a professional can be completed within the scheduled time and has the flexibility to choose location of the assignments and areas.

Gig economy which is also called as “Flex-economy” or “Mobile Economy” is among the fastest growing employment trends in India along with advanced countries during the recent years. The Global Gig Economy Index-2019 published by “Payoneer” observed that among Top-10 countries, India is emerging as the 3rd largest on-line labor market and the “On-line Labor Index Survey-2016” estimated that India-based employers represented 5.9 per cent of all projects/tasks posting for on-line labor of which 45.0 per cent were for software development and technology projects. The Global Gig Economy Index-2019 also shows that India occupies 7th rank in the year over year revenue growth of gig workers engaged in the economy, as shown in Table. 1.

TABLE 1: TOP-10 COUNTRIES WITH HIGH GIG-WORKER EARNINGS AND REVENUE GROWTH

Rank	Country	% of YoY Growth in Revenue of Gig worker earnings
1	United States of America	78.0
2	United Kingdom	59.0
3	Brazil	48.0
4	Pakistan	47.0
5	Ukraine	36.0
6	Philippines	35.0
7	India	29.0
8	Bangladesh	27.0
9	Russia	20.0
10	Serbia	19.0

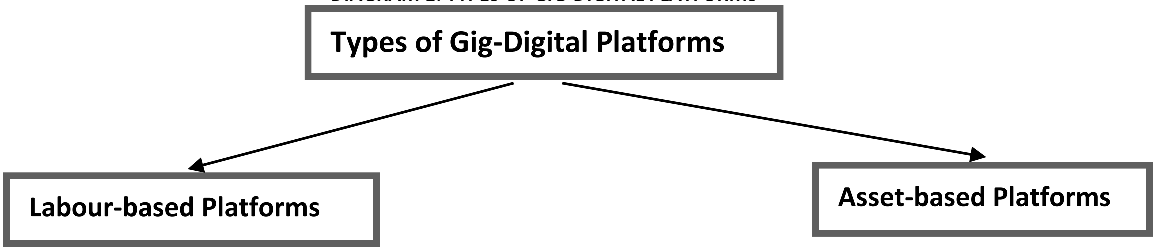
Source: Payoneer (2019) Report on The Global Gig Economy Index-2019, p.3

It is evident from the data presented in Table.1 that technology has made easier than ever for individuals to get increased earnings by engaged themselves in profitable gig-work and received favourable rewards. The data shows that India got the 7th rank in terms YoY growth in gig-earnings, accounting for 29.0 per cent among the top-10 countries. However, it is to be noted that India has to make sincere digital efforts to touch the revenue growth of Pakistan (47.0 per cent) as well as the rank of USA (78.0 per cent). As an effort to improve the earnings from gig work in India, it is to be noted that gig economy is churning out of a large number of solopreneurs, micropreneurs and our country has to provide the congenial business and technological environment for the development of gig work.

GIG-DIGITAL PLATFORMS

It is to be observed that gig-digital platform can be categorized into two main types in India as shown in the following diagram-1.

DIAGRAM 1: TYPES OF GIG-DIGITAL PLATFORMS

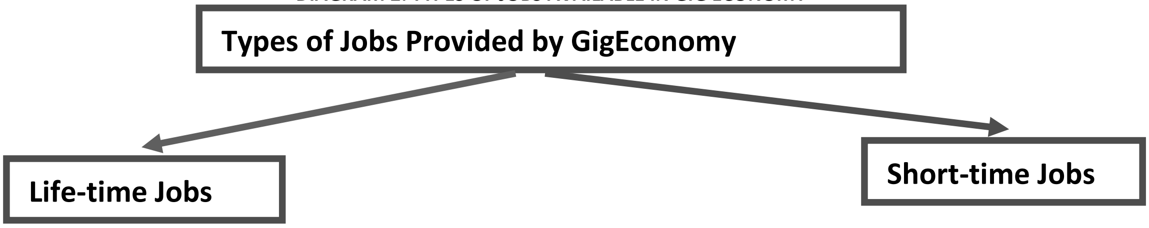


The labour-based platforms enable workers to provide activities and completing tasks assigned (Uber, Ola etc., The asset-based platforms allows people to rent or sell their unused asset (Airbnb, eBay etc., These two platforms have enabled the transformation of the gig economy from a C2C market to B2C market with new models of work and employment. These two kinds of platforms represent gig economy as a broad umbrella term originating from the digital universe of the "Sharing Economy". It is an economy and a novel organization of digital workers, distributed across the economy and organized through task markets and network connections. It is beyond doubt that the rise and advancement of technology has given people more options in the kinds of work they can do in the gig economy. A variety of mobile apps and E-commerce websites like Amazon, Flipkart, Alibaba and Shop clue etc., have proved that anyone can become a merchant and portals like Flexiorg.com, Getmeexperts.com etc., are providing work opportunities for any one with specialized knowledge and skills by connecting them with companies that have such needs.

SEGMENTATION OF GIG ECONOMY

An observation of jobs that are provided by the gig economy can be classified into two types, as shown below in diagram 2.

DIAGRAM 2: TYPES OF JOBS AVAILABLE IN GIG ECONOMY



Gig economy provides both lifetime jobs as well as short-time jobs. Life-time jobs mean short-term projects and which give provide jobs with independence and work flexibility, pay very well and offer future opportunities. Work with only 1 or 2 hours of working represent short-term jobs with good remuneration. The gig job options comprise a variety of digitally-skilled jobs like creative services, content writing, virtual assistance, engineering and architecture, accounting and consulting, software development, automation, artificial intelligence, IoT, ML, IT infrastructure, management, sales and marketing, civil BIM, automobile connected vehicles, PR and Branding, project management and data assembling etc.,

All the modern gig business offers on-line applications to connect individuals seeking jobs/services with those providing jobs and services, fueled by internet startups and a majority of talent managers are found leveraging gig workers in their teams and departments, to drive efficiency, innovation and competitive advantage.

RISE OF GIG ECONOMY IN INDIA

The incentives, schemes and financial assistance provided by Government of India and the creation of SEZ culture, start-ups have flourished in India and 70.0 per cent of the corporate were found using gig workers for solving organizational issues.It was reported by HR professionals and independent consultants interviewed that gig workers were found very useful for supplementing the skills of the existing workforce, reduce the cost of production and fill the temporary vacancies in the firms/organizations/enterprises. The gig workers containing self-employed, freelancers, independent contributors and part-time workers, though represent very much fragmented, got recognition across the globe in general and in India in particular and emerged as a modern workers'-economy, wherein workers come, gig and leave.

In India during the last five years, a large segment-- about 81.0 per cent—has joined the gig economy. Delhi accounts for 43.0 per cent of gig workers, recognized as the biggest hum followed by Mumbai with 19.0 per cent and Benguluru with 18.0 per cent.

Besides the above mentioned two types (as shown in Dig:2), the gig economy can be segmented into the following 4 important categories and with a broad description of each segment is presented in Table. 2

TABLE 2: BROAD SEGMENTATION OF GIG ECONOMY WITH ITs SUB-SECTORS IN INDIA

S. No.	Sector	Description	Subsectors included
1	Asset-Sharing Services	Digital Platforms that facilitate short term P2P rentals of one owner's (or freelancer) property to another individual	Home-sharing Car-sharing Boat- sharing Parking space-sharing P2P Equipment-sharing etc.,
2	Transport-based Services	Digital Platforms that require a freelance driver to complete the requested transport service	Ride-sharing Car pooling Restaurant Delivery Coupled with guiding skills
3	Professional Services	Digital Platforms that connect freelances directly with business to complete projects	Management skills, Business work, Designing, Coding, Writing/ Translating, Artificial intelligence, ICT, Cloud computing, Robotics etc.
4	Handmade Goods, Household and Miscellaneous Services (HGHM)	Digital Platforms for freelancers to sell homemade goods/crafts or offer on-demand services for household related jobs.	Home services Baby sitting Handicrafts Tutoring Pet Services and Miscellaneous services etc.,

Source: Master Card and Kaiser Associates: (2019) Report of The Global Gig Economy: Capitalizing on a $500 B Opportunity.

THE CONVERGING FACTORS

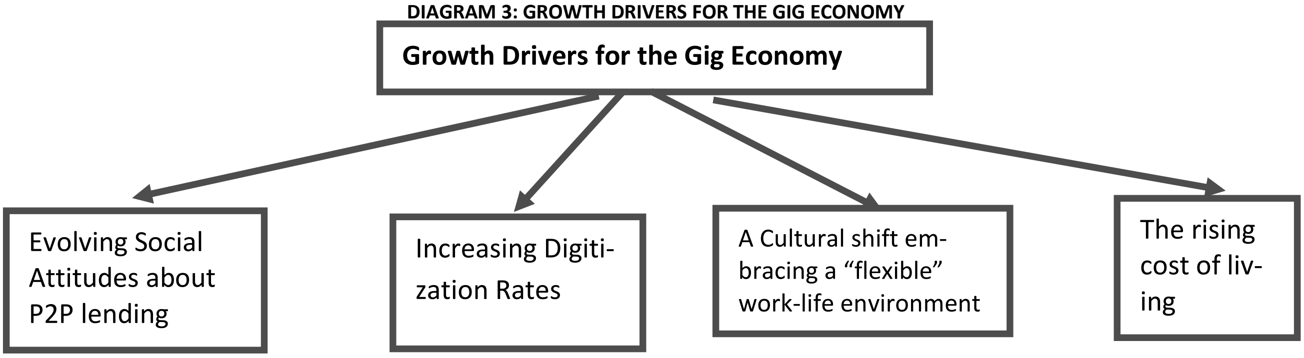
According to the report produced recently by BCG Henderson Group, the following are the factors that are pulling the gig workers towards gig economic activities:

1. Contrary to the mature economies, (1 to 4 per cent), a high proportion of more than 30.0 per cent of workers were found preferring the use of gig work platforms.
2. Job-seekers are entering into gig economy in each and every industry as freelancers.
3. There is a shift in the priorities among workers towards full-time employment as only 20.0 per cent of the freelancers preferred the fulltime employment.
4. The gig work platforms are targeting at workers with a specific level of expertise as well as management consultants, software developers and wellness workers with sophisticated modern skills.
5. 40.0 per cent of the companies, which have absorbed gig workers who have satisfied the characteristics of gig work reported that the gig workers have acted as a complementary source to their regular workforce and the labour productivity in their firms has improved.

THE MOTIVATING FACTORS

According to the recent reports on Gig Economy, the following factors can be listed as “growth drivers” for gig economy in India as shown in Diagram

DIAGRAM 3: GROWTH DRIVERS FOR THE GIG ECONOMY



With the advent of gig economic activities, major portion of gross volume of gig economy has been estimated coming from platforms that were relatively new to market, offering a greater diversity of services to customers, thus enabling the digital industry to expand and mature. The above flow-chart explains the important motivating factors, which acted as the growth drivers for the gig economy and for its expansion. In recent years sharing personal items has been accepted and there is a shift in social attitudes that are encouraging and facilitating of sharing underutilized as well as unutilized assets for profit.

Many digital lending and P2P lending platforms like Lendbox (New Delhi), Faircent (Gurugram), Lending Kart (Ahemadabad), Finzy (Benguluru), i2i Funding (Noida), i-Lend (Hyderabad), LenDen Club (Mumbai), Paisa Dukan (Mumbai), Rupee Circle (Mumbai), Monexo (Mumbai), CashKumar (Benguluru) etc., have been attracting the customers by providing an online marketplace to facilitate peer-to-peer lending by bringing together borrowers and lenders. The consumers are also actively engaged in this lending activity.

The recent trends in rapid smart phone adoption and increased access to internet are found expanding the numbers of eligible gig freelancers. The number of smart phone users is estimated to reach 442.5 million in 2022, which was 199.48 million in 2015. There are 1026.37 million active mobile phone users in our country as on 2018 with 2G,3G and 4G networks. It is also estimated that our country occupies 22nd rank, after China in the number of internet users which was estimated as 560 million and on an average 310 million people in India are spending time with social media accounting for an average of 17 hours per week. It is found that 80.0 per cent of the adults in our country are having at least one digital financial account and according to IMD World Digital Competitiveness Ranking for the year 2019, our country occupied 44th place with the improvement in terms of knowledge and future readiness to adopt and explore digital technologies.

It is also observed that work-life adjustments have been considered as important and a cultural shift has been taking place towards embracing a flexible environ-ment altering the workers expectations of a typical 9 to 5 work day. It is also true that in recent times, the cost of living has been increasing alarmingly clubbed with a shrinking share of middleclass families, which is compelling the employed lower to middle class to pursue the sources of supplementary income by engaged in part-time jobs to earn income through gig work to satisfy the needs and demands of the family members.

It is beyond doubt the all the above discussed facts are motivating the people with skills and expertise to pursue the gig economic activities as the best option.

NOT SIDE-HUSTLING WORK

Many workers feel that gig work is a part- time work which offers low income and they are not lucrative. It is a wrong notion and a mistake. The tech-savvy attitude and the skills and expertise fetches high amounts of income by serving a freelancer’s option. The study of “FitSmallBusiness.com” observed that the following are the most lucrative options for gig tech-savvy workers. The following Table-3 presents the jobs, their description and the income that can be earned

TABLE 3: TECH-SAVVY GIG JOBS AND THE INCOME OFFERED

S. No.	Name of the Tech-Savvy Gig Job	Income offered per Hour	Description of the Job
1	Deep Learning/ Artificial Intelligence	$ 115.06	Self-Teaching systems, Machine learning, data scientists, software engineers etc.
2	Block Chain Architecture	$ 87.05	Technology used to power, cryptocurrencies, digital currencies etc., It is also known as cloud compu-ting, in which users share data on third-party servers via Google and Microsoft.
3	Robotics	$ 77.46	Includes mechanical and electrical engineering and companies are expanding to develop devices in the medical and surgical fields.
4	Ethical Hacking/ Penetration Testing	$ 66.33	Skills in coding and programming systems-security professionals and Penetration testing.
5	Bit Coin /Cryptocurrency	$ 65.37	Ability to build automated payment tools using altcoins are sought after, including to integrate bitcoin payment technology into existing websites and apps.
6	Amazon Web Services/ Lambada Jobs	$ 51.0	Specialization in AWS Lambada writing and load code for lambada
7	Virtual Reality	$ 50.18	App designing to create digital content that combines visual and audio to create an interactive world in a user’s environment, including Development of Algorithms and 3D modeling and Scanning languages.
8	ReactJS Developers	$ 40.75	Companies like Yahoo, Airbnb, and American Express rely on React to allow consumers to make multiple selections on a page (the number of bedrooms in a rental, for example) without needing to reload it.
9	Final Cut Pro Editor	$ 37.12	This professional-grade software allows cutting video clips, altering pace, integrating music, editing scenes, inserting transitions, and more. As an editing freelancer, a gif worker can find work in almost every professional field.
10	Instagram Marketing	$ 31.23	As a marketer and influencer, a Gig worker connects the brands and advertises their products through photos for an agreed-upon fee.

However, there are some gig works which offer and pay a small amount per hour. Particularly in Data Entry jobs which converts the paper- based books into e-books, in the typing projects and Captcha solving the payment is very low which ranges from Rs. 7 to Rs. 48 in gig platforms like Kolotibablo, Megatypers, Captcha solving websites and MTurk etc.

CONCLUSION

In our country the unemployment rate is estimated at 7.9 per cent on 29th February,2020 according to the data released by CMIE. Urban unemployment rate was estimated as 8.6 per cent it was 7.6 per cent for rural areas. After going through this unemployment rates, it is to be noted that our economy is not able to generate the jobs for the people entering into labour market. Besides, it is to be observed that people in the age group of 15-24 years constitute nearly a fifth of India's total population (2011) and by 2020, they are predicted to make up a third of the country's population. The youth population with the age group of 20-24 years constitute around 40 per cent of India's labor force, have an unemployment rate of 32 per cent and the unemployment rate among the educated is even worse. The World Bank recently estimated that our country needs to create 8.1 million jobs a year to maintain the employment rate. With our demographic dividend and urgency to generate jobs in different sectors of our economy needs immediate attention in the present era of digitalization, which demands high skilled, well-educated and experts in modern technological literacy. The participation of women in the work force in our country is lowest in the world at around 21 percent, as absence of suitable jobs is observed as one of the reasons for this low rate of participation. The report on "Employment Outlook", women gig workers accounted for about 68,000 jobs in the country in 2019 and gig economy has to be resorted for generation of jobs in future. Keeping these unemployment rates, there is every need to support the gig works, which offer not only part-time jobs as well as full-time highly remunerative jobs for tech-savvy freelancers. Referring to the future of jobs in India, EY, FICCI and NASSCOM teams suggested that the jobs in future could be a combination of employee arrangements interspersed with gig working models. The jobs seekers should understand the importance and evaluate the benefits of contractual labor/project-based work arrangements. Gig work should be considered as relevant as any other type of employment and as the primary source of income and have its impact on society, which values stability in work. The Government, while designing the employment generation strategy should keep in mind the requirements of the present digitally-driven technological-dominant labor market to create employment opportunities for the future of India.

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CONSUMER BEHAVIOUR - PANIC BUYING DURING PANDEMIC COVID-19 ERA: AN ECONOMIC PSYCHOLOGY STUDY ON TIER 3/CLASS Z BANSWARA CITY

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ABSTRACT
This research paper is written in the light of recent pandemic crisis which has engulfed the whole planet. Although it has been a tough time for everyone but this has also presented us with an opportunity to intrigue in the realm on Economic Psychology. Often sub categorized into consumer behaviour, buying patterns and psychology, a lot yet remains unexplored in the field of Economic Psychology. A Worldwide panic has been spread which has been a trigger for Panic buying displaying a sudden shift in consumer behaviour rarely seen in the history. Although there have been few examples in history where mass panic may convert into mass hysteria and causes drastic changes in behaviour of otherwise 'Rational' consumer. It is duly noted that Panic buying is not exclusively related to any pandemic crisis. This is tried to be analyzed using data from a tier 3 city. The focus of this study has been how the panic buying has been triggered into the consumers and its outcomes.

KEYWORDS
behavioral macroeconomics, consumer habits, covid pandemic, customer experience, disaster myopia, new regulations for shopping.

JEL CODES
D12, D91, E71.

INTRODUCTION
Panic is the reaction of a human being which comes into effect when they are under stress and or anxiety. It is an emotional state of mind where the subject tends to exhibit behaviour which they normally do no tend to show under the norms of their rationality. When talking about mass panic, the subject becomes more fascinating as well as intriguing as the same situation affects different individuals over their separate cultures in a unique way displaying a wide range of behaviours between rational to irrational spectrum.

What makes this study more significant it that consumer psychology not only include subject matter from psychology but its scope also includes many element of business, management and economics. Any epidemic or pandemic has direct effect on health and mortality of the masses, thus this causes wide spread fear and mass panic. Any panic behaviour is a sign that individuals are trying to cope up with the problem and trying to maintain their natural equilibrium.

Due to Covid-19, there has been an economic eruption and erratic consumer buying pattern which has made it difficult to buy essential now. It has disrupted the buying behaviour as a whole. All the masses had been hit hard. But this unprecedented twist events have provided an opportunity in the field of Economic Psychology to learn more about the consumer psyche and also to signify the difference between consumer and customer more than ever.

REVIEW OF LITERATURE
Jagdish Sheth (2020) points out due to COVID-19 pandemic, the consumer buying and shopping habits have significantly changed. Consumers are improvising and picking up new habits. "Delivery at home" model is growing. Even with the lockdown opening phases, new social and safety measures have modified the buying pattern. The role of technology cannot be overlooked as for the purpose of social distancing many vendors and retailers are accepting mostly digital payments. He also points out the impact of a mixture of other things on shopping practices. This mixture consists of change in demographics, innovation in technology, and most importantly a blurring line between work, leisure, education, lively hood etc.

Silvius Stanciu (2020) also points towards the change in activities of the society and civilization as a whole due any cataclysmic event be it epidemics, wars or economic crisis. His work mainly focused on Romanian population and consumer in light of COVID-19. Although in comparison to western counterparts, Romania has not been that badly infected, still the prevention measures had been strictly imposed. Thus, during this home isolating situation, most of the consumers looked to prioritize their basic necessities majorly comprising of food, medicine and sanitary products. This also presented an opportunity for the local producers to understand consumer needs.

Samson & Voyer (2014) focused on EPS (Emergency Purchasing Situation) which obviously happens due to an unexpected event. It looks into how these event affect the decision making process of the consumers. Few related factors have been product related like its substitutability, importance and purchase risk. It also evaluates individual trust and expertise as one of the decisive factors.

Pantano, Pizzi, Scarpi, Denis (2020) discusses COVID-19 pandemic ad disruption caused by it in businesses and how retailers must adapt by understanding consumer buying pattern. It provided quite a guideline for retailers in understanding the need of the hour.

PSYCHOLOGY OF CONSUMER PANIC BUYING
As per Psychology experts, first it is necessary to understand that panic buying is different from disaster preparation buying. Latter is more on just anticipation, whereas Panic buying is driven by anxiety and it may drive an individual to absurd lengths to fulfill their demand like buying way excess quantity or waiting in queue for hours which otherwise they wouldn't have done.

Major reason behind this is people want to feel like to be in control. The lengths they go is proportional to harder they strive to be in control of the crisis. Like everyone know that washing hands few times a day is normal hygiene measure which they usually ignore but now they follow each such hygiene precautions religiously.

So basically what people are trying is trying to throw in money to make themselves feel secure. Thus, panic buying is a psychological mechanism trying to control an uncertain situation and curb the fear by taking a buying action.

There can be another reason to be it. Loss Aversion. In the time of crisis, people show a tendency of bulk or excessive buying and hoarding. A typical exception similar to that of Law of Diminishing Marginal Utility where consumer might not use the product right away or for quite some time but spends for it nonetheless as he expects its prices going up or supply falling down in near future. This psychological phenomenon is quite evident in western hemisphere which stemmed of global pandemic, jovially coined as the "Toilet paper Crisis".

The distrust upon government may also be one of the reasons. People have mostly supported the government by following the rules. However, still there is a figment of thought which crops up into the discussion is that while government might be trying to solve the crisis, the profit mongers would indulge in black marketing.

Another reason is the 'Herd Mentality' where people just get prompted into buying because others all around them are doing so and unfortunately all the social media has amplified and created a snowball effect for the sense of scarcity and urgency.

OBJECTIVES OF THE STUDY

1. To determine the changes in consumer buying behaviour in COVID-19 lockdown period.
2. To determine factors affecting the buying behaviour.

RESEARCH METHODOLOGY

The main source of data to gather the information here is collecting primary data collected using survey method with the help of a prepared questionnaire majorly at the P.O.S. while maintaining social distancing and following security protocols.

Sampling Design & Size: The research focuses on consumer buying behaviour in a Tier 3 town of Banswara (Rajasthan). Although target population is households but response could be derived in queues at retailers. The sample size is 300 respondents at various outlets randomly.

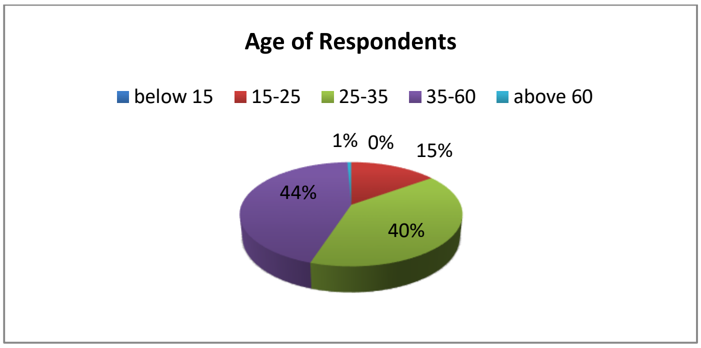
Sampling Method: Convenience sampling method was employed to collect data from respondents.

Tools of Analysis: For analysis of the data, Simple percentage method is used.

DATA ANALYSIS AND INTERPRETATION

1] Age of Respondents

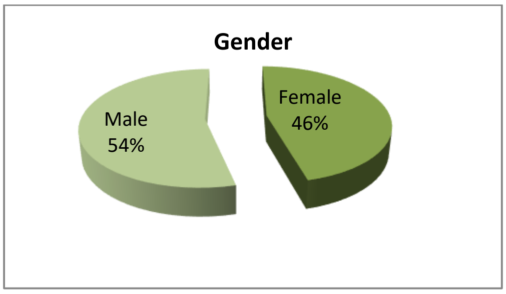
CHART 1



Interpretation: As depicted in the above pie chart, the maximum respondents lie in the age bracket of 35-60 years which is 44% closely followed by group 25-35 years at 40%. Young adults (15-25 years) were very less.

2] Gender

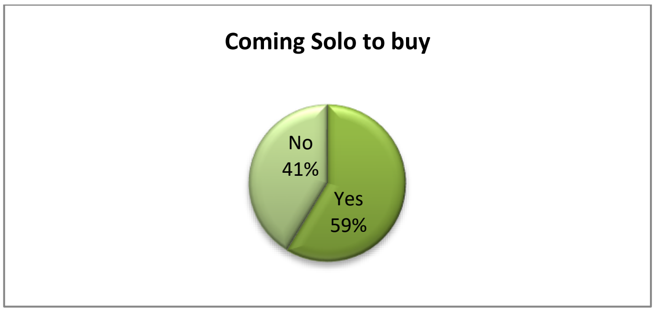
CHART 2



Interpretation: Again the ratio of male and female does not differ significantly when it is about buying the necessities with males being 54%.

3] Coming Solo to Buy at shop?

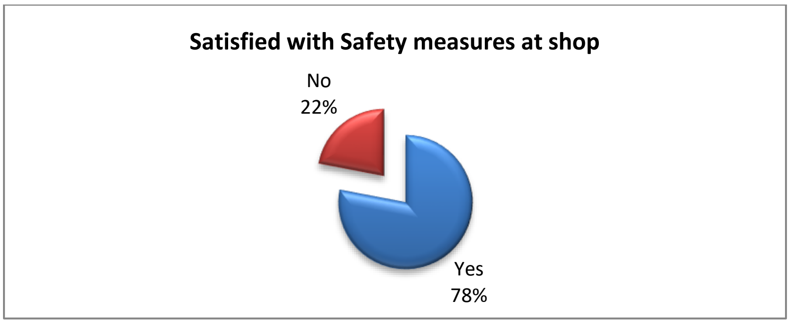
CHART 3



Interpretation: 59% of the sample had come alone to buy at shops reducing the risk to family members however rest had come with a family member or more due to one reason or another.

4] Satisfied with Safety measures at shop

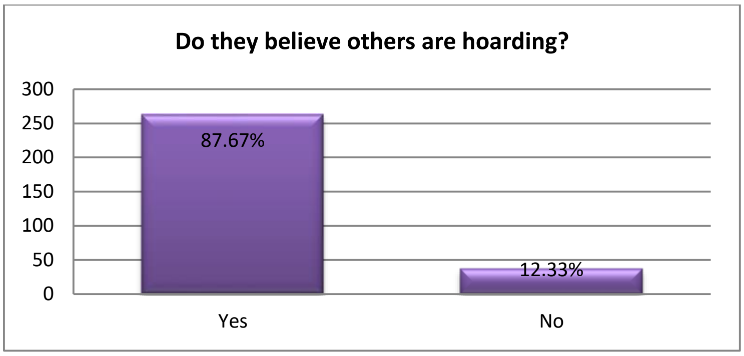
CHART 4



Interpretation: Of all the respondents, a majority (78%) showed confidence in the security measures and social distancing norms followed at the retailers.

5] Respondents believe who believe as per their observation that other buyers are hoarding rather than buying only required quantity.

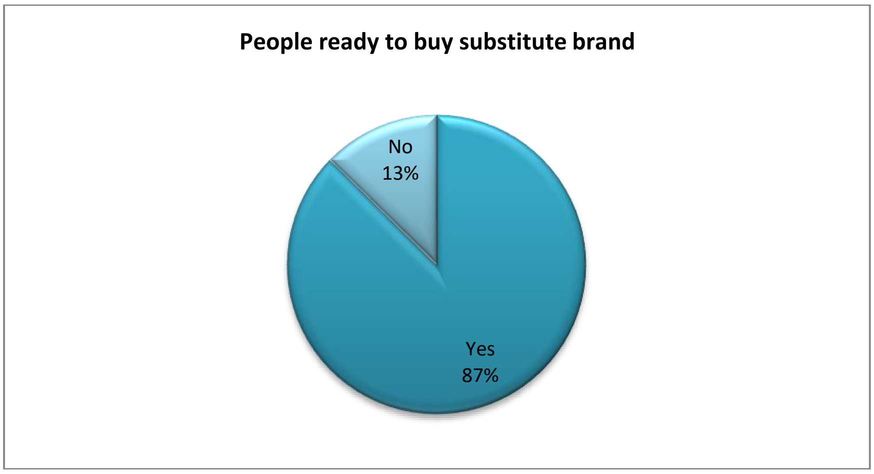
CHART 5



Interpretation: With 263 respondents observing that, whopping 87.67% believe that most of the people are just stock piling and buying more than what they need.

6] People ready to buy substitute brand

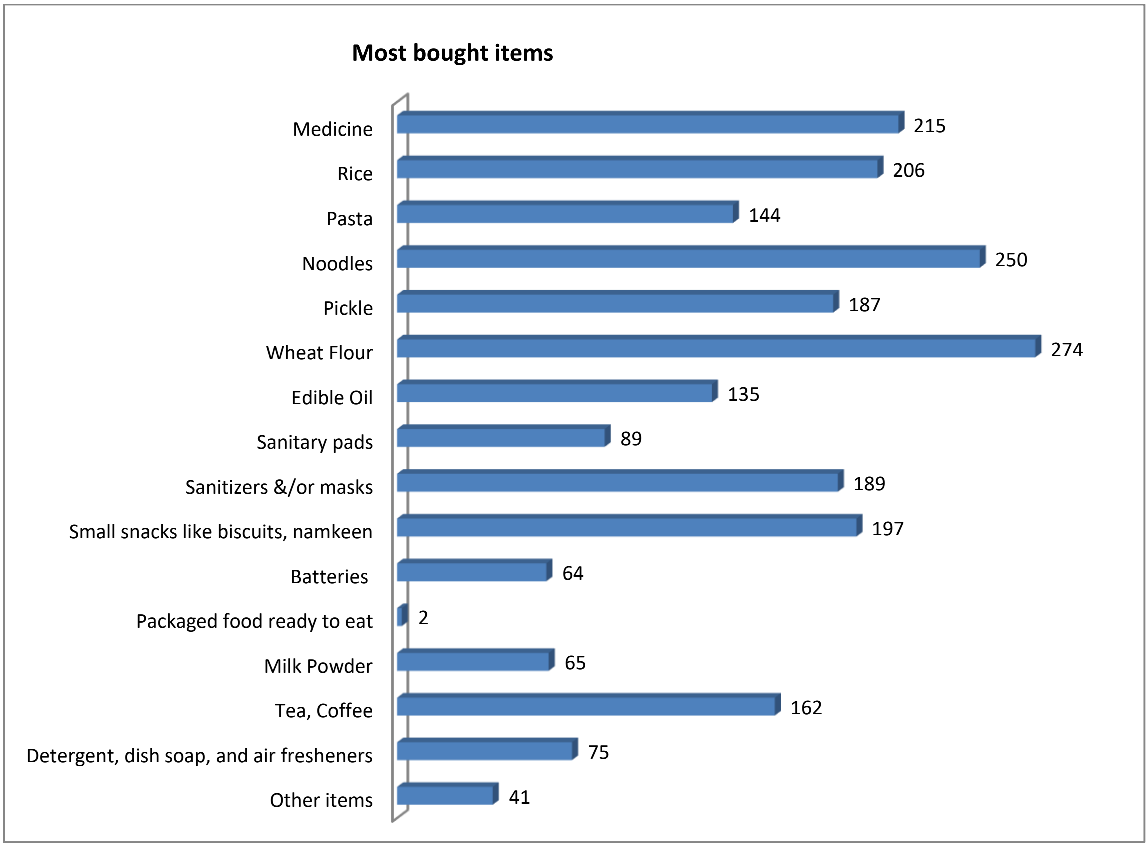
CHART 6



Interpretation: Again 87% of respondents admitted that although they are brand loyal, in this dire time if their preferred brand is out of stock then they would buy substitute brand rather than waiting for stock to come.

7] Most bought items

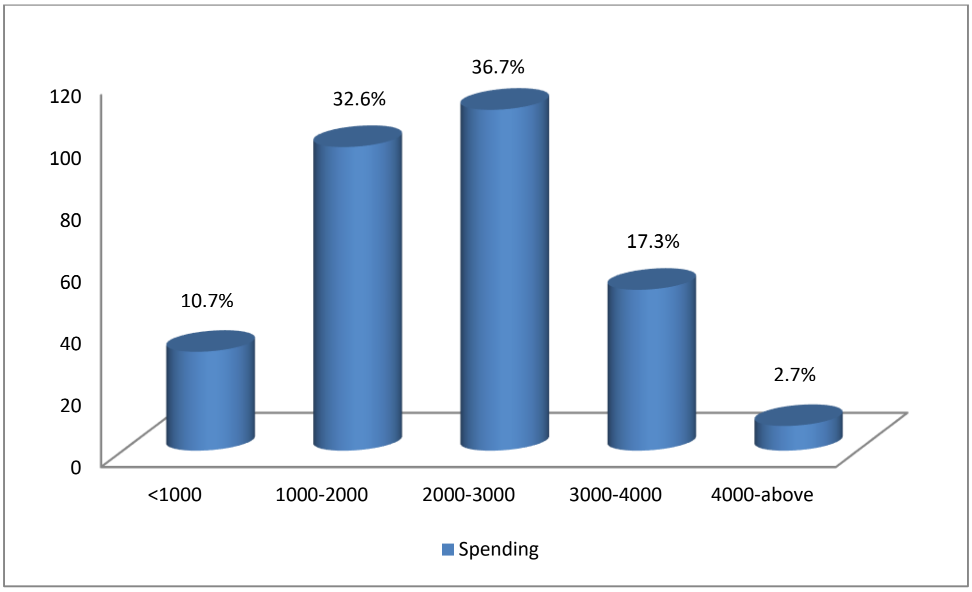
CHART 7



Interpretation: This was a multiple answer question An array of common items bought were put forward and respondents answered according to their needs on that very day.

8] Amount spent in one time

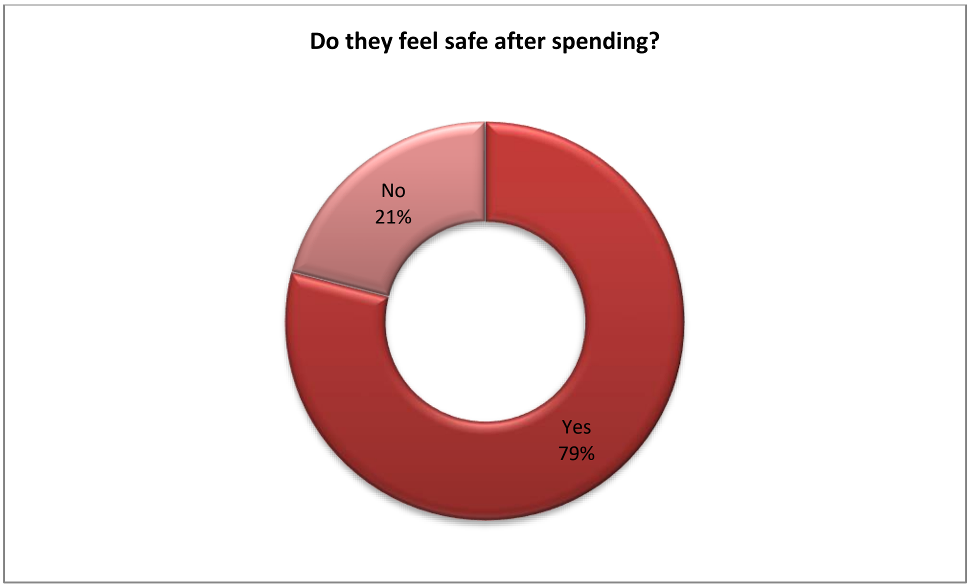
CHART 8



Interpretation: Evidently people were shelling out more than usual amount to buy extra quantity. Yet maximum spending in a tier 3 town has been between Rs.2000 to 3000 for 36.7% respondents.

9] Feeling of security after buying

CHART 9



Interpretation: 79% of total respondents felt that now they are much more secure once they have bought the things they perceive they need. A classic false sense of control as It has nothing to do with safeguard against pandemic (sanitizers etc. are an exception to certain limit).

PANIC BUYING: THE DOWNSIDE

It is quite evident that most of the anxiety driven decisions always hit you the hardest.

1] An individual compromises their rationality. It is sensible to stock-up during crisis but irrational to buy almost 50 liters of edible oil for a month in a family of four.

2] This might increase unnecessary consumption.

3] Stock piling would increase the shortage when supply is already low.

4] This chain reaction lead to black marketing and increase in prices.

5] Collective individual buying causes 'Price gouging'. As a result, as the prices increase, by default then that commodity is labeled as a scarce item. This further adds to anxiety. As seen in case of sanitizers and especially face masks.

6] An utter total disregard of social distancing and safety norms during panic buying

FINDINGS & CONCLUSION

1. Survey shows maximum people engaged in buying has been between 25 to 60 years. Seemingly kids and elderly people followed the norms. Male-females both were actively engaged in the buying process with no significant difference in numbers. And mostly people came alone at the retailers and only had company when it was needed. A majority showed confidence in social distancing norms at the point of purchase.
2. Many of the respondents observed that many people exhibited the trait of hoarding and buying in excess.
3. Almost a majority of items bought could very well be placed under the "Essentials" or "Necessities". On a broad spectrum, people spent between Rs. 1000 to 3000 for one time buy.
4. Important items bought were Wheat Flour, Noodles, Medicines, Rice, small snacks, sanitizers and so on.
5. On talking with respondents and even the retailers, it was evident that initially there was shortage of supply of many items, heavily of sanitizers till mid may. The other supplies had been quite erratic in nature. The Data collected was of items actually bought from available stock rather than what they wanted to buy else sanitizers might have topped the list.

6. People in the town initially didn't had any online shopping service available and even after resume of online services, no such grocery services are available to people in this area hence they depend on local retailers.
7. Product substitution, its importance and purchase risk had heavily affected the consumer's psyche and can be distinguished as factors affecting the consumer behaviour. There has been reduction in panic buying behaviour as buying frequency has quite reduced after mid-June but it stays unclear that this is whether due to reduction in anxiety or due to stock piling by the people.
8. Looking at the factors and the numerical finding, the panic buying behaviour is strongly being exhibited by the people. Statistically speaking although Rajasthan state is having a growing number of Covid-19 patients, Banswara city has been blessed to have only a handful positive cases. Despite this, the mass panic was evident from March till June 2020 which lead to huge changes in buying patter of the people. This study is very significant as although it shows the consumer panic behaviour in a tier 3 city yet this micro-economic model is very well applicable on a larger macro-economic system and points out the panic issues faced by the masses in this pandemic.

SUGGESTIONS

It is time for the authorities to understand the swift and erratic changes in consumer's mood which is causing panic buying. And even the people should ask themselves what they are really afraid of and the root cause of anxiety, the panic spread is not just of Covid-19 but a mixture of many factors like lack of sense of control, financial crunch, career & business tensions, family responsibilities to name a few. Along with other healthcare, mental care is also needed and thus government should use media and other mediums and employ a task force of mental health care experts because this help in reducing anxiety and significantly decline the panic buying behaviour. Also government must now focus on long neglected middle class of the country as they are among the hardest hit in terms of health, finance and employment. They neither have a steady source of income right now, many lost their jobs and they do not even fall in the bracket of government schemes. The panic level in them is the highest. Government must take stern steps to ensure their physical and financial wellbeing and reduce mass panic.

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ROLE OF PERCEIVED SUPERVISOR SUPPORT AND PERSON-JOB FIT ON WORK ENGAGEMENT

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ABSTRACT

Employee engagement is a matter of concern for leaders and managers in organizations across the globe. Organizations need to identify the factors that help to develop and maintain an engaged workforce. The objective of the present study is to determine the influence of person job fit and perceived supervisor support on employee engagement in the Indian context. Respondents to the survey were 177 employees working in three service sector organisations in Central Kerala, South India. Correlation and regression analyses were used to test the research hypotheses. Results of the study show that there exists significant correlation among person-job fit, perceived supervisor support and employee engagement. Results of multiple regression analysis showed that person-job fit and perceived supervisor support significantly predicted employee engagement in the Indian context. The present study has implications for human resource managers as it provides an understanding into two factors that facilitate employee engagement.

KEYWORDS
perceived supervisor support, person-job fit, employee engagement.

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INTRODUCTION
The theme of employee engagement has generated a great deal of attention among many human resource practitioners, business entrepreneurs and academic researchers across the globe. It has emerged as one of the most important topics in the sphere of human resource management (Baldev and Anupama, 2010). The notion of employee engagement has been heavily marketed by human resource consulting firms that offer advice on how it can be created and leveraged (Macey & Schneider, 2008). Employee engagement is a distinct and unique construct that consists of cognitive, emotional, and behavioral components that are associated with individual role performance (Saks, 2006). Engaged employees play a key role in achieving organizational success and competitive advantage. Researchers have made significant studies in exploring the potential relations between engagement and performance-related outcome variables that suggest enhancing engagement could create a compelling competitive advantage for organizations across the globe (Shuck *et al.*, 2011). As commented by Smith (2009), engagement takes its rightful place at the core of organizational success, regardless of how the economy is doing. It is a fundamental area of concern for leaders and managers across the globe as it is a vital element affecting organizational effectiveness, innovation and competitiveness (Welch, 2011). With increasing relevance of employee engagement, researchers are now focusing on what exactly drives engagement and how it can be enhanced. However little research has been undertaken to identify the antecedents of employee engagement and Chaudhary, Rangnekar &Barua (2011) mentioned that antecedents of employee engagement need to attract considerably more attention. The objective of the present study is to determine the influence of perceived supervisor support and person job fit on employee engagement.

LITERATURE REVIEW AND HYPOTHESES
EMPLOYEE ENGAGEMENT
Kahn (1990) was one of the first to propound the concept of engagement. Kahn (1990) defined personal engagement as the harnessing of organization members' selves to their work roles; in engagement people employ and express themselves physically, cognitively and emotionally during role performances. Kahn (1990) also noted that personal disengagement is the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances. Building on Kahn's (1990) qualitative study May *et al.,* (2004) quantitatively explored the determinants and mediating effects of three psychological conditions, meaningfulness, safety and availability on employees' engagement in their work. The results showed that three psychological conditions exhibited significant positive relations with engagement. Employee engagement is also considered in the context of organizational behavior. For example, Schaufeli *et al.* (2002) defined engagement as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work. The present study follows the above definition of engagement.

PERCEIVED SUPERVISOR SUPPORT AND EMPLOYEE ENGAGEMENT
Perceived supervisor support is defined as the degree to which employees form impressions that their supervisors care about their well being, value their contributions and are generally supportive (Eisenberger *et al.,* 2002). Direct supervisors are usually the closest organisational link to the employee and they have the ability to communicate the organizations intentions directly to their subordinates (Levinson, 1965). According to Levinson (1965) as supervisors act as agents of the organization, perceived supervisor support should facilitate positive attitudes towards the organization in general. According to Kahn(1990) management style and processes, like leader behaviours that show more or less support, resilience, consistency, trust and competence, help employees to show and employ self without fear of negative consequences to self image, status or career (psychological safety). Employees tend to view their supervisors orientation toward them as the indicative of organizational support (Rhoades and Eisenberger, 2002). A study conducted by Eisenberger et al. (2002) reported that perceived supervisor support is a predictor of perceived organisational support. This might be because supervisors who seem to be honoured by the organization would be assumed by employees to strongly represent the organizations image (Eisenberger et al., 2002). A basic principle of social exchange theory is that relationships evolve over time into trusting, loyal, and mutual commitments as long as the parties abide by certain "rules" of exchange (Cropanzano and Mictchell, 2005). Rules of exchange usually involve reciprocity or repayment rules such that the actions of one party lead to a response or actions by the other party. For example, when individuals receive socio emotional resources from their organization, they feel obliged to respond in kind and repay the organization (Cropanzano and Mitchell, 2005). When the relationship between the supervisor and the employee is characterized by trust, obligations, socio-emotional resources and a long term orientation, the employees should perceive the exchange relationship as social (Dysvik and Kuvaas, 2012). Thus employees who experience good treatment by their organization are likely to "give back" with more favorable attitudes towards their employer (Meyer & Allen, 1991). Studies signify the positive impact of supervisory support on organizational commitment and job satisfaction. Results also indicate that supervisory support would help reduce employees' tendency to leave the organization (Muhammad & Hamdy, 2005). Literature reveals that perceived supervisor support is an antecedent of employees' positive attitudes and behaviours. On the basis of the above discussion this study proposes a positive relationship between perceived supervisor support and employee engagement.

Hypothesis 1: Perceived supervisor support positively influence employee engagement

PERSON JOB FIT AND EMPLOYEE ENGAGEMENT

P-J fit is defined as the match between the abilities of a person and the demands of a job or the needs/desires of a person and what is provided by a job (Edwards, 1991). P-J fit is relevant to an individual's compatibility with a specific job (Lauver and Kristof- Brown, 2001). According to Munchinsky and Monahan's (1987) conceptualization, the person-job fit refers to complimentary fit which represent the degree of compatibility or congruence between individual's KSAs and job's demands. Shelton et al(2001) stated that people being mismatched in their jobs causes anxiety-induced illnesses, higher incidents of job-related accidents, increases in employee absences, and lower productivity. A mismatch between an employee's skills and the job requires the employee to divert valuable time and attention away from matters of task completion and focus instead on flexing and adjusting to job demands incongruent with their knowledge, skills, and abilities. Saks and Ashforth (1997) determined that employees who experience higher degrees of mismatched P–J fit evidence less organizational commitment and organizational identification. Lauver and Kristof-Brown (2001) said when employees have extended experiences of perceived job mismatches, their perceptions of how they fit positively into the life of the organization is adversely affected. According to them, such negative experiences adversely impact employees' perception of their task performance (how they perceive themselves to execute the responsibilities formally considered to be their jobs) and negatively impact how they execute contextual performance (behaviours contributing to organizational effectiveness beyond formal job requirements). High person-job fit is associated with positive outcomes. Kristof (1996) suggested that P-J fit should be more strongly associated with attitudes specific to the job (e.g., job satisfaction). Based on the above logic we posit that level of engagement of employees with high person job fit is more compared with employees with low person- job fit.

Hypothesis 2: Person- job fit positively influence employee engagement

METHODOLOGY

SAMPLE

The study was conducted among177 employees working in three service sector organisations (one in the healthcare sector, one in the insurance sector and one in the telecom sector) in Central Kerala, South India. Questionnaires were administered to participants and confidentiality was assured.

MEASURES

The study used three main instruments derived from the academic literature to measure each variable. The employees who participated in the survey responded using a 5 point Likert scale with anchor points (1) strongly disagree to (5) strongly agree. Perceived supervisor support was measured by the scale adapted by Rhoades et al. (2001) from the survey of perceived organisational support (SPOS). This instrument contained four items. Person –Job fit was measured using the five items scale developed by Lauver and Kristof-Brown (2001). Employee engagement is measured using the shortened version of UWES (Utrecht Work Engagement Scale) developed by Schaufeli et al.,(2006).

ANALYSES AND RESULTS

Descriptive statistics, reliability estimates, and correlations for all measures are reported in Table 1. Analyses of the study were carried out using SPSS 21.0.

TABLE 1: MEANS, STANDARD DEVIATIONS AND RELIABILITY COEFFICIENTS OF STUDY VARIABLES

Variables	Mean	SD	Cronbach's Alpha
1.Person Job Fit	3.82	.687	(.842)
2.Perceived supervisor support	3.72	.693	(.756)
3. Employee engagement	3.73	.667	(.881)

TABLE 2: RELATIONSHIP BETWEEN PSS, PERSON –JOB FIT AND EMPLOYEE ENGAGEMENT

		PSS	PERSON-JOB FIT	ENGAGEMENT
PSS	Pearson Correlation	**1**	**.351****	**.415****
PERSONJOBFIT	Pearson Correlation	**.351****	**1**	**.731****
ENGAGEMENT	Pearson Correlation	**.415****	**.731****	**1**
****. Correlation is significant at the 0.01 level (2-tailed).**				

Table 2 shows that there exists positive significant correlation between the study variables. Also it is noted that the correlation values are less than 0.8, which rules out the possibility of multi-collinearity (Field, 2009).

To test the hypotheses, H1 and H2 multiple regression analyses were conducted in which employee engagement was regressed simultaneously on person-job fit and perceived supervisor support.

TABLE 3: INFLUENCE OF PERCEIVED SUPERVISOR SUPPORT AND PERSON-JOB FIT ON EMPLOYEE ENGAGEMENT

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	R	Adjusted R^2
	B	Std. Error	Beta			
(Constant)	.610	.225		.007		
PSS	.174	.052	**.180**	**.001**	.750	**0.558**
PERSONJOBFIT	.648	.052	**.668**	**.000**		

Dependent variable: Employee engagement

As presented in Table 3, the regression results indicate that the person-job fit and perceived supervisor support explained a significant amount of variance in employee engagement, **R^2=.558, p<.01**. Person-Job fit (β=.668, p<.01) and perceived supervisor support (β=.180, p<.01) were significant predictors of employee engagement. Both the study hypotheses, H1 and H2 were supported in the present study.

CONCLUSION

The concept of employee engagement is acquiring increasing significance among academic circles and practitioners in India. Literature on employee engagement has blossomed progressively over the past two decades. The objective of the present study was to find out the influence of person job fit and perceived supervisor support on employee engagement. The results showed that person job fit and perceived supervisor support predicted employee engagement. Managers may direct selection and socialization efforts toward increasing person job fit of employees. Results of this study also suggest that employee engagement can be enhanced through modulation in perceived supervisor support and person-job fit of employees. As employee engagement is the backbone of an organization it would be fruitful to explore drivers of employee engagement and the linkages between drivers and employee engagement.

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