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# O J A S

## EXPANDING KNOWLEDGE HORIZON

ISSN No: 2279-0373

Online-ISSN No: 2321-726X

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**Special Issue  
January 2017**

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**An International Journal  
of Research in Management**

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## From Editor- in- Chief

The publication of this special issue of the Ojas – the JSB Journal of Research, is another milestone in the progress and development of the Institute. The current issue deals with a plethora of ideas and concerns for Management representing the volatile and uncertain environment in which we all live today, which spans the social, economic, psychological, cultural and logical expanse. The contributors have dealt with a variety of current issues related to customer satisfaction, controversies related to consumer products, employees' conflicting attitude and behavioral disputes, fluctuating stocks, ever changing financial markets, performance evaluation of private sector banks, theories and approaches related to exchange rate determination and balance of payments; post merger and acquisition measurement; and many more. This issue has research papers focused upon the Indian context.

I compliment the editorial team for bringing out the special issue of Ojas and congratulate all the researchers who have contributed their seminal ideas for this issue. I thank the Editorial Advisory Board for painstakingly going through each and every paper and for their final selection of papers which have figured in this Special Issue. Our endeavour shall be to walk the continuous journey of improvement and bring out another special issue of Ojas at the earliest, based on the proceedings of the National Conference on Financial Inclusion in Digital India.

Happy reading

**Editor- in- chief**

# *Our Inspiration*



**Dr. Rajaram Jaipuria**  
(1934-2015)  
**Founder, Jaipuria School of Business**

“When one performs his prescribed duty only because it ought to be done, and renounces all material association and all attachment to the fruit, his renunciation is said to be in the mode of goodness”...

Bhagwad Gita

# OJAS

Expanding Knowledge Horizon

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*Special Issue - January 2017*

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# A study on effects of Geomagnetic Storm on Financial Markets

Dr. Shuchita Singh\*

## Abstract

This paper throws light on the impact of geomagnetic storms on daily stock market returns, deviations in the average returns, and change in investor's strategies. Many researchers studies that geomagnetic storms have a deep effect on people's moods, and, in turn, people's moods have been found to be related to human behavior, judgments and decisions. This paper also contributes that people repeatedly attribute their feelings and emotions to the wrong source, leading to incorrect judgments which are affected by geomagnetic storms may be more prone to sell stocks on stormy days because they incorrectly attribute their bad mood to negative economic prediction rather than awful environmental conditions.

The main purpose of this paper is to identify the misattribution of mood and pessimistic choices of assets in stock market, which ultimately affect the stock market return due to behavioral factors and bad environment conditions which is directly affected by geomagnetic storms.

**Keywords:** Behavioral Finance, Geomagnetic Storms, Misattribution of mood, Stock returns.

## Introduction

The geomagnetic storms (GMS) is a temporary disturbance of the earth's magnetosphere which is caused by solar flares or solar winds. These are bright eruptions from visible portion of sun's chromospheres which interacts with the earth's magnetic field.

These solar flares are known as plasma which is made up of protons and electrons with an energy of some thousands electron volts. The force of plasma is spread to the upper circumference of earth's magnetosphere which causes the boost in the geomagnetic field at the earth, perhaps through hydro magnetic waves.

The large geomagnetic storms occur when the magnetic field direction within the solar wind is directed opposite to the earth's magnetic field. On a regular basis sun produce "bubbles" or coronal mass ejections. The movement of these bubbles is away from the sun at about 2 million miles per hour. When bubbles leave the sun to reach earth, they travel the 93-million-mile distance in about 40 hours. The occurrence of Coronal mass ejections is more often and it occurs when the sun is more active, and sunspots are more numerous during such times. Since sunspot activity peaks every 11 years, geomagnetic storms exhibit some cyclicity as well.

Disturbance Storm time (DST) is the index which tells about the changes in the geomagnetic storm. Disturbance Storm Time is computed once per hour and reported in near-real-time.

### Effects of Disturbance Storms:

Sometimes they can also create a serious hazard for commercial and military satellite operators, power companies, astronauts, and they can even shorten the life of oil pipelines. The most important thing is that, geomagnetic storm causes a serious hazard for human beings regarding their health. In many countries, such as Russia, as well as in other Eastern and Northern European countries, standard warnings about the amount of geomagnetic storms have been issued for decades.

In a most recent research, geomagnetic storms and their effects was found in several other countries such as the United States, the United Kingdom, and Japan. Nowadays, we can get regular updates on the amount of the geomagnetic storm movement from the press, the Internet and the Weather Channel.

Geomagnetic storms have great effect on the health and behavior of humans, which directly motivates the investigation of a possible link between geomagnetic storms and the stock market.

In this research paper, we recommend a possible and economically practical talk which relates geomagnetic storms to



stock market returns, and provide empirical evidence which is consistent with this talk.

#### Phases of geomagnetic Storm:

The phases of geomagnetic storm are divided into three parts which tells about how geomagnetic storm occurs from initial phase to recovery phase, which are as follows:

- i. Initial phase: In the initial phase of geomagnetic storms, it is illustrated by DISTURBANCE STORM TIME. The initial phase of geomagnetic storms is also known as storm sudden commencement (SSC). This phase is connected with compression of the magnetosphere, resulting in an increase in local intensity. The period of this phase is last for 2-8 hours.
- ii. Main phase: The period of main phase of geomagnetic storm is about 12 to 24 hours. The main phase is connected with erratic but general decreases in background field intensities.
- iii. Recovery phase: The duration of the recovery phase of geomagnetic storm is about as short as 10 hours or as long as 7 days. The recovery phase occurs when DISTURBANCE STORM TIME changes from its minimum value to its quiet value.

#### Types of geomagnetic storms:

Geomagnetic storms are divided into types which are regarded as recurrent and non-recurrent storms. The detailed explanation is as follows:

- i. Recurrent storms: Recurrent storms take place every 27 days, equivalent to the Sun's rotation period. These are the storms which occur mostly in declining phase of solar cycle. These storms are generated by the Earth's encounters with the southward-oriented magnetic field of the high-pressure regions formed in the interplanetary medium by the interaction of low- and high-speed solar wind streams co-rotating with the Sun.
- ii. Non-recurrent storms: Non-recurrent geomagnetic storms, on the other hand, occur most frequently near solar maximum. They are caused by interplanetary disturbances driven by fast coronal mass ejections (CMEs) and typically involve an encounter with both the interplanetary shock wave and the CME that drives it.

#### Causes of Geomagnetic Storms:

As discussed above those magnetic storms are produced by a change in the properties of the solar wind. Geomagnetic storms occur when the solar wind contains a magnetic field called the

interplanetary (IMF) which have the same direction as the Earth's field on the dayside. Magnetic disturbances occur when this field rotates toward an opposed to parallel direction. The main causes of geomagnetic storm can be explained as follows.

1. Solar flare
2. Coronal Holes

#### Effect of Geomagnetic Storm

Energy produced by solar flares are very high in nature, which are also very dangerous to living organisms because intense solar flares release very high energy particles that produce poisonous radiation which is harmful to human health. Although, the Earth's magnetic field and atmosphere protect the earth's surface from the effects of solar flares and other solar activity. The intense solar flares and radio emission, both changes in the atmosphere can degrade the precision of Global Positioning System (GPS) measurements.

From the above discussion we can conclude that impact of geomagnetic storm can be divided into following points.

#### 1. Probable Impact

It refers to that impact which is likely to be happening when geomagnetic storm occurs, but it is not necessary that it affect the following objects. So we can say that probable impact is most likely impact.

- i. Induced Currents – Irregularities in power system voltage can be possible. On some protection device false alarms may be elicited.
- ii. Spacecraft – Automatically surface charging may experience; increased drag on low Earth-orbit satellites and compass reading problems may occur.
- iii. Navigation - Irregular satellite routing (GPS) problems, including loss-of-lock there may be increased in range error.
- iv. Radio – Blinking of High Frequency (HF) radio may be occur.

#### 2. Earthquake connection

Geomagnetic storm has also affected the earthquake. As solar flares and CMEs can influence Earth's tectonic plates which then respond with a release of this extra energy in the form of stronger earthquakes.

#### Biological Affects

As we have already discussed geomagnetic storm have affect on humans which is also known as biological effects. In 1998 the

study has been conducted and concludes that there is a straight relation between the sun's solar storms and living biological effects. The channel which facilitates the solar flares i.e. charged particles from sun to earth surface is the same channel which facilitates to human disturbance. Both animals and humans have a magnetic field which is around them in the same manner the magnetic field is around the earth as a shield.

### Psychological Effect

Psychological effects of coronal mass ejections (CMEs) are usually very short live which includes headache, palpitations, mood swings, and feeling generally unwell. Messy or puzzled thinking and erratic behaviors also among the human beings. Solar storms can force our emotions and exploit it to both good and bad side of it; the main purpose is here to be alert from these consequences. The electromagnetic charges from sun produced physically, mentally and emotionally effects and because of it our body can feel sleepy and also feel highly energized.

### Geomagnetic Storms (GMS) and Investor's Psychology

Many researches in psychology has accepted a relation between depression, anxiety, altered moods, and unusually high levels of geomagnetic activity. It has been found that Psychological disorders and bad moods have been linked to more vigilant behavior, including decisions of a financial nature, and substantial misattribution.

As we have studied the relation between geomagnetic storms and distorted moods and misattribution, the strength of geomagnetic storm can potentially affect stock market returns. If investors are more distrustful during periods of extreme geomagnetic storms, they may be more prejudice to sell stocks on stormy days.

According to the belief, market participants directly affected by GMS which can influence overall market returns. From the above discussion we can conclude that, there is a negative causal relationship between patterns in geomagnetic storm and stock market returns.

Many researchers have observed and strongly support in favor of a GMS effect in stock returns after controlling for market seasonal and other environmental and behavioral factors.

They also give indication of substantially lower returns around the world through periods of strong geomagnetic activity. In addition to this researchers have also observed that, geomagnetic storm has greater effect on small capitalization stock as compare to the large capitalization stocks.

**Gompers and Metrick (2001)** observed in their study that institutional ownership is positively correlated with stock capitalization, small cap stocks being held mostly by individuals.

As decisions relating to investment taken by individual investors are prone to affected by emotions, mood, fear and greed as compare to those of institutional investors who trade and rebalance their portfolio using a specified set of rules. So we can say that, **the effect of GMS should be more prominent in the pricing of smaller cap stocks and the returns of stock market also appears to be relevant from an economic point of view.**

### Geomagnetic Storms and Moods

The predictions of geomagnetic storms have improved with the help of Physicists at the University of California, San Diego and Japan's Nagoya University, in past few years by developing a method of detecting and predicting the movements of these geomagnetic storms in the cosmic region of space between the sun and the earth. NASA and various other sources related to space provide details relating to forecasts of geomagnetic activity. The period of Geomagnetic storms are predictable and persist for two to four days. Commonly there are 35 stormy days in a year with a more concentration of stormy days occurs in March-April and September-October. It has been found that Geomagnetic storms have great effects on human health and have been related to various forms of mood disorders.

In a study of Persinger (1987) geomagnetic activity have been correlated with anxiety, sleep disturbances, altered moods, and greater incidences of psychiatric admissions. The accesses of individuals with a diagnosis of depression rose 36.2% in the phase of high geomagnetic activity as compared with normal phase, under the study on GMS and depression.

The main factor which plays a significant role in mood disturbance in phase of geomagnetic storm is influenced by the activity of the pineal gland, cause imbalances and disruptions of the circadian rhythm of melatonin production. Abnormal melatonin model have been closely associated to a variety of behavioral changes and mood disorders.

In addition to this, the effect of geomagnetic storm may continue several days after the perturbation has ceased. Therefore, it can be said that, there is direct causal relationship between geomagnetic storms and common psychological disorders and geomagnetic activity seems to affect people's health with a lag.

### Mood Disorders and Decision Making:

**Hirshleifer and Shumway (2003)** documented in their studies, that there is a direct link between mood disorders and decision making. **Wright and Bower (1992)** have shown in their study, that when people are not in good mood, there is a clear inclination for more pessimistic choices and judgments. **Loewenstein (2000)** also discusses the role of emotions in economic behavior. **Johnson and Tversky (1983)** find that mood has strong effects on



judgments of risk. From above mentioned literature we can conclude that, people often attribute their feelings and emotions to the wrong source, leading to incorrect judgments.

**Geomagnetic Storm and Stock Market Returns**

From the different studies, we can predict that, there is a fundamental relationship between patterns in geomagnetic activity and stock market returns. Findings relating to medical don't permit us to identify an exact lag structure linking geomagnetic storms to psychological disorders. According to for example, Zakharov and Tyrnov (2001), Halberg et al. (2000), and Belisheva et al. (1995) they make it clear that the effects of unusually high levels of geomagnetic activity are more pronounced during the recovery phase of the storms. So to examine empirically the link between stock market returns at time t and GMS indicators at time t-k, with choice of k as motivated factor. As a result, we are taking GMS as a null hypothesis, which has no effect on the stock returns but the alternative hypothesis which is psychological disorders brought on by GMS lead to relatively lower returns the days following intense levels of geomagnetic activity. From the above discussion we can conclude that, the relation between GMS and the stock market are not focus on the criticism of data probing.

Why the financial analysts examine a casual relationship between geomagnetic storms and the stock market? The reason behind this, the intensity of geomagnetic storm has pervasive effects on human health and behavior. The researchers have concluded that there is a direct relation between gloominess and nervousness, mood swings and normally high levels of geomagnetic activity. The researchers has also stressed on psychological disorders and bad moods which have been found to be more observant behavior including decisions related to financial nature and extensive misattribution. So we can say that, the inter relationship between the intensity of geomagnetic storms, mood swings and misattribution affects the return of the stock market. If the investors bend towards more to negative situations during periods of intense geomagnetic activity, the investors will be more bias to sell stocks on stormy days. This results because of,

investors characteristic their bad mood incorrectly and perceived negative economic prospects rather than environmental conditions.

The affects of geomagnetic storm on the market participants is directly which indirectly influence the overall market returns. The demand for riskless assets is quite high due to negative future prediction which ultimately causes the price of risky assets to fall or to rise less quickly. Therefore, the conclusion of this description is a negative causal relationship between patterns in geomagnetic activity and stock market returns.

While calculating stock market returns we should consider four US indices that are the NASDAQ, the S&P500, the Amex, and the NYSE. All of these indices are value-weighted and do not include dividends. US stock market indices are taken from CRSP indices of returns which also include dividends and we got qualitatively identical results in all cases. To investigate the effect of geomagnetic storms on small capitalization vs. large capitalization stocks, we give a attention on the NASDAQ and the NYSE-AMEX-NASDAQ size deciles from CRSP.

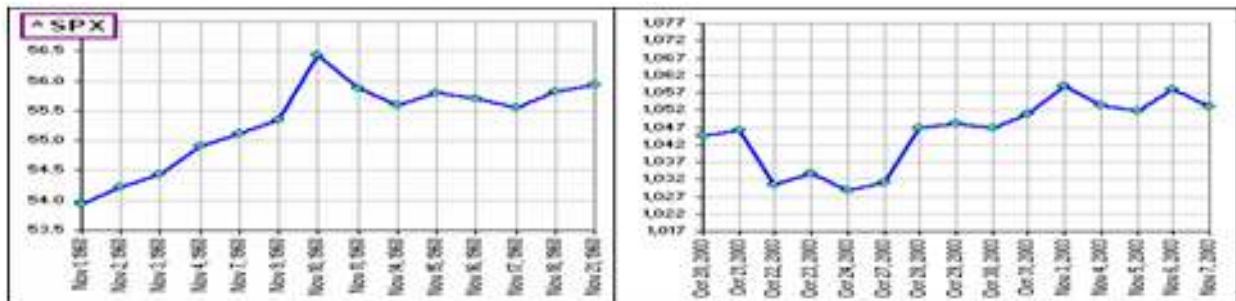
The reaction of the S&P 500 to the Nov 12, 1960 storm is shown below (as well as something more recent):

From the above data we can conclude that, from November, 1960 the returns are increasing gradually day by day, on 10 November 1960 the returns are higher. On 12 November 1960, the geomagnetic storm has come and after that there is a tremendous decline in the returns and returns remain low aftermath effect of geomagnetic storm.

After 3 to 4 days of geomagnetic storm effect, the return will increase but on a slow pace as compare to its decline. In the second table, more recent trends are presented.

In the above figure, there is comparison of returns of world and Canada, NASDAQ and SP500. The green bar shows the returns during a normal day of trading and red bar shows the return

Figure 2



Source: <http://www.financialwisdomforum.org/gummy-stuff/magnetics.htm>

during bad days i.e. aftermath effects of geomagnetic storms. From both graphs, we can conclude that returns decline tremendously after the geomagnetic storm i.e. in normal days of trading the NASDAQ returns is approximately 6% but after geomagnetic storm it decreases which is approximately less than 1%. So there is a large difference between the returns of normal days and bad days. So we can conclude that, geomagnetic storm has very bad affect on human beings, communications and as well as on the returns of stock markets.

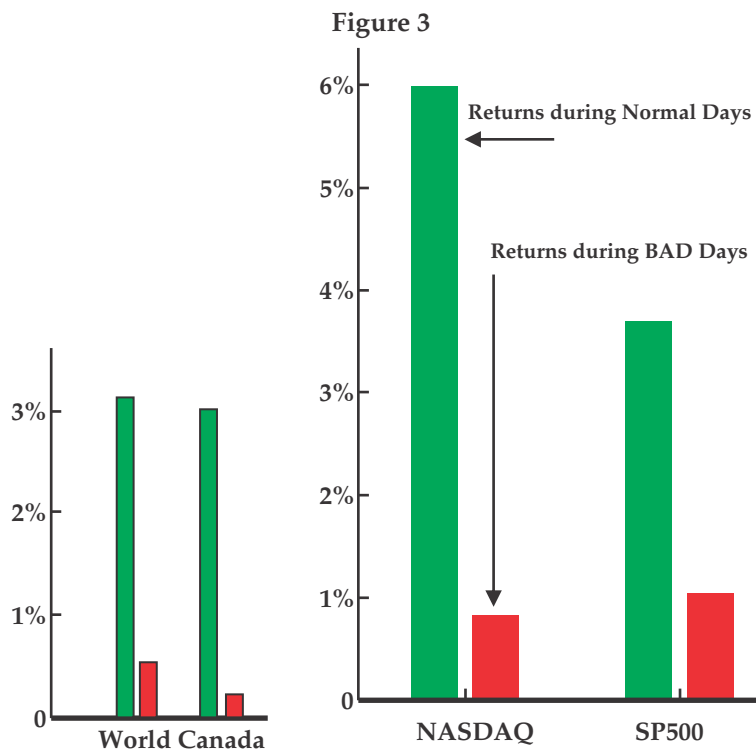
### Conclusion

Above details show that geomagnetic storm effect stock market returns even after controlling the influence of other environmental factors on the stock market. National and international stock market both are negatively affected by geomagnetic storm during recovery phase. We have also documented a more pronounced GMS effect demand for riskless assets, which is quite high due to negative future prediction which

ultimately causes the price of risky assets to fall or to rise less quickly. Therefore, the conclusion of this description is a negative causal relationship between patterns in geomagnetic activity and stock market returns.

This paper also shows an attempt of ascertain a relation between psychology and economics and also explore the relation between people’s mood and behavior in a financial setting, possibly controlling for cross-country differences.

The geomagnetic storms have a deep effect on people’s moods, human behavior, judgments and decisions about risk. Experimental research in psychology has documented a direct link between mood and decision making. It has been observed that people affected by geomagnetic storms may be more inclined to sell stocks on stormy days because they incorrectly attribute their bad mood to negative economic prospects rather than poor environmental conditions. Though it has also been observed that geomagnetic–storms have favorable effect in stock returns. If



Source: <http://www.financialwisdomforum.org/gummy-stuff/magnetics.htm>

people are more pessimistic during periods of intense geomagnetic storms, they may be more inclined to sell stocks on stormy days. when people are in bad moods, there is a clear tendency for more pessimistic choices and judgments. Pessimistic investors raise high demand for riskless assets, causing the price

of risky assets to fall or to rise less quickly than otherwise. Since investment decisions of individual investors are more likely to be affected by emotions and mood than those of institutional investors who trade and rebalance their portfolio using a specified set of rules, the GMS effect should be more pronounced

in the pricing of smaller cap stocks. Seasonal affective disorders (SAD) effect **Kamstra, Kramer, and Levi (2003)** and of a sunshine effect **Saunders (1993)**, **Hirshleifer and Shumway (2003)**, **Goetzmann and Zhu (2003)** are also caused by Geo Magnetic Storms. **Calendar effect and Monday effect also take place because of GSM only.**

#### Arithmetic Mean of stocks effected by GSM

Intense geomagnetic storms not only appear to affect people's mood during their recovery phase but also seem to affect US stock returns within a week from hitting the atmosphere.

#### The GMS Effect on Returns of Large Cap vs. Small Cap Stocks

The GMS effect is found to be more pronounced in the pricing of smaller cap stocks. The differences in returns generally increase as we move from large capitalization stocks to small capitalization stocks. An individual might try to hold the world market portfolio during 'normal' days and switch his investments towards safer assets. The GMS-based portfolio would also deliver a standard deviation which is 14 percent lower than the standard deviation of the benchmark portfolio. One possibility would be to use derivative securities as a hedging device. Trading against incoming storms by buying put options on stock market indices might turn out to be a valid strategy.

It is also observed that Individual investment is more effected as compared to institutional investment.

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[http://lunatictrader.com/?Geomagnetic\\_Storms](http://lunatictrader.com/?Geomagnetic_Storms)

GSM Activity Index	Ap Index GSM
0-29	Quiet or Unsettled Activity
30-49	Minor Storm
50-99	Major Storm
≥ 100	Severe Storm

# The Effect of Product Diversification on the Adoption and Implementation of Activity Based Costing

Amit Kumar Arora\*  
M.S.S. Raju\*\*

## Abstract

Role of cost accounting in today's era has been significantly changed. Organizations have to reduce their cost to increase the profits. Activity based costing is a tool in the hands of management to get the more correct cost information and to enhance the profitability by taking more appropriate decisions. In the present study there is an attempt to know that whether the product diversification of the organization is having any significant impact on the implementation of ABC system in the selected manufacturing units. Logistic regression model is used to know the above relation and found that there is no significant impact of the product diversification on the implementation of the ABC system. Future study can be recommended to investigate the other various influential factors for ABC implementation such as, size of the organization, top management support, competition level etc.

**Keywords:** Activity Based Costing System, product diversification and Logistic regression model.

## Introduction

Manufacturing organizations of today are much more complex than those of the 1960s and earlier years. To manage today's manufacturing organizations managers require information which is relevant, accurate and readily available. Information is needed to formulate and operationalise functional strategies and to make decisions on product mix and production costs. Although production systems have changed to meet the changing needs of the marketplace, in many organizations the internal management accounting systems and information systems have remained unchanged. Managers and accountants have become dis-satisfied with conventional costing systems and have expressed concerns about their suitability in the modern manufacturing environment. Conventional cost systems have been severely criticized by experts since the late 1980s. Critics have therefore argued for better cost systems that reflect cost information more accurately. Activity-based costing systems (hereafter called ABC) were developed to overcome the deficiencies found in conventional cost systems.

The initial purpose of the ABC system is to provide a fair and accurate cost allocation and therefore product, or in this case services, profitability evaluation also. Accordingly, the ABC system focuses its attention on indirect costs. The aim is to define the most appropriate way for indirect costs allocation to cost objects.

Product diversification can be one of the influential factors for the adoption of ABC system. Many studies are conducted to know the

impact of various factors influencing the implementation of ABC system i.e. size of the organization, top management support, competition level etc. As the product diversification can be the one of the major influential factor for the implementation of ABC system. But, very less no. of studies is found in this regard and the studies found no significant relationship between the two. What is the relation exist for the Indian companies between the product diversification and the use of ABC is still far from the study.

## Objectives of the Study

As in the literature product diversification is considered as one of the important factor for implementation of ABC system. Hence, the objective of the present study is to determine the relationship between the product diversification and the ABC uses in the selected manufacturing units.

## Hypothesis

On the basis of the objective of the study the following hypothesis is developed.

**H0:** There is no relationship between the product diversification and the ABC uses.

**H1:** There is significant relationship between the product diversification and the ABC uses.

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## Research Methodology

The study is based on Primary data collected through direct interview and through the mail. Out of the targeted 50 manufacturing units in Delhi/NCR region data is received from 30 companies out of these data received from 7 units are found not suitable for the study, hence total 23 company's data is considered for the study. Logistic regression is used to analyze the impact of product diversification and the use of ABC system in the selected manufacturing units.

## Literature Survey

Very less no. of studies are found on product diversity and its impact on the implementation of ABC system. The following are the literature survey collected on the relationship between the product diversification and the use of ABC.

**Trond**<sup>1</sup>, studied 75 manufacturing companies to know the importance of cost structure, competition, product diversity and firm size for adoption of ABC. He found only cost structure significant for the adoption of ABC. Where-as the size of the organization is not the reason to adopt ABC system in the organizations. The study also found product diversity as non significant factor for the adoption of ABC.

**David A. Brown, Peter Booth, Francesco Giacobbe**<sup>2</sup>, studied the impact of technological and organizational influence on the adoption of ABC in Australia. Organizational and technological factors are considered for the study. organizational factors i.e., top management support, internal champion supports, organizational size and use of consultants are used and three technological factors i.e. level of overheads, product complexity and diversity and relative advantage are used to determine the impact over the use of ABC by using cross sectional study on 160 firms in Australia. Logit model is used to determine the result and the study found three factors i.e. top management support, internal champion support and organization size leads to implement ABC in the organizations. Product diversification is not found to be significant for the implementation of ABC.

**Rbaba'n**<sup>3</sup>, examine the relationship between company characteristics i.e. industry type, number of employees, number of products, level of overheads and ABC implementation. He examined 82 Jordanian manufacturing companies and used logistic regression and found no significant relationship among ABC implementation and company characteristics i.e. industry type, number of employees, number of products, level of overheads variables.

## Result and Discussion:

The results of the analysis are presented in this section with the discussion of findings.

**Table -1 Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	2.004	1	.157
	Block	2.004	1	.157
	Model	2.004	1	.157

Omnibus model has a chi-square value of 2.004 with significant value of .157 which is more than .05 which states that the model is not significant.

**Table -2 Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	28.785 <sup>a</sup>	.083	.113

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table -3 Classification Table<sup>a</sup>

Observed			Predicted		
			Use		Percentage Correct
			Yes	No	
Step 1	Use	Yes	2	7	22.2
		No	1	13	92.9
Overall Percentage					65.2

a. The cut value is .500

Table -4 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Products	-.038	.029	1.721	1	.190	.962
	Constant	.965	.585	2.717	1	.099	2.623

a. Variable(s) entered on step 1: Products.

Nagelkerke R Square is similar to R Square we use in OLS. This explains that how much variance in the dependent variable is explained by the predictive variables. In the present study only 11.3% variation is explained by the predictive variables.

The classification table shows that how good is the model to predict the actual outcome. In the present study the model is able to predict the 65.2%. This indicates that the present model prediction is correct around 65%. Generally model having prediction power more than 70% is considered as a good model. So the model prediction power is also not too good.

The above table is most important table in this variables are in the equation. As from the above we can see that the significant value is .190 which is more than .005 so we can say that there is no significant relationship between the no. of employees and the implementation of ABC system. The standard error is 0.028 the less value of standard errors shows that the estimates are fair.

### Conclusion

From the above analysis we can conclude that the null hypothesis of the study has been accepted this implies that there is no

significant relation between the product diversification on the uses of ABC system. The result of the studies is similar to the studies conducted by David A. Brown, Peter Booth, Francesco Giacobbe, Bjornenak, Rbaba'h etc.,

Future study can be recommended to investigate the other various influential factors for ABC implementation such as, size of the organization, top management support, competition level etc.

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# Assessing the efficiency of Indian Stock Market

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## Abstract

Every investor wants to earn profit from the share market. For this purpose, an investor should know how to predict the future share prices of particular security on the basis of past historical data. When excess return generates by picking up lottery stock. This situation is called "Inefficient Market". On the other side if market is efficient, it is waste of time to predict stock market. The foal purpose of this paper is to study the efficiency level in Indian Stock market and the random walk nature of the stock market by using RUN test for the period from 1st January 2001 to 31st December 2014. In this research paper, six major indices of Bombay Stock Exchange [BSE 30, BSE 100,200,500, BSE SMALL CAP and BSE MIDCAP] are studied.

**Keywords:** Run test, ACF, Market efficiency, Random walk.

## Introduction

Future is uncertain. Every investor wants to know about the future because past has gone and every decision taken in the present will show its results in the future. Every investor uses different techniques to forecast the future up to an extent so that he can take a decision whether to invest in the share market or not. The academicians have also put a lot of efforts to find out the different kinds of trading techniques so that abnormal profits can be earned .by knowing the dependence in successive price changes.

The Random Walk Hypothesis can be used to find out whether one can predict future prices from past prices or not. It assumes that every change in the share price is independent from its previous or historical prices. So there is no need to study the past trend or patterns of prices to predict future movement. And it can be said that future prices are independent and cannot be predicted from earlier changes in any significant manner (Weak form of hypothesis)<sup>1</sup>. The main purpose of this paper is to test the weak-form of efficiency of the Indian stock market by using data on daily basis from the 1st January 2001 to 31st December 2014. There are 2 major stock exchanges in India, Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). There are various indices are available but for the research purpose only 6 indices of BSE [BSE 30, BSE 100,200,500, BSE SMALL CAP and BSE MIDCAP] are considered.

## Literature Review

In his finding, Lo, Mamaysky and Wang (2000) conclude that human decisions are superior to most computational algorithms. But recent advanced statistical techniques and tests had

successful applications which can be useful to identify the patterns or trends in technical analysis<sup>2</sup>.

In their paper titled "Quasi-Maximum Likelihood Estimation and Inference in Dynamic Models with Time Varying Covariance" Brock, Lakonishok and LeBaron (1992) tested twenty six technical trading rules on daily basis data of the Dow-Jones Industrial Average for the period 1897-1986. They concluded that buy signals generates higher returns during buy days as compare to sell signals during sell signals<sup>3</sup>.

Louis Bachelieer , The French mathematician in his Ph.D dissertation titled "The Theory of Speculation" concluded that "The mathematical expectation of the speculator is zero"<sup>4</sup> as French government papers are unpredictable and no decision can be taken on the basis of studying past data.

Alexander (1961) in against of Random Walk theory, worked on Dow Jones Industrial Averages in the period 1897-1929 and Standard & Poor Industrials in the period 1929-1959.

He gave the answer of a unique question "When to Buy and when to sell the stocks?" According to him if the price of a particular stock are continuously declining then set a fix percentage and as soon as the price increases from its low by that percentage, buy the stock. The same strategy should be used for selling decision also, if the price of a particular stock increases on continuous basis then after reaches its recent high if the stock decline by that percentage, sell the stock. He concludes that a particular trend whether bull or bear has a trend for long time<sup>5</sup>.

Sharma and Kennedy (1977), in the paper titled "A Comparative

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Analysis of Stock Price Behaviour on the Bombay, London and New York Stock Exchanges" compared the behavior of stock indices of the Bombay, London and New York Stock Exchanges for the period of 1963-73. They used run test and spectral analysis to find out the market efficiency. In their findings they concluded that Bombay, London and New York all the three stock exchanges follow the random walk movement<sup>6</sup>".

Madhuri Malhotra, M. Thenmozhi, G Arun Kumar (2007), in their paper titled "Stock Market Reaction and Liquidity Changes around Bonus Issue Announcement: Evidence from India" by (2007), examines the reaction of bonus issue on the share prices of Indian companies. In India bonus issue declaration provides negative abnormal returns around the bonus declaration date. There is a negative correlation between bonus announcement and share prices means if any company declares bonuses then its share prices declines. It is also observed that there is no prior information regarding the bonus issue declaration<sup>19</sup>.

## Objectives of the Study

The objective of the research is to test the random walk theory in Bombay Stock Exchange via their six indices [BSE 30, BSE 100, 200, 500, BSE SMALL CAP and BSE MIDCAP].

The 14 years daily closing data for 4 indices (BSE 30, BSE 100, BSE 200 and BSE 500) and 10 years daily closing data for 2 indices (BSE MIDCAP and BSE SMALLCAP) is used to find out whether past stock prices can be used to predict the future stock prices or not. Whether the stock prices follow any pattern or trend or not. Whether the decision to buy or sell of any stock can be taken on the trend of past stock prices.

### Hypothesis:

Ho1: BSE 30 Follows Random pattern.

Ha1: BSE 30 does not Follows Random pattern.

Ho2: BSE 100 follows Random pattern.

Ha2: BSE 100 does not follows Random pattern.

Ho3: BSE 200 follows Random pattern.

Ha3: BSE 200 does not follows Random pattern.

Ho4: BSE 500 follows Random pattern.

Ha4: BSE 500 does not follows Random pattern.

Ho5: BSE Mid-Cap follows Random pattern.

Ha5: BSE Mid-Cap does not follows Random pattern.

Ho6: BSE Small-Cap follows Random pattern.

Ha6: BSE Small-Cap does not follows Random pattern.

## Methodology

For testing random walk of BSE indices, daily closing values used for the period of 1st January 2001 to 31st December 2014. The reason for selecting this period is that during this 14 years market seem too volatile. It touched the life time high in 2008 and low in 2010 and then it recovered. The total 3461 number of observations for BSE 30, BSE 100, BSE 200 and BSE 500 each and 2937 for BSE Small-cap and Mid-cap each. The data are collected from BSE website only.

## Research Methodology

After having 1 lag difference ( $t_1 - t_0$ ), total runs are calculated with the help of Excel. The MINITAB software is used for applying run test.

Run test is used to check the Randomness among the data. Run test is a non-parametric test.

"A Run test may be defined as a sequence of price changes of the same sign preceded and followed by price changes of different signA." It measures only the direction of the price change (whether upward or downward) and not the magnitude of the change. It measures how many times the share price moves upward or downward from its last closing price on daily basis.

In a given time series of stock prices there are three possible types of price changes, namely positive, negative and no change. This gives three types of runs. A positive (negative) run is a sequence of positive (negative) price changes preceded and succeeded by either negative (positive) or zero price change. Similarly, a zero run is sequence of zero price changes preceded and succeeded by either negative or positive price changeB. The assumption of Run test is that the successive price changes are independent and the sample proportion of positive, negative and zero price changes are unbiased estimates of the population proportions.

## Result and Discussion

From the Table 1 it can be observed that, the resulting p-value of all indices (0.0000) are smaller than the alpha level of 0.05, there is sufficient evidence to conclude that the data are not in random order and market is inefficient. It means with the help of past prices and trend we can predict the market. The above test was run on total observed runs of 10 years. And it can be interpreted that market is not random.

**Table: 1 BSE Indices Run test output for 2001 to 2014**

Runs Test					
	BSE 30	BSE 100	BSE 200	BSE 500	BSE MIDCAP
Test Value <sup>a</sup>	6.78432246142	2.062	.8575	2.69945256520	3.22551923731
	732			494	699
Cases < Test Value	1701	1674	1640	1649	1291
Cases >= Test Value	1760	1815	1849	1840	1646
Total Cases	3461	3489	3489	3489	2937
Number of Runs	1591	1593	1553	1547	1225
Z	-4.761	-5.076	-6.330	-6.565	-8.355
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000

Runs Test	
	BSE SMALLCAP
Test Value <sup>a</sup>	3.49080013619339
Cases < Test Value	1277
Cases >= Test Value	1660
Total Cases	2937
Number of Runs	1129
Z	-11.848
Asymp. Sig. (2-tailed)	.000

**Table: 2 BSE 30 Run test output for 2001 to 2014**

Runs Test						
	bse 100 01	bse 100 02	bse 100 03	bse100 04	bse 100 05	BSE 100 06
Test Value <sup>a</sup>	3.6419	.2594	3.2149	1.0256	3.0719	4.7305
Cases < Test Value	157	121	122	114	116	112
Cases >= Test Value	91	129	131	139	134	137
Total Cases	248	250	253	253	250	249
Number of Runs	106	113	120	125	106	116
Z	-1.400	-1.633	-.926	-.161	-2.466	-1.058
Asymp. Sig. (2-tailed)	.162	.102	.354	.872	.014	.290

Runs Test					
	BSE 100 07	BSE 100 08	BSE 100 09	BSE 100 10	BSE 100 11
Test Value <sup>a</sup>	9.5757	-14.722	9.8520	3.1824	-6.5716
Cases < Test Value	121	122	124	117	127
Cases >= Test Value	127	123	118	134	119
Total Cases	248	245	242	251	246
Number of Runs	119	116	129	131	105
Z	-.755	-.960	.912	.645	-2.414
Asymp. Sig. (2-tailed)	.450	.337	.362	.519	.016

## Runs Test

	BSE 100 12	BSE 100 13	bse 100 14
Test Value <sup>a</sup>	5.47572000000000	1.19473895582330	8.399
Cases < Test Value	124	125	117
Cases >= Test Value	126	124	126
Total Cases	250	249	243
Number of Runs	124	111	108
Z	-.252	-1.841	-1.845
Asymp. Sig. (2-tailed)	.801	.066	.065

Table: 3 BSE 100 Run test output for 2001 to 2014

## Runs Test

	bse 100 01	bse 100 02	bse 100 03	bse100 04	bse 100 05	BSE 100 06
Test Value <sup>a</sup>	3.6419	.2594	3.2149	1.0256	3.0719	4.7305
Cases < Test Value	157	121	122	114	116	112
Cases >= Test Value	91	129	131	139	134	137
Total Cases	248	250	253	253	250	249
Number of Runs	106	113	120	125	106	116
Z	-1.400	-1.633	-.926	-.161	-2.466	-1.058
Asymp. Sig. (2-tailed)	.162	.102	.354	.872	.014	.290

## Runs Test

	BSE 100 07	BSE 100 08	BSE 100 09	BSE 100 10	BSE 100 11
Test Value <sup>a</sup>	9.5757	-14.722	9.8520	3.1824	-6.5716
Cases < Test Value	121	122	124	117	127
Cases >= Test Value	127	123	118	134	119
Total Cases	248	245	242	251	246
Number of Runs	119	116	129	131	105
Z	-.755	-.960	.912	.645	-2.414
Asymp. Sig. (2-tailed)	.450	.337	.362	.519	.016

## Runs Test

	BSE 100 12	BSE 100 13	bse 100 14
Test Value <sup>a</sup>	5.47572000000000	1.19473895582330	8.399
Cases < Test Value	124	125	117
Cases >= Test Value	126	124	126
Total Cases	250	249	243
Number of Runs	124	111	108
Z	-.252	-1.841	-1.845
Asymp. Sig. (2-tailed)	.801	.066	.065

Table:4 BSE 200 Run test output for 2001 to 2014

Runs Test					
	BSE 200 01	BSE 200 02	BSE 200 03	BSE 200 04	BSE 200 05
Test Value <sup>a</sup>	-.3847	.2147	1.464	.4186	1.1417
Cases < Test Value	117	118	125	113	115
Cases >= Test Value	130	132	128	140	135
Total Cases	247	250	253	253	250
Number of Runs	103	117	118	121	106
Z	-2.706	-1.094	-1.195	-.645	-2.449
Asymp. Sig. (2-tailed)	.007	.274	.232	.519	.014

Runs Test					
	BSE 200 06	BSE 200 07	BSE 200 08	BSE 200 09	BSE 200 10
Test Value <sup>a</sup>	1.8814	3.9796	-6.1887	4.1036	1.3365
Cases < Test Value	106	121	117	124	114
Cases >= Test Value	143	127	128	118	137
Total Cases	249	248	245	242	251
Number of Runs	116	117	111	125	125
Z	-.877	-1.009	-1.572	.396	-.057
Asymp. Sig. (2-tailed)	.381	.313	.116	.692	.955

Runs Test				
	BSE 200 11	BSE 200 12	BSE 200 13	BSE 200 14
Test Value <sup>a</sup>	-2.824	2.2837	.34	3.6876
Cases < Test Value	125	122	124	112
Cases >= Test Value	121	128	125	131
Total Cases	246	250	249	243
Number of Runs	105	119	107	104
Z	-2.424	-.879	-2.349	-2.297
Asymp. Sig. (2-tailed)	.015	.380	.019	.022

Table:5 BSE 500 Run test output for 2001 to 2014

## Runs Test

	BSE 500 01	BSE 500 02	BSE 500 03	BSE 500 04	BSE 500 05
Test Value <sup>a</sup>	-1.2041	.6952	4.6813	1.4623	3.8800
Cases < Test Value	119	119	125	110	115
Cases >= Test Value	128	131	128	143	135
Total Cases	247	250	253	253	250
Number of Runs	103	115	116	123	110
Z	-2.724	-1.361	-1.447	-.301	-1.939
Asymp. Sig. (2-tailed)	.006	.174	.148	.763	.053

## Runs Test

	BSE 500 06	BSE 500 07	BSE 500 08	BSE 500 09	BSE 500 10
Test Value <sup>a</sup>	5.8873	13.2031	-20.6685	13.0186	4.2129
Cases < Test Value	105	119	115	120	118
Cases >= Test Value	144	129	130	122	133
Total Cases	249	248	245	242	251
Number of Runs	114	113	105	123	121
Z	-1.100	-1.504	-2.319	.130	-.641
Asymp. Sig. (2-tailed)	.271	.133	.020	.897	.521

## Runs Test

	BSE 500 11	BSE 500 12	BSE 500 13	BSE 500 14
Test Value <sup>a</sup>	-9.04	7.1830	.7132	11.86251028806585
Cases < Test Value	125	119	122	111
Cases >= Test Value	121	131	127	132
Total Cases	246	250	249	243
Number of Runs	99	117	107	104
Z	-3.191	-1.107	-2.344	-2.279
Asymp. Sig. (2-tailed)	.001	.268	.019	.023



Table:6 BSE MIDCAP Run test output for 2003 to 2014

## Runs Test

	BSE MIDCAP 03	BSE MIDCAP 04	BSE MIDCAP 05	BSE MIDCAP 06	BSE MIDCAP 07
Test Value <sup>a</sup>	7.9653	2.2782	5.39292000000 000	5.30236947791 165	22.8195
Cases < Test Value	88	103	110	100	127
Cases >= Test Value	101	148	140	149	132
Total Cases	189	251	250	249	259
Number of Runs	86	107	98	105	131
Z	-1.327	-2.022	-3.369	-2.072	.068
Asymp. Sig. (2-tailed)	.185	.043	.001	.038	.946

## Runs Test

	BSE MIDCAP 08	BSE MIDCAP 09	BSE MIDCAP 10	BSE MIDCAP 11	BSE MIDCAP 12
Test Value <sup>a</sup>	-27.2357	13.9865	3.926	-11.1306	7.92516000000 000
Cases < Test Value	116	113	110	117	117
Cases >= Test Value	130	130	141	129	133
Total Cases	246	243	251	246	250
Number of Runs	91	105	111	80	109
Z	-4.179	-2.184	-1.745	-5.598	-2.098
Asymp. Sig. (2-tailed)	.000	.029	.081	.000	.036

## Runs Test

	BSE MIDCAP 13	BSE MIDCAP 14
Test Value <sup>a</sup>	-1.9760	14.96057613168724
Cases < Test Value	113	112
Cases >= Test Value	136	131
Total Cases	249	243
Number of Runs	99	114
Z	-3.259	-1.003
Asymp. Sig. (2-tailed)	.001	.316

**Table:7 BSE SMALLCAP Run test output for 2003 to 2014**  
Runs Test

	BSE SMALLCAP 03	BSE SMALLCAP04	BSE SMALLCAP 05	BSE SMALLCAP 06	BSE SMALLCAP07
Test Value <sup>a</sup>	8.456	3.78	9.7491	3.4729	26.8607
Cases < Test Value	95	106	106	100	120
Cases >= Test Value	94	145	144	149	139
Total Cases	189	251	250	249	259
Number of Runs	80	103	103	103	127
Z	-2.261	-2.654	-2.610	-2.336	-.351
Asymp. Sig. (2-tailed)	.024	.008	.009	.019	.726

Runs Test

	BSE SMALLCAP 08	BSE SMALLCAP 09	BSE SMALLCAP 10	BSE SMALL CAP 11	BSE SMALLCAP12
Test Value <sup>a</sup>	-40.7315	18.7127983539 0947	4.69553784860 558	- 17.4589837398 3739	7.2938
Cases < Test Value	109	115	105	117	108
Cases >= Test Value	137	128	146	129	142
Total Cases	246	243	251	246	250
Number of Runs	91	99	93	79	105
Z	-4.066	-2.985	-3.919	-5.726	-2.413
Asymp. Sig. (2-tailed)	.000	.003	.000	.000	.016

Runs Test

	BSE SMALLCAP 13	BSE SMALLCAP 14
Test Value <sup>a</sup>	-3.6215	18.26300411522634
Cases < Test Value	114	112
Cases >= Test Value	135	131
Total Cases	249	243
Number of Runs	89	106
Z	-4.556	-2.038
Asymp. Sig. (2-tailed)	.000	.042

In table 2, it can be observed that in the year 2005 and 2011 the P value is smaller than 0.05. It means market is non random. But in rest of the years the P value is greater than alpha value. It means in all 12 years, market follows the random pattern.

In table 3, it follows the same pattern of BSE 30. In the year 2005 and 2011 the P value is smaller than 0.05. It means market is non random. But in rest of the years the P value is greater than alpha value. It means in all 12 years, market follows the random pattern.

In table 4, In the year 2001, 2005, 2011, 2013 and 2014 the P value is smaller than 0.05. It means market is non random. But in rest of the years the P value is greater than alpha value. It means in all 9 years, market follows the random pattern.

In table 5, In the year 2001, 2008, 2011, 2013 and 2014 the P value is smaller than 0.05. It means market is non random. But in rest of the years the P value is greater than alpha value. It means in all 9 years, market follows the random pattern.

In table 6, In the year 2004, 2005, 2006, 2008, 2009, 2011, 2012 and 2013 the P value is smaller than 0.05. It means market is non random. But in rest of the years the P value is greater than alpha value. It means in all 5 years, market follows the random pattern.

In table 7, In the year 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013 and 2014 the P value is smaller than 0.05. It means market is non random. And only in 2007 the P value is greater than alpha value. It means that only in 2007 market follows the random pattern.

## Limitations of the Study

The study is limited to 14 years from 2001 to 2014 and 6 indices of BSE only. The broader study is possible by increasing the number of years and indices. The study is also limited to BSE only; it can be expanded by including NSE or some other Nation's indices to prove randomness of the capital market. Some other tests and statistical methods may also be applied to find out the stationarity of the data.

## Conclusion

The findings of the research show that in the long run Indian stock market is inefficient but in the short run it is efficient. So, the results of the research support the Random-walk hypothesis in short duration but in long term doesn't. As well as some indices support the weak form of market efficiency and some indices does not support it. The information regarding yesterday's and today's indices can be used to predict tomorrow's indices. The

stocks in the index don't absorb the price information effectively. So the conclusion is this that the investors can earn extra profits by analysing the securities and buy undervalued securities and sell the overvalued securities.

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# Performance evaluation of Private sector Banks in India

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## Abstract

This paper ascertains the financial performance of private sectors banks in India from year 2010-11 to 2014-15 on the basis of Deposits, Net NPA ratio, Return on equity, Net Interest Margin and Number of Branches. Secondary data was used for such analysis. We gave ranks (1,2,3) to banks individually on above mentioned parameters. We found out their mean and standard deviation Bank wise and year wise. We found that following private sector banks as HDFC, ICICI, AXIX, Yes bank etc. are working very efficiently. While Nainital Bank with 0 NPA is doing good job. Trend analysis of average mean and S.D year wise was calculated through which we justified slope and interception of Trend.

**Keywords:** Interception, Net NPA Ratio, Return on Equity and Trend Analysis

## Introduction

The private-sector banks are banks where greater parts of stake or equity are held by the private shareholders and not by government. In 1994, the Reserve Bank Of India issued a policy of liberalization to license limited number of private banks, which came to be known as New Generation tech-savvy banks. Global Trust Bank was, thus, the first private bank after liberalization; it was later amalgamated with Oriental Bank of Commerce (OBC). Then Housing Development Finance Corporation Limited (HDFC) became the first (still existing) to receive an 'in principle' approval from the Reserve Bank of India (RBI) to set up a bank in the private sector. These banks are split into two groups by financial regulators in India, old and new. The old private sector banks existed prior to the nationalization in 1969 and kept their independence because they were either too small or specialist to be included in nationalization.

The new private sector banks are those that have gained their banking license since the liberalization in the 1990s. At present 13 old private sector banks and 7 new private sector banks exist. But Vysya Bank has merged with Kotak Mahindra Bank with effect from April 1, 2015, and the combined entity will bear the name Kotak Mahindra Bank. there were certain criteria set for the establishment of the new private-sector banks, some of those criteria being:

- a) The bank should have a minimum net worth of Rs. 200 crores.
- b) The promoters holding should be a minimum of 25% of the paid-up capital.
- c) Within 3 years of the starting of the operations, the bank

should offer shares to public and their net worth must increased to 300 crores.

Private Banks in India have earned great response for its skin tight service and also known for bringing revolution for serving millions of customers. it offers best option for saving and also offers various scheme with maximum return. It offers its services 24 hours and made the job of fund transfer easier by offering new banking services. Besides there are lots of ATM machines have been setup by such private banks and made the task of withdrawing liquid money easier.

## Literature Review

Harish Kumar Singla (2008) It is concerned with examining the profitability position of the selected sixteen banks (BANKEK-based) for a period of five years (2000-01 to 2006-2007). The study reveals that the profitability position was reasonable during the period of study when compared with the previous years. Return on Investment proved that the overall profitability.

Chaudhary and Sharma (2006) performed comparative analysis of services of public sector banks and private sector banks and stated that the increased competition and information technologies reduce processing costs, the erosion of product and geographic boundaries, and less restrictive governmental regulations have all played a major role for public sector banks in India to forcefully compete with private".

B.Satish Kumar (2008), in his article on an evaluation of the financial performance of Indian private sector banks wrote

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Private sector banks play an important role in development of Indian economy. After liberalization the banking industry underwent major changes. The economic reforms totally have changed the banking sector. RBI permitted new banks to be started in the private sector as per the recommendation of Narashiman committee. The Indian banking industry was dominated by public sector banks. But now the situations have changed new generation banks with used of technology and professional management has gained a reasonable position in the banking industry.

## Objective of the Study

The study focuses to analyze the trend performance of total private banks operating in India that has contributed to increase in employment, profits of the business, deposits, etc., maintaining the minimum capital adequacy ratio from the date of its establishment catering to needs of the Indian Banking

Regulatory Norms as per the Reserve Bank of India (RBI) guidelines. Non performance Assets are used to judge the efficiency of banks. This research will be helpful for the future growth of Indian economy and policy makers in the banking industry. Objective of the study are as follows:

- (1) To check the financial performance of Private sector banks
- (2) To evaluate the overall trend performance of Private Sector Banks operating in India.

## Research Methodology

Research Methodology is the scientific and systematic research for pertinent information on the specific topic.

- (1) Nature of The Research Design: The methodology adopted was both descriptive and analytical in nature

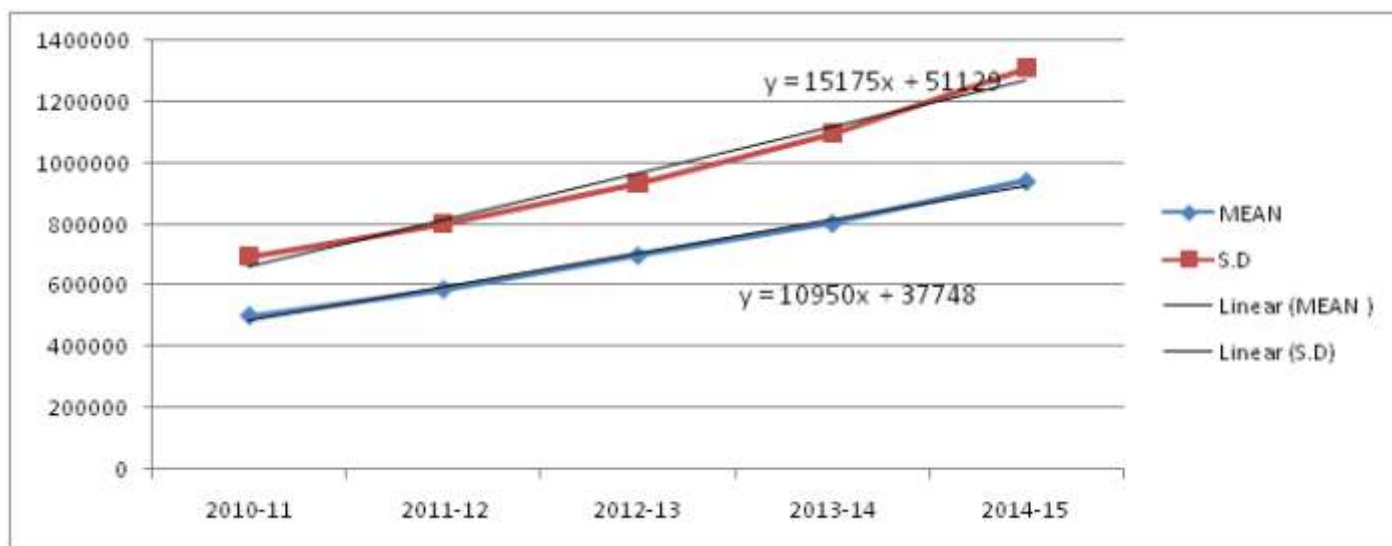
### (1) Basis - Deposits

(Amount in millions)

S.No	Bank	2010-11	2011-12	2012-13	2013-14	2014-15	Mean	Rank	SD
1	Catholic Syrian Bank.	87257	106049	123416	136738	144744	119640.80	16	23292.62
2	City Union Bank	129143	163408	203048	220169	240749	191303.40	13	44883.44
3	Dhanlaxmi Bank	125296	118044	112021	121332	123816	120101.80	15	5287.30
4	Federal Bank	430148	489371	576149	597,290	708226	560236.80	6	106620.82
5	ING Vysya Bank	301942	351954	413340	412167	-----	369850.75	----	53584.43
6	Jammu & Kashmir Bank	446759	533469	642206	693358	657561	594670.60	5	101952.8
7	Karnataka Bank	273364	316083	360562	405828	460086	363184.60	11	73316.98
8	Karur vysya Bank	247219	321116	386530	437576	446902	367868.60	10	83957.99
9	Lakshmi Vilas Bank	111495	141141	156190	185728	219642	162839.20	14	41538.25
10	Nainital Bank	28249	34775	37236	46503	53440	40040.60	19	9949.13
11	Ratnakar Bank	20422	47393	83405	115986	170992	87639.60	17	58964.11
12	South Indian Bank	297211	365005	442623	474910	519124	419774.60	9	88676.11
13	Tamilnad Mercantile Bank	137933	171104	202238	226456	256498	198845.80	12	46307.62
14	Axis Bank	1892378	2201043	2526136	2809445	3224419	2530684.20	5	518433.79
15	Devlopment Credit Bank	56102	63356	83638	103251	126091	86487.60	18	28792.00
16	HDFC Bank	2085864	2467064	2962470	3673374	4507956	3139345.60	1	968420.33
17	ICICI Bank	2256021	2555000	2926134	3319136	3615627	2934383.6	2	551430.59
18	Indusind Bank	343654	423615	541167	605022	741343	530960.20	7	155287.52
19	Kotak Mahindra Bank	292610	385365	510288	590720	748600	505516.60	8	177579.24
20	Yes Bank	459389	491517	669556	741920	911758	654828.00	4	186200.05
	MEAN	501122.8	587293.6	697917.6	802731.1	940924.9			
	% Change in average deposits	-----	17.20%	18.84%	15.02%	17.22%			
	S.D	695459.3	802070.89	932450.81	1095070.4	1307717.9			

Sources: Annual reports of banks



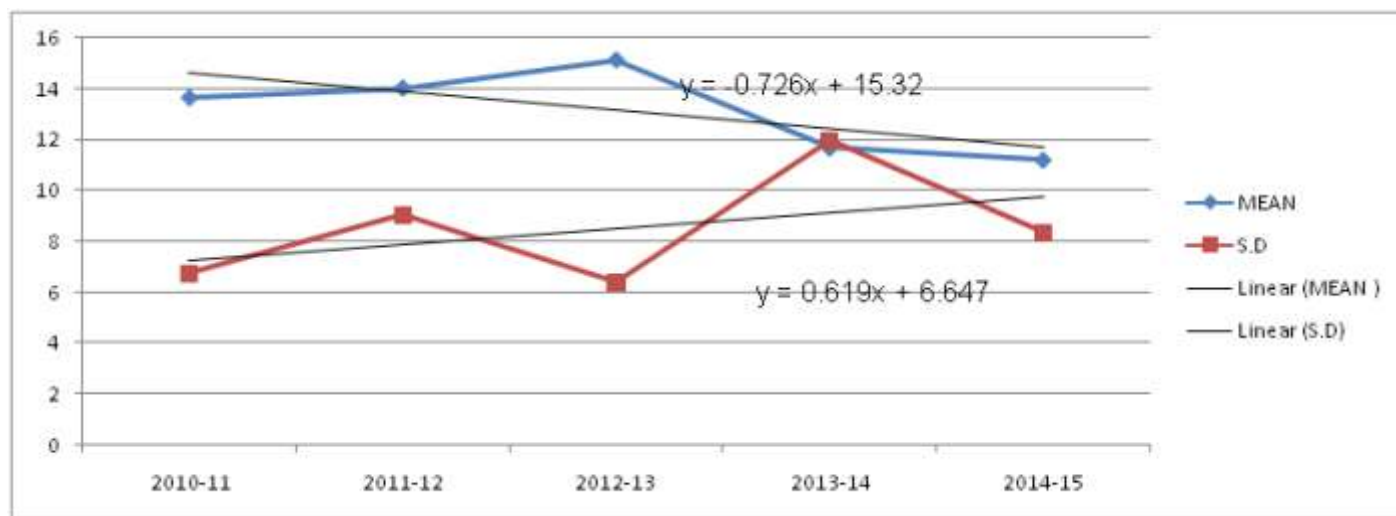


(2) Basis – Return on Equity

(Amount in millions)

S.No	Banks	2010-11	2011-12	2012-13	2013-14	2014-15	Mean	Rank	S.D
1	Catholic Syrian Bank.	2.6	4.66	6.14	4.49	-8.18	1.942	18	5.80
2	City Union Bank	21.4	22.5	19.6	17.1	14.7	19.06	2	3.18
3	Dhanlaxmi Bank	3.1	-15.9	0.35	-34.2	-12.6	-11.85	19	14.91
4	Federal Bank	11.98	14.37	13.89	12.8	13.77	13.362	12	0.96
5	ING Vysya Bank	12.86	13.82	14.24	9.3	-----	12.555	-----	2.25
6	Jammu & Kashmir Bank	18.96	21.22	23.56	22.34	8.6	18.936	4	6.02
7	Karnataka Bank	9.6	9.79	12.76	10.73	13.3	11.236	14	1.70
8	Karur vysya Bank	22.26	20.81	19	12.9	11.6	17.314	8	4.79
9	Lakshmi Vilas Bank	12.4	11.56	9.28	6.17	10.1	9.902	15	2.42
10	Nainital Bank	16.24	17.74	13.31	14.3	15.7	15.458	10	1.72
11	Ratnakar Bank	1.71	5.9	6.73	6.72	7.6	5.732	17	2.33
12	South Indian Bank	17.56	19.99	19.41	15.07	8.56	16.118	9	4.64
13	Tamilnad Mercantile Bank	19.96	20.89	24.08	14.02	15.6	18.91	5	4.08
14	Axis Bank	19.34	20.29	18.53	18.23	18.57	18.992	3	0.83
15	Devlopment Credit Bank	3.51	7.43	10.95	13.1	12	9.398	16	3.92
16	HDFC Bank	16.74	18.69	20.34	19.8	16.9	18.494	6	1.64
17	ICICI Bank	9.65	11.2	13.1	14.4	14.5	12.57	13	2.11
18	Indusind Bank	17.91	18.26	17.15	17.48	18.59	17.878	7	0.58
19	Kotak Mahindra Bank	16.4	15.4	15.6	14	14.8	15.24	11	0.90
20	Yes Bank	21.13	23.07	24.81	25	19	22.602	1	2.55
	<b>MEAN</b>	13.66	14.04	15.14	11.68	11.21			
	% Change in average Return on Equity	-----	2.78%	7.83%	-22.8%	-4.02%			
	S.D	6.74	9.04	6.40	11.97	8.37			

Sources: Annual reports of banks

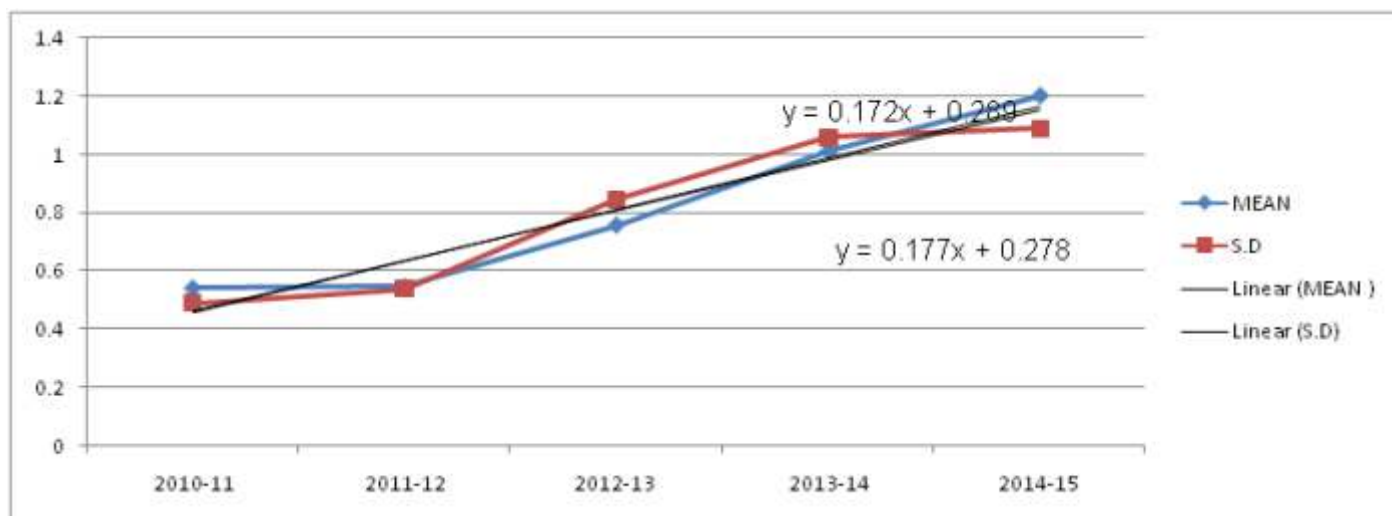


### 3) Basis – Net NPA Ratio

(Amount in millions)

S.No	Banks	2010-11	2011-12	2012-13	2013-14	2014-15	Mean	Rank	S.D
1	Catholic Syrian Bank.	1.74	1.1	1.12	2.22	3.85	2.006	17	1.13
2	City Union Bank	0.52	0.44	0.63	1.23	1.3	0.824	13	0.41
3	Dhanlaxmi Bank	0.3	0.66	3.36	3.8	3.29	2.282	19	1.66
4	Federal Bank	0.6	0.53	0.98	0.74	0.73	0.716	12	0.17
5	ING Vysya Bank	0.39	0.18	0.03	0.28	-----	0.22	-----	0.15
6	Jammu & Kashmir Bank	0.2	0.15	0.14	0.22	2.77	0.696	11	1.16
7	Karnataka Bank	1.62	2.11	1.51	1.91	1.98	1.826	16	0.25
8	Karur vysya Bank	0.07	0.33	0.37	0.41	0.78	0.392	7	0.25
9	Lakshmi Vilas Bank	0.9	1.74	2.43	3.44	1.85	2.072	18	0.94
10	Nainital Bank	0	0	0	0	0	0	1	0.00
11	Ratnakar Bank	0.36	0.2	0.11	0.31	0.27	0.25	4	0.10
12	South Indian Bank	0.29	0.28	0.78	0.78	0.96	0.618	8	0.31
13	Tamilnad Mercantile Bank	0.27	0.45	0.66	1.22	0.67	0.654	9	0.36
14	Axis Bank	0.29	0.27	0.36	0.4	0.44	0.352	6	0.07
15	Devlopment Credit Bank	0.96	0.57	0.75	0.91	1.01	0.84	14	0.18
16	HDFC Bank	0.19	0.18	0.2	0.3	0.3	0.234	3	0.06
17	ICICI Bank	1.11	0.73	0.77	0.82	1.4	0.966	15	0.28
18	Indusind Bank	0.28	0.27	0.31	0.33	0.31	0.3	5	0.02
19	Kotak Mahindra Bank	0.6	0.5	0.64	0.9	0.8	0.688	10	0.16
20	Yes Bank	0.03	0.05	0.01	0.05	0.12	0.052	2	0.04
	MEAN	0.542	0.5475	0.758	1.01	1.20			
	% Change in average NPO	-----	1.01%	38.44%	33.24%	18.81%			
	S.D	0.49	0.54	0.847	1.06	1.09			

Sources: Annual reports of banks

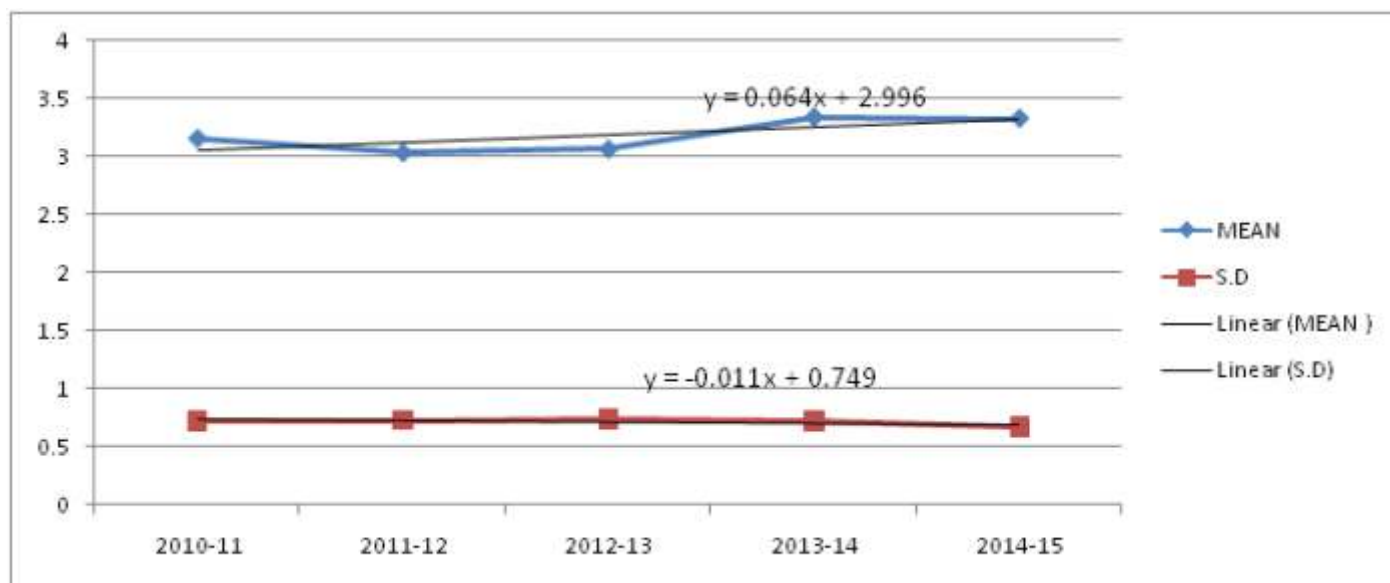


(4) Basis - Net Interest Margin

(Amount in millions)

S.No	Banks	2010-11	2011-12	2012-13	2013-14	2014-15	Mean	Rank	S.D
1	Catholic Syrian Bank.	2.83	2.81	2.64	2.58	2.57	2.686	17	0.13
2	City Union Bank	3.21	3.03	3.02	3.5	3.44	3.24	9	0.22
3	Dhanlaxmi Bank	2.37	1.71	1.94	2	2.4	2.084	19	0.30
4	Federal Bank	3.67	3.49	3	3.32	3.27	3.35	8	0.25
5	ING Vysya Bank	2.76	2.81	3.02	3.52	-----	3.0275		0.35
6	Jammu & Kashmir Bank	3.32	3.32	3.51	4.16	3.81	3.624	5	0.36
7	Karnataka Bank	2.09	2.15	2.32	2.4	2.36	2.264	18	0.14
8	Karur vysya Bank	3.06	2.79	2.75	2.64	2.91	2.83	13	0.16
9	Lakshmi Vilas Bank	3.07	2.52	2.32	2.87	2.7	2.696	16	0.29
10	Nainital Bank	3.76	3.88	3.54	3.71	3.2	3.618	6	0.26
11	Ratnakar Bank	3.58	3.58	2.55	2.84	3.14	3.138	11	0.45
12	South Indian Bank	2.71	2.79	2.84	3.02	2.7	2.812	14	0.13
13	Tamilnad Mercantile Bank	3.66	3.57	3.91	3.87	3.53	3.708	3	0.17
14	Axis Bank	3.1	3.04	3.09	3.81	3.92	3.392	7	0.43
15	Development Credit Bank	2.79	2.83	2.85	3.56	3.72	3.15	10	0.45
16	HDFC Bank	4.22	4.19	4.28	4.4	4.4	4.298	2	0.10
17	ICICI Bank	2.34	2.4	3.11	3.33	3.48	2.932	12	0.53
18	Indusind Bank	3.4	3.3	4.41	3.71	3.65	3.694	4	0.43
19	Kotak Mahindra Bank	5.23	4.83	4.7	4.97	4.93	4.932	1	0.20
20	Yes Bank	2.61	2.44	2.57	2.9	3.2	2.744	15	0.31
	MEAN	3.16	3.04	3.07	3.34	3.33			
	% Change in Aveage Net Interst Margin	-----	-3.79%	0.98%	8.79%	-0.29%			
	SD	0.72	0.73	0.74	0.72	0.67			

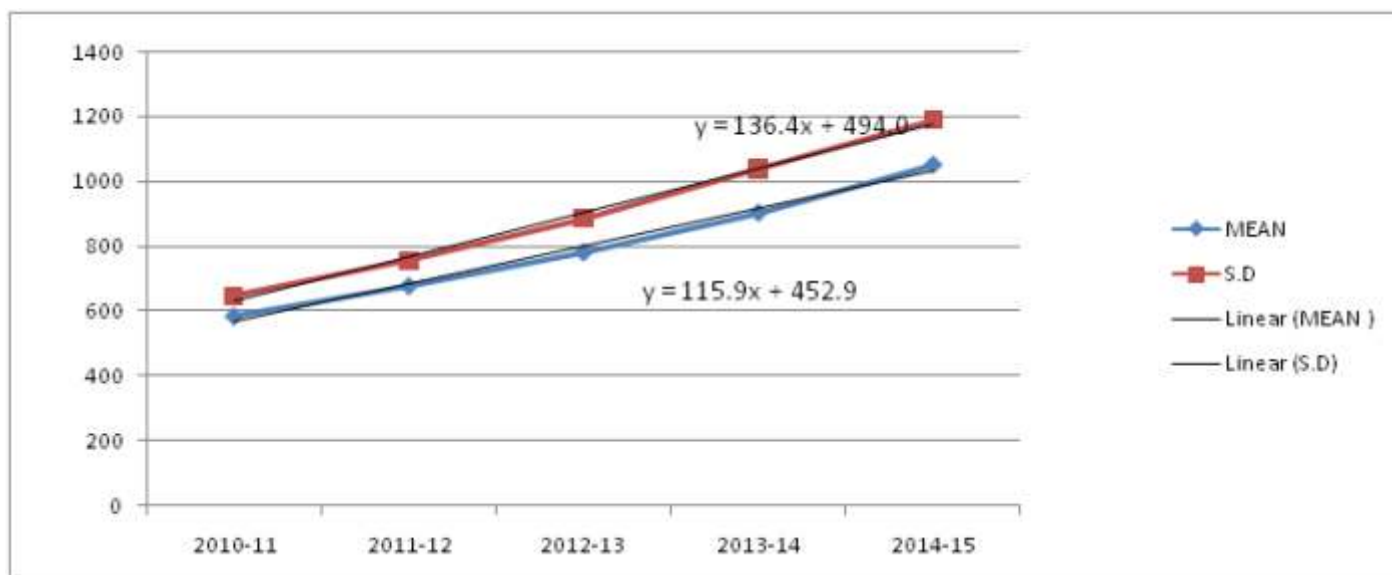
Sources: Annual reports of banks



(5) Basis - Number of Branches

S.No.	Banks	2010-11	2011-12	2012-13	2013-14	2014-15	Mean	Rank	S.D
1	Catholic Syrian Bank.	364	372	390	430	426	396.4	12	30.38
2	City Union Bank	246	300	375	425	475	364.2	13	92.44
3	Dhanlaxmi Bank	275	268	268	266	266	268.6	16	3.71
4	Federal Bank	743	950	1103	1174	1247	1043.4	4	200.64
5	ING Vysya Bank	511	531	546	557	-----	536.25		19.92
6	J & K Bank	548	603	685	777	817	686	6	113.33
7	Karnataka Bank	478	503	550	600	675	561.2	8	78.88
8	Karur vysya Bank	370	451	551	572	632	515.2	10	104.11
9	Lakshmi Vilas Bank	274	290	291	361	400	323.2	15	54.51
10	Nainital Bank	103	104	116	121	123	113.4	18	9.40
11	Ratnakar Bank	100	108	130	184	196	143.6	17	43.96
12	South Indian Bank	641	700	750	794	822	741.4	5	72.68
13	Tamilnad Mercan. Bank	233	285	326	370	430	328.8	14	75.90
14	Axis Bank	1390	1622	1947	2402	2589	1990	8	506.41
15	Development Credit Bank	80	84	94	130	154	108.4	19	32.23
16	HDFC Bank	1986	2544	3062	3403	4014	3001.8	2	779.51
17	ICICI Bank	2529	2750	3100	3753	4050	3236.4	1	648.93
18	Indusind Bank	300	400	500	602	801	520.6	9	192.93
19	Kotak Mahindra Bank	321	355	437	605	1241	591.8	7	379.15
20	Yes Bank	214	356	430	560	631	438.2	11	165.15
	MEAN	585.30	678.80	782.55	904.30	1,052.05			
	% Change in Average No. of Branches		15.97%	15.28%	15.55%	16.33%			
	S.D	647.84	755.76	885.62	1038.74	1188.40			

Sources: Annual reports of banks



(2) Period of Study: The period of study taken to assess the overall performance of Private Banks is restricted to 5 year Period commencing from 2010-11 to 2014-15.

(3) Sources Of Data : The study is based on secondary data. The required data was collected from various sources Namely: Annual reports of banks, Key Business Statistics of private Banks - Indian Banker's Association, Books, Magazines, websites, journals etc.

(4) Variables Used in the Study: The following variables were used in the study to assess the overall performance of private banks operating in India: Deposits, Net Non-performing asset ratio, Return on equity, Net Interest Margin, Number of Branches

(5) Tools Used For Data Analysis: In this study we used (i.e.,) Mean, Standard deviation and Trend analysis was to measure the financial performance of private bank.

### Findings & Conclusion

**DEPOSITS:** HDFC Bank has first Rank in case of deposits followed by ICICI and AXIS banks having 2nd and 3rd Rank. Overall Deposits year wise and Bank wise is also increasing. But there was a downfall of 3.82% in 2013-14. It has a slope of 10950 of Mean and 15175 of S.D

**RETURN ON EQUITY:** Yes bank is earning highest return on equity with having 1st ranks in spite of downfall in 2014-15. City Union Bank and AXIS bank is also performing well with 2nd and 3rd position. There is regular downfall in 2013-14 and 2014-15.

Y = a+ bx	Slope		Interception	
	Mean	S.D	Mean	S.D
Deposits	10950	15175	37748	51129
Return on Equity	-0.726	0.619	15.32	6.647
Net NPA Ratio	0.177	0.172	0.278	0.289
Net Interest Margin	0.064	-0.011	2.996	0.749
No. of Branches	115.9	136.4	452.9	494.0

Standard Deviation is also high in 2013-14 as 11.97.

**NET NPA RATIO:** Nainital Bank has controlled its 'Non Performing Assets from the very beginning with 0 NPA Ratio. It is a good sign of working efficiency, while Yes bank and ICICI Banks are also performing well in the sense of NPA ratio. Overall trend of increasing NPA is also not good specially of 2012-13 and 2013-14 where it is drastic increment 38.44% and 33.24% in non-performing assets ratio. While after these year there is slightly improvement.

**NET INTEREST MARGIN:** If we talk about Net Interest Margin Kotak Mahendira Bank is holding first Rank. Its Main cause may be the merger with ING Vysya Bank. While HDFC and Tamilnad Mercantile Bank holding 2nd and 3rd Rank.

If we see average % change in 2011-12 and 2014-15 it is not found satisfactory.

**NO. OF BRANCHES:** If we talk about no. of branches ICICI is expanding its branches having first rank while HDFC and AXIS bank having the position at 2nd and 3rd rank. Overall trend is also in upwarding position showing increment in No. of branches.  
Trend Analysis:

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# Assessment of Changes in Labor Laws on the Industrial Relations in Manufacturing Sectors.

Bhupendra Kaushal\*

## Abstract

The Industrial relations in common parlance are the relationship developed in the organization out of Production Process. It helps to develop a cohesive team for the productivity. The purpose of the paper is to identify the reason for the losses arising out of worsening industrial relations in manufacturing sector due to archaic labor laws and its impact arising out of changing labor laws. Paper discusses the method to improve the industrial relations in manufacturing sectors like Pulse reading to judge under current, understand unsaid words/feelings of peoples, see external dynamic and develop the community.

**Keywords:** Labor laws, Industrial relations and manufacturing sector

## Introduction

There have been a few basic problems on account of Inflexible labor laws like archaic labor laws are counterproductive to the business, to the amicable relationship. Archaic labor laws are less flexible to attract the investment into manufacturing sectors. Lack of revision/flexibility in the labor laws as per the changing business module. Labor laws could not prevent the business interest of the entrepreneur like Maruti Udyog Limited and Shriram Pistons & Rings Limited. Labor being in concurrent list leading to conflicting situation between one state law to other state law & various control laws. It affects on the Conversion cost due to this very high due to labor intensive sector. The Industries can't survive without low cost atomization or contract manufacturing model as existing China. Neither Employer is able to retrench nor appoint permanent workmen on roll due to stringent or inflexible labor laws. Employer is not able to freely getting employable or industrial ready skilled workforce for production manufacturing purpose. The industrial relations get

worsen due to non compliance of inflexible labor legislation which result into man dies loss arisen out of strike and lock out.

A bird's eye view of the loss is tabled below for the ready reference as under:-

Labor laws arose in parallel with the Industrial Revolution as the relationship between worker and employer changed from small-scale production studios to large-scale factories. Workers sought better conditions and the right to join a labor union, while employers sought a more predictable, flexible and less costly workforce. The state of labor law at any one time is therefore both the product and a component of struggles between various social forces.

England was the first country to industrialize; it was also the first to face the often appalling consequences of industrial revolution in a less regulated economic framework. Over the course of the late 18th and early to mid-19th century the foundation for

Year	Number		Person days lost (millions)	
	Strikes	Lockouts	Strikes	Lockouts
1990	528	403	10.6	13.5
2000	426	345	11.96	16.80
2003	255	297	3.21	27.05
2006	154	192	3.16	10.60
2010	262	168	5.12	8.18

Sources: labor Bureau of India, Gol, 2013; statistical Yearbook india,2012



modern labor law was slowly laid, as some of the more egregious aspects of working conditions were steadily ameliorated through legislation. This was largely achieved through the concerted pressure from social reformers

### Research Objectives

To identify the reason for the losses arising out of worsening industrial relations in manufacturing sector due to archaic labor laws and its impact arising out of changing labor laws.

To carry out research suggest the frame work to make labor legislations industrial friendly.

To assess the impact of labor laws on Industrial relations in manufacturing units to create a productive business environment in India in the process of labor reforms.

### Litration Review

The following research papers were reviewed from time to time for the purpose of research by the researcher

The author has focused on the business problem arising out of the industrial relations due to archaic labor law but author can not foresee the problem in white color job.

There is a shortage of literature focusing on worsening industrial relations due to archaic labor laws. So the author want's to carry out his research on the impact assessment on the industrial relations on account of changing labor laws in manufacturing sector to identify the reason for the loss in the said sector. The study will help to fill up the gap in the literature. Gap analysis is done to find out research gap arisen out of theory and practices at the shop floor in reference of labor laws.

In addition, researcher needs to see the impact or trends of industrial relation in manufacturing sector. The manufacturing sector contributes directly to the GDP of the country and it provides growth to mixed economy. The manufacture sector mostly employees blue collared workman governed by various labor legislation contributes to the organization, society and nation as well. It will also help to prevent the unrest / Strike / Lockout / Grievances in the after month of changes in labor laws/ industrial reforms.

### Motivation of the Work

Researcher have been working on Industrial relations domain in manufacturing sectors after doing Master In Personnel Management and Diploma in Labor laws and labor welfare. There are three factors which motivated the author to carry out a research in manufacturing sector are as under:

- a) It is the most relevant areas related to author's profession to further sharpen my conceptual skills in the industrial relations arena.
- b) It will help to measure the impact on the industrial relations on account of changing labor laws by the new government.
- c) This will help me to understand the impact on the business in globalization.
- d) The sustenance of the author's career depends upon the future of industrial relations.

### Corrective Actions

De-facto, Industrialization started from UK, France, Japan, Italy and India. The reform took place from the industrial revolution. Mr. N.M. Lokhande, Mr. Joshi in Mumbai who pioneered Labor reforms in India.

Author (s) Year	Objective	Findings	Inference	Gap
2014-2015	To carryout impact assessment on industrial relations due to changing labor law findings	1. More flexibility in business 2. SSU are excluded from the ambit of compliance 3. Easy retrenchment 4. Business friendly law	The author analyzes the business problem and possible solution with the reason for the same.	The author has focused on the business problem arising out of the industrial relations but cannot foresee the problem in white color job.

At first time, the old / impracticable labor legislations were amended and attempted in the state of Rajasthan and followed by other states to attract investors in India. A major boost is being given for the startup company to provide or to create more jobs and more entrepreneurs.

P.M.K.VY ( Pradhan Mantri Kaushal Vikas Yojna ) is launched to bridge up the gap between need of employer and availability of talents by reducing the gap of employability. Mudra Bank was created to provide the soft loans to Startup Company or new entrepreneurs. Prime Minister has taken the initiative for developing the skills among the workmen.

1. It is evident from the facts that basic framework is already being drawn to make India as a manufacturing hub by MAKE IN INDIA program.
2. The name of planning commission is changed to NITI AAYOG to make effective policies.
3. There is a sea change in to the foreign policy to bring maximum investment into India by creating employer friendly policies.

## Proposed Amendments into Labor Laws

After receiving the approval from the president government is set to notify the new labor laws despite resentment from labor unions, which expressed deep disappointment for not addressing their concerns.

- Limit to 300 employees from 100 for firms requiring permission to layoff or close a business unit will pose a serious threat to the job security of large number of people. Companies with 300 workers need No permit for layoff. After the amendment to the industrial Disputes Act companies employing up to 300 workers will not need approval of the state government.
- Under the new law, forming labor unions will also be difficult as it would require a membership of 30% of the workforce against the 15% earlier. The lower limit allowed many unions to emerge often increasing inter-union conflicts and multiplicity.
- There was no time limit for raising disputes. But the amendments have stipulated a period of three years within which such disputes can be raised. The move is aimed at reducing the volume of litigations changes.
- The License under the contract labor act will now apply to establishments in which 50 or more workmen are employed against 20 earlier.
- Factory Act will apply to those companies (run with aid of power) where 20. The state government reasoned that

because the limit, small units were also covered under the definition of 'factory' requiring several compliances while hurting their expansion and growth.

- For speedy disposal of offences and minimizing number of litigations, a new provision has been added for compounding of offences which was absent in previous Act.

## Proposed Social Security Cover for Laborers

The labor ministry is all set to flag off a new model for providing social security cover to unorganized sector workers besides a new on-the job training module to upgrade skills. labor minister Bandaru Dattatreya has sought initial funding of Rs 100-200 crore for Recognizing of Prior Learning (RPT), a scheme that will not only provide on-the-job training for close to 125 trades such as factory workers, carpenters and plumbers but also give them daily wages during the 20-30 day program.

As part of the proposed social security net for unorganized sector workers, many of whom keep moving from one place to another, the labor ministry has proposed Unique Labor Identification Number (U-LIN), which will enable them to access health facilities across the country. The number will be modeled on the Unique Account Number for the Employees Provident Fund Organization that assures probability of retirement savings even if a worker switches jobs.

Simultaneously, the ministry is "synchronizing" there schemes Rashtriya Swasthya Bima Yojna, Aam Aadmi Bima Yojna and Old Age Pension to make it more effective. The U-LIN plan has to include housing and scholar-ships for education of unorganized sector workers.

## Unorganized Sector to Get Full Medical Cover and other Benefits Under ESI Scheme

Rickshaw pullers, auto-rickshaw drivers, Anganwadi and Asha workers and other such vulnerable groups may get complete medical care (From primary to tertiary) under the umbrella of employee's state insurance (ESI) scheme.

They may also be entitled for a range of cash benefits during exigencies arising out of their jobs such as death, injury, disablement, maternity and unemployment as guaranteed to workers in organized sector under the Employees' State Insurance Corporation (ESIC) Act.

## EPFO Board for Tweaking Rules to Boost Pension

The Employees' Provident Fund Organization's (EPFO) Central Board of Trustees has recommended that the pension should be based on the average salary for past 30 months, instead of the

current 60 months. As a result, the payout is expected to increase although it will add to EPFO's burden which already has to deal with a deficit, estimated at Rs 8,000 crore.

It is just a recommendation at this stage and will have to be notified by the government for subscribers to benefit. From September 1, EPFO had changed the formula for determining the pensionable salary by calculating the average monthly pay for 60 months instead of 12.

If notified, the step will counter EPFO's attempts to restrict withdrawals. Against the current norm of allowing pension payment at 58 years, the CBT has now agreed to allow subscribers to defer it by two years.

## 8 Months Maternity Leave

Expecting mothers could get maternity leave for 8 months if Union Minister Maneka Gandhi has her way.

## E-Tailers to Fall Under Labor Laws

After amendments in labor laws and bringing changes in the land acquisition bill, the Rajasthan government is now leading other state by introducing provisions to include e-commerce sector in its proposed Rajasthan Shops and Commercial Establishment (RSCE) Act.

The burgeoning e-commerce industry, which is estimate to be worth over \$4 billion, has so far remained untouched by any specific law. The Rajasthan government, however, is now framing rules related to working hours, payment, holidays and wages.

## Labor Codes

The 2<sup>nd</sup> National Commission on Labor had recommended codification of Labor Laws in to 4-5 Groups on functional basis. At present, Ministry of Labor & Employment is working to rationalize the provisions of the 43 Labor Laws in 4 Labor Codes viz.

- Labor Code on Wages.
- Labor Code on Industrial Relations.
- Labor Code on Social Security & Welfare.
- Labor Code on Safety & Working Conditions.

## Changes in Labor Laws:

### Change in Labor Laws: Social Security

The following laws have been changed in the state of Rajasthan to facilitate the industry more especially in manufacturing sectors in the aftermath of economic slowdown.

## The Government of Rajasthan has Amendments in Six key Labor Legislations

- The Industrial Disputes Act (IDA), 1947.
- The Contract Labor (Regulation and Abolition) Act (CLRA), 1970
- The Factories Act, 1948
- The Apprentice Act, 1961
- The Provident Fund Act, 1952
- The ESIC Act, 1948
- The payment of Bonus Act 1965
- The Maternity Benefit Act 1961
- The Employee Compensation Act 1923
- The Child Labor Act 1986
- Administrative Initiatives / Decisions
- Governance Reforms Through Technology
- The Equal Remuneration Act 1976

## Governance Reforms Through Technology Shram Suvidha Portal in the Central Sphere

A unified Web Portal 'Shram Suvidha Portal' launched on 16.10.2014 to bring transparency and accountability in enforcement of labor laws and ease complexity of compliance. Main features of this portal included Unique Labor Identification Number (LIN) is allotted to Units. 13.19 Lakh LIN allotted as on 09.09.2016. Filing of self certified and simplified Single Online Common Annual Return by the establishments. Units will only file a single consolidated Return online instead of filing separate Returns under 9 Labor Acts.

Transparent Labor Inspection Scheme through computerized system Total 2, 37,579 inspections have been assigned and out of that 2, 20,945 inspections have been uploaded as on 09.09.2016. Establishment can now submit monthly contribution return for ESIC and EPFO using this portal Multilingual Shram Suvidha Portal-with options in 11 languages.

## Recent initiatives on Shram Suvidha Portal

Common Electronic Challan Cum Return (ECR) facility for EPFO and ESIC. Common Registration under 5 Central Labor Acts, by integration with DIPP's E-Biz Portal.

Facility of return submission under Mines Act for DGMS, on Shram Suvidha Portal.

## Better Delivery of Service Universal Account Number (UAN):

Universal Account Number (UAN) programme launched on 16th October 2014 is designed to act as an umbrella for the multiple Member IDs allotted to same individual.

As on 31.08.2016, EPFO has allotted around 8.11 crore UAN to its members and around 2.82 crores of these members have activated using their Mobile number and enjoying various related services.

### **Online Registration of Establishments (OLRE):**

As part of the commitment of Government to ease of doing business, on 30th June 2014, EPFO launched the facility for the establishments to apply online for allotment of PF Code Number.

Employers now apply online PF code number and upload the digitally signed documents at the time of application itself (from December 2015) and obtain on the spot code number immediately.

As on 31.08.2016, around 1.36 Lakhs establishments have already obtained online registration on OLRE portal till date.

### **Online Facilities to Members:**

In September 2015, EPFO moved from e-governance to m-governance and launched a mobile application. So far over 11.08 lakhs members have downloaded the Mobile App.

Through Missed Call service at 01122901406, at no cost to the member, member is provided with all the envisaged details.

As on 09.09.2016, around 3.12 crores missed calls have been received since 16th September 2015.

The members who have activated their UAN receive regular SMS regarding their deposit of monthly PF contribution in their account. A SMS message is also being sent to employers that they have not deposited the monthly contribution or non-deposit of returns.

### **Exempted Establishments Brought on E-Portal**

The exempted establishments are a big part of the EPFO compliance system and managing huge funds to the tune of approximately 3 lacs crores.

EPFO launched the facility of online submission of monthly return of contributions, investments and other activities.

### **Inoperative Accounts Helpdesk:**

An online help desk created to assist the members in tracing their inoperative accounts and withdrawing or merging them with the present account (UAN) has helped in 65 thousand cases so far.

### **Updating of Accounts:**

A new mechanism to credit the interest in members' accounts has been developed for auto-updating of members' accounts at the end of the financial year, updating with interest, more than 15 crore accounts.

### **Facilities to International Workers:**

To ensure social security not only to persons working within India but also to those coming to India and going abroad, a facility was launched for the international workers for online fillable form seeking certificate of coverage (COC).

### **Global Network Operations Centre (g-NOC):**

EPFO has started its Network Operation Centre at National Data Centre monitoring the IT functioning of the EPFO. It shall be nodal point for handling troubleshooting as well as detecting and preventing all external threats.

### **Compliance Analysis & Monitoring System of EPFO:**

This software was launched on 16.02.2016

Principal employers, registered with EPFO & Government Department which are not registered with EPFO will upload details of contract awarded with due details – which will be available to EPFO for checking.

### **Employees State Insurance Corporation:**

**ESI Scheme** - The Employees' State Insurance Corporation- ESIC (Ministry of Labor & Employment) is a social security organisation that provides comprehensive medical care and cash benefits in the contingencies of Sickness, Maternity, Disablement and death due to employment injury and Unemployment to beneficiaries' i.e the organized sector working class in the lower wage bracket of the society. The total number of Insured Persons covered (as on 31.03.2015) are 2.03 crore and number of beneficiaries (as on 31.03.2015) 7.89 crore.

### **Enhancing Employability of the workforce**

DGE runs 24 National Career Service Centres for Scheduled Castes and Scheduled Tribes (NCSC SC/STs) for providing vocational guidance and counselling services and also training in computer courses. In the last 2 years, around 3.8 lakh SC/ST candidates were provided vocational guidance and counseling, 33 thousand candidates pursued secretarial practices (shorthand/typing) for enhancing employability, 4,300 candidates pursued the special coaching scheme course and 7,800 candidates pursued the computer courses. The 24 (NCSC SC/STs) have been integrated with the NCS Project.

In addition, 21 National Career Service Centers for Differently Abled (NCSCDA) provide training and guidance. In the last 2 years, around 69 thousand persons with disabilities were helped and around 24 thousand were rehabilitated with various organizations.

### **Pradhan Mantri Rojgar Protsahan Yojana (PMRPY) scheme**

The Ministry is implementing the Pradhan Mantri Rojgar Protsahan Yojana (PMRPY) scheme to incentivize employers registered with the Employees Provident Fund Organisation (EPFO) for new employment. Under the Scheme, Government will be paying the 8.33% EPS contribution for the new employment for a period of 3 years. For the textile (garmenting) sector, Government will also pay the 3.67% EPF contribution of employers for these new employees.

### **Opening Bank Accounts for Cashless transaction of wages.**

The huge efforts of Labor and Employment Ministry have succeeded in bringing over thirty lakhs forty thousand workers into banking fold within one month of launching a campaign on 26th November for ensuring cashless transaction of wages. It may be noted that already 25.68 crore Jandhan Accounts are existing and all the left over workers are being covered. Till last evening (26 December, 2016), 38, 40, 863 (thirty eight lakh forty thousand eight hundred and sixty three) bank accounts were opened by organizing 1, 08,179 (one lakh eight thousand one hundred and seventy nine) camps for this purpose.

Labor movement became successful due to Indian freedom movement, Therefore various laws were made in the journey of freedom movements, in the course of industrialization process are as under:

- Workmen Compensation Act – 1923
- Trade Union Act – 1926
- Maternity Benefit Act 1931

- Payment of Wages Act – 1936
  - Industrial Employment Standing Order Act - 1946
  - Industrial Disputes Act - 1947
  - ESIC Act – 1948
  - Factory Act 1948
  - Minimum wage Act - 1948
  - Provident Fund Act – 1952
  - Employer Exchange Act – 1959
  - Apprentice ship Act – 1961
  - Payment of Bonus Act - 1965
  - Contract Labor (R&A) Act – 1971
  - Payment of Gratuity Act – 1972
  - Equal Remuneration Act - 1976
  - Labor Interstate Migrant Workmen Act 1979
- All the labor legislations are Preventive in nature, whereas Criminal Laws / Municipal Laws are punitive / corrective in nature. Labor falls in the concurrent list of subject matters.

### **Impact Assessment on IR on Account of Changes in Labor Laws**

The labor reforms undertaken in 2011 have had negative effects on the employees' coverage with regard to collective bargaining and worker protection for changes to the labor and social dialogue legislation.

Most HR professionals agree that lack of specialization in industrial relations (IR), the study of labor relations and management was hurting the manufacturing industry. "There has been a continuous movement of HR talent from manufacturing firms to knowledge-based firms," said Krishnan of EY. "Earlier, most of the top HR leaders came from an IR background in manufacturing industry which is no longer the case."

"IR is no longer an aspiration skill even though it lies at the head of an HR job in a manufacturing firm. Unfortunately, it is no longer the focus.

The IR knowledge base has evolved significantly but it is not imparted in our educational institutes," said Suri of KPMG. "There is a dearth of IR skill set in the country."

Aditya Narayan Mishra, president, staffing at Randstad India, said that an increasingly younger workforce is more expressive about their needs. "Average age of employees is coming down. All of them are better networked socially than their predecessors," he said. "15-20 years ago, these situations might not have happened. They are more expressive and want better standard of living."

"Definition of blue collar has changed. They are no longer the uneducated labor from rural areas. They come with exposure and



education in many cases,” said Krishnan. In such a scenario, how organization practices fairness becomes paramount, said Mishra. Faced with resistance from labor organizations, on the government’s push for labor reforms, PM Narendra Modi said changes in the laws will be made only through consensus with trade unions.

Addressing the 46th Indian Labor Conference, the PM said there is a thin line that separates the interest of workers and their unions and it should be respected.

Hinting at unease among trade unions, BMS National President B N Rai attacked the government in front of the PM for pursuing “few wrong policies” and stressed the trade will not allow reforms “at the cost of labor”.

BMS, one of the biggest trade unions in the country, demanded withdrawal of the industry-friendly Factories Act enacted by BJP-ruled Rajasthan government as also the new by the Centre.

“The government has adopted few wrong policies by taking such actions which directly affect labor in particular and people in general,” said Rai, who was vice-president of the conference.

Among the “wrong policies”, Rai listed unilateral enactment of Apprentice Act as well as “allowing Rajasthan government to do unilateral changes in factories and other labor laws, which has motivated Maharashtra, Madhya Pradesh, Haryana and other (state) government to follow the same line”.

In his speech, the prime Minister talked about different interest groups, saying there was a thin line dividing the interest of government and nation, industry and labor and labor organizations.

“Sometimes one talks about saving the industry but ends up protecting industrialists. Sometimes we talk about saving nation but try to save the government. Similarly, we talk of labor, but try to ensure security of labor unions.

He added that it is a need to recognize this thin line and adopt a balanced approach to the deal with the issues and change the environment.

PM also stressed that “obsolete and unnecessary” laws are being weeded out as part of the government’s objective to achieve “minimum government and maximum governance”. “It is my effort to simplify the laws so that even the poorest are able to understand their rights and avail them,” Modi said. The remarks came at a time the BJP government has constituted a high-level ministerial panel under finance minister Arun Jaitley to evolve a consensus.

We are all aware of the mega trends that are reshaping the global economy. In the first decade and a half of the 21st century, we witnessed, a major technological inflection point – where connectivity became fast, free and easy to use. The advancement made in internet, mobile and data has led individuals and companies to compete, connect and collaborate globally in a seamless manner. Smart companies like Google, Amazon, Facebook, Apple etc. have ensured that globalization is not restricted to trade in physical goods, services and financial transactions but play a much bigger role in today’s interconnected world. However, in the last one year we have been witnessing anti-globalization rhetoric and increase in protective sentiments in the developed economies of the world. The exit of Britain from the European Union and victory of Mr. Trump in USA will change the future dynamics of global trade as these countries become more inward looking.

Secondly, the developed and emerging countries are undergoing economic slowdown. The global economy grew by 3.1% in 2015 against 3.4% in 2014 as per the IMF world economic outlook. This has led to weakness in global trade. The world trade grew at 2.6% in 2015 and in 2016 it does not seem to have done any better. The GDP growth in Brazil, Russia etc has been negative whereas European Union has shown significant decline in the last few years. However India has been an exception and a bright spot in the otherwise gloomy global outlook.

Besides these trends, another important trend that is looming large and should be taken note off is that the developed countries are laden with aging population which does not augur well for companies in life style consumer products segments.

All these trends continue to have a profound adverse impact on the Textile and clothing industry globally. As far as the Indian Textile Industry is concerned, it continues to be one of the key Drivers of our economy in terms of contribution to economic activity, employment generation especially for women and rural poor and exports. The current size of the Indian Textile Industry is estimated to be US\$ 110 billion and is expected to grow exponentially in the next ten years. India is the second largest producer of Textile and clothing in the world after China. While China is losing ground in terms of export growth due to increase in manufacturing cost, it continues to expand, backed by strong domestic demand. The emergence of Bangladesh, Vietnam & Cambodia as new textile powerhouses due to their strong cost competitiveness has been significant. However there is an opportunity for India to enhance its global reach by focusing on value added products. Home textiles apart from apparel, is showing promising growth. Likewise, a technical textile is another potential area for growth - a field which was dominated by western world backed with research and technological

advancements. Automotive textiles, functional textiles, protective wear, medical textile, industrial fabrics, composites etc. will continue to grow in future and will have wider applications. Newer technologies in terms of development of chemicals, finishes like plasma and nanotechnology, environment friendly products and recycled fibers will continuously occupy attention of consumers.

The Industry has to be highly sensitive to the power of design and creativity so as to create unique selling proposition for their products. Development of smart textiles incorporating electronic communication and biotechnology in textile and clothing, particularly in areas of health and sportswear will see increasing usage. The advent of robotics, artificial intelligence, internet of things and 3D printing are also having a profound impact on where goods will be produced in future. The skill sets of people will also have to be consistently upgraded and realigned to meet the demands of new technologies.

Development of brands is a strategy that companies will have to consider in order to develop a sustainable business. Although it takes longer time and deeper pockets to create a brand but with the help of E-commerce and change in shopping habits of consumers the same can now be done at far lower costs. Apart from scaling up capacity in apparel and expanding market share, it is important to improve the supply chain management in an efficient manner. Retailers are looking for shorter lead times and

production bases closer to the consumer so that they have flexibility in meeting the changing trends of fashion.

In short the Textile value chain will see a paradigm shift from a traditional mode of growth to a more effective growth model with advance manufacturing that turns out to be intelligent, flexible and digital with new products, new technologies and new business models.

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# Exchange Rate Determination and Balance of Payments; theories and approaches

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## Abstract

In the globalised economy, each nation is interconnected with the other in terms of political alignment, economic inter-connectedness and social strata-exchange. At the bedrock of each of these is trade and commerce between the countries. Thus, the concept of foreign exchange rates and its determination becomes very important. A change in the digit across a computer network might tilt global dynamics. This paper discusses the causes, the theoretical approaches and a brief literature review of the authors involved in the same.

**Keywords:** Balance of Payments, Absorption Approach, Monetary Approach, Exchange Rate, J Curve, Trade Balance, Foreign Exchange Rate, historical perspective of exchange rates

## Introduction

According to the official statistics from Bank for International Settlements, foreign-exchange trading stood at an average of \$5.3 trillion a day. In other words, it comes out to be \$220 billion per hour. A higher currency makes a country's exports more expensive and imports cheaper in foreign markets. A lower currency makes a country's exports cheaper and its imports more expensive in foreign markets. A higher exchange rate can be expected to lower the country's balance of trade, while a lower exchange rate would increase it. Thus, exchange rates are very vital and the slightest changes can make or mar a country's economy on a long term horizon. This paper focuses on determination of exchange rate in the floating exchange regime. The forces that guide the determination of exchange rates have for years drawn serious concerns from many scholars all around the global.

## Determinants of Exchange Rates

### 1. Inflation Rates

Changes in market inflation cause changes in currency exchange rates. A country with a lower inflation rate than the other country (the one in comparison) will see an appreciation in the value of its currency. This is as per the simple theory that prices of goods and services increase at a slower rate where the inflation is low. This theory is also termed as Purchasing Power Parity theorem by some.

### 2. Interest Rates

Changes in interest rate affect currency value and dollar exchange rate. Forex rates, interest rates, and inflation are all correlated. Increases in interest rates cause a country's currency to

appreciate because higher interest rates provide higher rates to lenders, thereby attracting more foreign capital, which causes a rise in exchange rates. Interest factor usually comes in along with Inflation.

### 3. Country's Current Account / Balance of Payments

If a country exports more goods, the importing country will have a higher demand for the currency of the exporting country so as to meet its requirement. A country's current account status (surplus or deficit) reflects balance of trade and earnings on foreign investment. A deficit in current account due to spending more of its currency on importing products than it is earning through sale of exports causes depreciation. Balance of payments fluctuates exchange rate of its domestic currency.

### 4. Government Policies

Countries incur large public debts to pay for government funding and public welfare projects. Though domestic economy seems to be stimulated with this, international economy suffers. Thus they attract less foreign investors. It is also possible that the government prints more currency to pay some part of the debt. This will further increase supply of money in the market which will ultimately result in inflation. Economic conditions which make the country less attractive to foreign investors ultimately affect its foreign exchange rates.

### 5. Terms of Trade

Related to current accounts and balance of payments, the terms of trade is the ratio of export prices to import prices. A country's terms of trade improves if its exports prices rise at a greater rate than its imports prices. This results in higher revenue, which causes a higher demand for the country's currency and an

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increase in its currency's value. This results in an appreciation of exchange rate.

### 6. Political Stability & Performance

A country's political state and economic performance can affect its currency strength. A country with less risk for political turmoil is more attractive to foreign investors, as a result, drawing investment away from other countries with more political and economic stability. Increase in foreign capital, in turn, leads to an appreciation in the value of its domestic currency. A country with sound financial and trade policy does not give any room for uncertainty in value of its currency. But, a country prone to political confusions may see a depreciation in exchange rates.

### 7. Speculation

If a country's currency value is expected to rise, investors will demand more of that currency in order to make a profit in the near future. As a result, the value of the currency will rise due to the increase in demand. With this increase in currency value comes a rise in the exchange rate as well.

## Historical Perspective

### Phase I

Pre 1914, the benchmark for trade was a commodity called Gold. Countries used gold as a medium of exchange. The monetary strength of a country was determined by the quantum of Gold. Under a gold standard, the amount of gold a nation holds in bank vaults determines how much of its money circulates. If a nation's gold stock increases through trade, for example, the country issues more currency. Likewise, if its gold stock decreases, it issues less.

All countries are assumed to have fixed exchange rates and independent monetary and fiscal systems and thus they have the need to hold international reserves for settlement of payment imbalances. This has not been based on an explicit agreement among nations, but represents the outcome of historic evolution. Gold as currency has obvious problems. First, there is relatively little of it while there are more people and goods all the time. So in the long term, the gold standard exerts a downward pressure on prices as money becomes relatively tighter and its value increases.

Everything was fine and so was this benchmark until the year of World Wars 1914 onwards and 1940s. The benchmark was further complicated by the Great Depression. Researchers tried to normalize these changes in currencies but gold as a measure failed.

### Phase II

The earliest systematic unity or ratification came at Bretton Woods in 1944. The need for having a stable system of foreign exchange rate determination was there at it was addressed to a large extent in this conference. The hero of Great Depression, Keynes had already set the ball rolling claiming that "the importance of rule-based regimes to stabilise business expectations something he accepted in the system of fixed exchange rates." The conference was attended by forty-four countries. IMF and IBRD (now known as World Bank) was born at this venue. The members agreed on implementing a system of fixed exchange rates with the U.S. dollar as the key currency.

The system of Bretton Woods of 1944 with its fixed exchange rates do not exist anymore today. Its institutions and procedures had to adjust to market forces to survive but still its goals are as valid today as they have been in the past. The benefits of the Bretton Woods system were a significant expansion of international trade and investment as well as a notable macroeconomic performance: the rate of inflation was lower on average for every industrialised country except Japan than during the period of floating exchange rates that followed, the real per capita income growth was higher than in any monetary regime since 1879 and the interest rates were low and stable.

In the Bretton Woods system of the 1950s, the US was the center region with essentially uncontrolled capital and goods markets. Europe and Japan, whose capital had been destroyed by the war, constituted the emerging periphery. The periphery countries chose a development strategy of undervalued currencies, controls on capital flows and trade, reserve accumulation, and the use of the center region as a financial intermediary that lent credibility to their own financial systems. In turn, the US lent long term to the periphery, generally through FDI.

### Phase III

By the early 1960s, the U.S. dollar's fixed value against gold, under the Bretton Woods system of fixed exchange rates, was seen as overvalued. A sizable increase in domestic spending on President Lyndon Johnson's Great Society programs and a rise in military spending caused by the Vietnam War gradually worsened the overvaluation of the dollar.

The system dissolved between 1968 and 1973. In August 1971, U.S. President Richard Nixon announced the "temporary" suspension of the dollar's convertibility into gold. While the dollar had struggled throughout most of the 1960s within the parity established at Bretton Woods, this crisis marked the breakdown of the system. An attempt to revive the fixed exchange rates failed, and by March 1973 the major currencies began to float against each other.

Since the collapse of the Bretton Woods system, IMF members have been free to choose any form of exchange arrangement they wish (except pegging their currency to gold): allowing the currency to float freely, pegging it to another currency or a basket of currencies, adopting the currency of another country, participating in a currency bloc, or forming part of a monetary union.

## Theoretical Approaches to Balance of Payments

Since exchange rates affect Balance of Payments, it is essential that one peeks through the various theoretical approaches to Balance of Payments.

### Elasticities Approach

This approach focuses on the substitution among commodities, both in consumption as well as in production; each of these induced by the relative price changes brought about by devaluation. In other words, the elasticities approach emphasizes the role of the relative prices (or exchange rate) in balance of payments adjustments by considering imports and exports as being dependent on relative prices (through the exchange rate).

Two characteristics of the special case of elasticities approach:

- (i) Any impact of the devaluation on the demand for domestic output is assumed to be met by variations in output and employment rather than relative prices, with the repercussions of variations in output on the balance of payments regarded as secondary. This is made possible by the assumption that supply elasticities are infinite. The assumption of output and employment being variable proved highly unsatisfactory in the immediate postwar period of full and over-full employment.
- (ii) The connections between the balance of payments and the money supply, and between the money supply and the aggregate demand, are ignored. This is made possible by the assumed existence of unemployed resources, as well as by the Keynesian skepticism regarding the influence of money. Johnson (1972) emphasizes that the monetary approach differs crucially from the elasticities approach on both these grounds.

A notable shortcoming of the elasticities analysis is its neglect of capital flows. Even though the adherents of the elasticities approach were attempting to guide the policy-maker in improving the country's balance of payments, their focus, nevertheless, was on the balance of trade (net exports of goods and services).

### Absorption Approach

The absorption approach to balance of payments is general equilibrium in nature and is based on the Keynesian national income relationships (at time also called Keynesian approach). It runs through the income effect of devaluation as against the price effect to the elasticity approach.

The theory states that if a country has a deficit in its balance of payments, it means that people are 'absorbing' more than they produce. Domestic expenditure on consumption and investment is greater than national income. If they have a surplus in the balance of payments, they are absorbing less. Expenditure on consumption and investment is less than national income. Here the BOP is defined as the difference between national income and domestic expenditure.

In other words, it emphasizes the role of income (or expenditure) in balance of payments adjustments by considering the change in expenditure relative to income resulting from a change in exports and/or imports. In the monetary approach, on the other hand, the focus of attention is on the balance of payments (or the money account) with full employment.

### The absorption approach to BOP deficit has been criticized on the following grounds:

1. **Ignores Effects on Other Countries:** The absorption approach is weak in that it relies too much on policies designed to influence domestic absorption. It does not study the effects of devaluation on the absorption of other countries. This is critical in today's era specifically when each of the countries are interlinked.
2. **More Emphasis on Consumption:** This approach places more emphasis on the level of domestic consumption than on relative prices. A mere reduction in the level of domestic consumption for reducing absorption does not mean that resources so released will be redirected for improving BOP deficit.
3. **Neglects Price Effects:** This approach neglects the price effects of devaluation which are very important.
4. **Calculations are Difficult:** Theoretically, it appears to be superior to the elasticity approach but propensities to consume, save and invest cannot be accurately calculated.
5. **Not Operative in a Fixed Exchange Rate System:** The absorption approach fails as a corrective measure of BOP deficit under a fixed exchange rate system. When prices rise with devaluation, people reduce their consumption expenditure. With money supply remaining constant, interest rate rises which brings a fall in output along-with

absorption. Thus devaluation will have little effect on BOP deficit.

### Monetary Approach

According to monetary approach, the relationship between the demand for and supply of money is a crucial determinant of balance of payments. It is treated as a stock (and not flow) over a given time period. The approach rests on the basic principle that for any country over the long run, there exists a stable demand function for money as a stock, i.e., demand for money is a stable, linearly homogeneous function of real income. Thus, similar to any merchandise which is for sale, the foreign exchange value is subjected to the law of supply and demand.

The key element of monetary approach is that it identifies balance of payments disequilibrium with adjustments in money market. The relationship between demand for and supply of money is important in this analysis. They postulate that there is always a tendency towards the stock equilibrium in the money market.

### Other Notable Aspects

**J-curve:** It postulates that after depreciation or devaluation, the trade balance is expected to deteriorate at first, then improve because the increased value of imports initially would dominate the increased volume of exports, and increased volume of exports would outweigh the increased value of imports later.

### Contributors and researchers in the area of BoP

"Elasticities approach," was attributed to a classic essay by Joan Robinson (1950), though traceable to early work by Bickerdike.

The main formal development of the absorption approach is found in the works of Alexander (1952), though many others including Meade (1951), Tinbergen (1952) and Johnson (1958) have contributed. The "absorption" approach of Alexander was an attempt to bypass the "elasticities" issue and go to the heart of the matter, the then prevalent inflationary conditions. Johnson (1977b) describes it as half-way house to the full Keynesian analysis of BoP policy, another half-way house on a different route to the same destination being the extension of the "elasticities" approach by the addition of Keynesian multiplier theory.

According to Machlup (one of the biggest critic of Alexander), Alexander's fundamental equation was nothing more than a definition, and therefore his absorption analysis was nothing more than an implicit theorizing based on tautologies.

The monetary approach was first outlined in the treatment by Hahn (1959) and further developed by Mundell (1968), Johnson (1972), Swoboda (1973), Dornbusch (1973), and Mussa (1974, 1976). Kreinin and Officer (1978), Magee (1976), and Whitman (1975) have reviewed the literature on the monetary approach to balance of payments. The term "monetary approach" was first used by Mundell (1968) to refer to the new theory (Mussa, 1976).

### Conclusion

Role of demand and supply of money has been an implicit feature in most attempts to analyze BOP over the past few decades with traditional tools of value theory. The policy of devaluation has a multi-faceted effect. It not only influences the trade flows but also affects the monetary sector. It affects imports, exports, price level, money supply, output etc.. it continues to baffle policy makers and is an active and evolving area of research for the keen.

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# Service Quality Impact on Customer Satisfaction in Hotel Industry: A Study Conducted at Paradise Lodge, Arba Minch, SNNPR, Ethiopia

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## Abstract

During marketing era of the 1950's Customers became very crucial in business when companies could produce what they can sell and not just selling. The main objectives of this research is to evaluate the service quality gap and then to identify the impact of these gaps on customer satisfaction on Paradise Lodge in Arba Minch from the view point of customer's expectation of the service quality and perception of service delivered by the hotel. To achieve this objective, Descriptive & Causal research design will be used to analyze the data collected through questionnaire from a sample of 393 international and domestic guests. These respondents were selected using stratified random sampling method. The data was analyzed by using statistical tools such as mean, standard deviation, Anova, correlation and regression analysis. The model explained 52.2% variability by these five factors on customer satisfaction and model can be generalizes for total population also. The research recommends that the management of Paradise Lodge hotel must try to reduce these service quality gaps by adopting the suggested recommendations as in this competitive era if the hotel has to survive, it must be customer centric.

**Keywords:** Customer Expectation, Customer Perception, Customer Satisfaction, Service Quality Gap

## Background of the Study

Many research studies have been conducted on the concept of service quality and its variety in service organizations; even the research attention towards hotel industry has been growing. A relative increase of investment is recently observed in the hotel & tourism sector. The hotel industry consists of many different services, including accommodation, swimming pool, spa, restaurants, bar, cafes, and catering. The market for the hotel industry, especially classified hotels in a developing country like Ethiopia, is closely linked to the tourism industry, because a majority of consumers for the sector services come from international tourists.

Wilson et al., (2008) stated that customer satisfaction has also been a subject of great interest to organizations and researchers alike. The outcome of business organizations is to maximize profits and to minimize cost. Profit maximization can be achieved through increase in sales with lesser costs. One of the factors that can help to increase sales is customer satisfaction, because satisfaction leads to customer loyalty recommendation and repeat purchase.

Moreover, the importance of service quality and customer satisfaction has been proven relevant to help improve the overall performance of organizations (Magi & Julander, 1996). For instance in tourism earning it is directly or indirectly linked with the number of nights spent by visitors in the country, quality of

service is the key factor to increase the length of stay and to increase the satisfaction.

Service quality is important to measure and decide research effectiveness while it becoming a major part of business practices. But still now there is no research conducted or done on the issue of Impact of service quality gaps on customer satisfaction particularly in Arba Minch Hotels. Due to the reason or purpose of the gap, this research is undertaken to measure and evaluate the level of service quality gaps and its impact on customer satisfaction in the hotel industry targeting the biggest hotel in Arba Minch and to determine which dimension of the service quality has a significant effect on the customer's level of satisfaction.

## Statement of the Problem

Condition of expected service quality in order to obtain high customer satisfaction is a vital issue as well as a challenge facing the contemporary service industry. Due to this reason, the issue has become of great importance for both academics and practitioners in the subject area of marketing (Ghasemi et al, 2012). It is not the first time that service quality appears to obtain such importance. Through the last 20-25 years many firms have invested in service initiatives and promoted service quality as ways to differentiate themselves and thus gain competitive advantage (Zeithaml et al, 2006).

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After commencement of the Ethiopian millennium in 2007 every sector of the country goes high particularly in tourism attraction and hotel accommodations. Arba Minch town is one key beneficiaries of the government's reform. After transformation of structures there has been a seen boom of business and economy, diversification of business activities, scaled up employment sectors.

Different tourists emphasize that three things attract foreigners to visit Ethiopia. One is presence of sites of different tourist attraction; second in country level towns resides continental and international offices to host conferences of different issues. The third factor is security of the whole country to host anyone who wants to refresh leisure times with no fear of terrorist acts like neighboring Kenya, Sudan and Somalia. Due to this fact growth in Ethiopia's tourism industry continues to be steady even despite the effect of the global financial crisis. International visitors' arrival in Ethiopia reached about 770,000 in 2015 from 592,615 in 2014, with average growth of 14.02 percent in 2014, (The World Bank's Global Economic prospect Report for 2016).

In Ethiopia handling of customer related issues are not scientific, still it is following traditional way according to Buzeye (2010) like throwing the food in front of the guest, giving not attention to the guest, cheat the guest or failure to give a change back as fast as possible, chewing gums while serving the guests, putting finger in to nose while serving, touching hair and other bodies, using mobile game and phone communication while serving the guest, no use of hair coverings while providing food to guests, etc with all this lack of respect of customers'.

The town is being seen on the right track of growth and development. Though a great emphasis is given for the expansion of hotel industry since the early time, many service related problems are still unnoticeable. Simply collecting money with no advancement in service quality is the fact of today's most hotels. In addition to that lack of quality hotel service is one of primarily figured in the town. There are only few hotels that give accommodation, swimming pool, spa, restaurants, bar, cafes, and catering services to guests and residents but their reflected significant gaps have acknowledged by this research. Due to this regard, the reviewed literatures and research conducted on hotel services in different countries plus personal observations in Arba

Minch hotels point towards that Hotels have much serious quality and customer handling strategy problems and it needs a serious research on the issues. This was seen when the employees are very much delaying both in taking order from the guests who are waiting for their order and, even long wait for the delivery of the order. This plus the other major problems often observed are may be lack of Hotel service ethics. It is clear that the quality of service in hotel industry is an important factor of successful business. The existing trend of complete quality management in hotel industry have role in the achievement of competitive advantage of hotel companies and is needed the subject of current research into service quality gaps in hotel industry. It is essential to identify the service Quality gaps & whether the customers are given what they need & expect. So this research is purposed to assess the service quality gaps and its impact on customer satisfaction in hotel industry in Arba Minch especially in relation to nationality.

Paradise Lodge was opened in 2008 as a means to transform the hospitality industry in Africa by providing guests with unparalleled service and an authentic experience while preserving the natural environment and strengthening the local culture. Each suite at Paradise Lodge offers guests the opportunity, experience and privacy of their own bamboo thatched hut built in the traditional Gamo style with the standard of comfort and amenities one can expect at a luxury hotel. All huts are built with a serene outdoor veranda with either a breathtaking view of the lakes or that are set in the lush gardens of the lodge grounds. Each hut is also equipped with a bathroom with shower, mosquito net, reading table and a mini bar with a complimentary bottle of mineral water. Each hut is also richly furnished with handmade furniture and decorations that embody the cultures of the locals who built them.

## Research Objectives

1. To assess the expectation and perception of services quality in Paradise Lodge.
2. To identify the service quality gap in Paradise Lodge.
3. To identify the impact of service quality gap on customer satisfaction in Paradise Lodge.

## Review of Literature

**Table 1: Six months of visitor's Statistical data of Paradise Lodge**

Hotel	Home country visitors (Domestic)	Foreign visitors	Total
Paradise Lodge	4,121	1,526	5,647

For the last 6 months (July- December 31, 2015)

*Source: Arba Minch CA Cultural & Tourism office*

**Table 2: Paradise Lodge accommodation facility summary**

Hotel	No of rooms	No of beds
Paradise Lodge	58	92

For the last 6 months (July- December 31, 2015)

*Source: Arba Minch CA Cultural & Tourism office*

In order for a company's offer to reach the customers there is a need for services. These services depend on the type of product and it differs in the various organizations. Service can be defined in many ways depending on which area the term is being used. Kotler & Keller, (2009) defined service as "any intangible act or performance that one party offers to another that does not result in the ownership of anything"

Solomon (2009 ) defines quality as is one of the things that consumers look for in an offer, which service happens to be one it can also be defined as the totality of features and characteristics of a product or services that bear on its ability to satisfy stated or implied needs (Kotler et al., 2002). It is evident that quality is also related to the value of an offer, which could suggest satisfaction or dissatisfaction on the part of the user.

Service quality in the management and marketing literature is the extent to which customers' perceptions of service meet and/or exceed their expectations for example as defined by Zeithaml et al. (1990) as cited in Bowen & David, (2005) Thus service quality can intend to be the way in which customers are served in an organization which could be good or poor. Parasuraman defines service quality as "the differences between customer expectations and perceptions of service" (Parasuraman, 1988). They argued that measuring service quality as the difference between perceived and expected service was a valid way and could make management to identify gaps to what they offer as services. Haywood (1988) explains the aim of providing quality services is to satisfy customers. Measuring service quality is a better way to dictate whether the services are good or bad and whether the customers will or are satisfied with it.

Parasuraman et al., (1988) presented ten dimensions of service quality. Such as;

- ✓ **Tangibles:** the appearance of physical artifacts and staff members connected with the service (accommodation, equipment, staff uniforms, and so on).
- ✓ **Reliability:** the ability to deliver the promised service.
- ✓ **Responsiveness:** the readiness of staff members to help in a pleasant and effective way.
- ✓ **Competence:** the capability of staff members in executing the service.

- ✓ **Courtesy:** the respect, thoughtfulness, and politeness exhibited by staff members who are in contact with the customer.
- ✓ **Credibility:** the trustworthiness and honesty of the service provider.
- ✓ **Security:** the absence of doubt, economic risk, and physical danger.
- ✓ **Access:** the accessibility of the service provider.
- ✓ **Communication:** an understandable manner and use of language by the service provider.
- ✓ **Understanding the customer:** efforts by the service provider to know and understand the customer.

Kuo-YF, (2003) in his first SERVQUAL model that came had 22 pairs of Likert-type items, where one part measured perceived level of service provided by a particular organization and the other part measured expected level of service quality by respondent. Further investigation led to the finding that, among these 10 dimensions, some were correlated. After refinement, these ten dimensions above were later reduced to five dimensions as below:

- ✓ **Tangibility:** physical facilities, equipment, and appearance of personnel
- ✓ **Reliability:** ability to perform the promised service dependably and accurately
- ✓ **Responsiveness:** willingness to help customers and provide prompt Service
- ✓ **Assurance:** knowledge and politeness of employees and their ability to inspire trust and Confidence
- ✓ **Empathy:** caring individualized attention the firm provides to its customers

The aggregated sum of difference between perceptions and expectations from the five dimensions forms the global perceived quality construct. (Laroche et al., 2004) Following this view, customers' expectations were met through the outcome dimension (reliability) and exceed it by means of the process dimension (tangibility, assurance, responsiveness, and empathy).

This concept was quite similar to the conceptual model of service quality suggested by Parasuraman, Zeithaml and Berry (1985), who had identified that there were five major gaps in the service quality concept.



**Gap1: Customers' expectations versus management perceptions:** as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.

**Gap2: Management perceptions versus service specifications:** as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting.

**Gap3: Service specifications versus service delivery:** as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control systems, lack of perceived control and lack of teamwork.

**Gap4: Service delivery versus external communication:** as a result of inadequate horizontal communications and propensity to over-promise.

**Gap5: The difference between customer expectations and their perceptions of the service delivered:** as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In this case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.

Zeithaml and Bitner (2003) stated that in order to manage service quality, it is important to manage the gaps between expectations and perceptions on the part of management, employers and customers. The most important gap (Gap 5) was that between customers' expectations of service and their perceptions of the service actually delivered. So by referring to the gap model, it was noted that a service marketer must lessen the customer gap (Gap 5).

The model of Parasuraman and Zeithaml is the base of this study.

## Conceptual & Mathematical Framework

After considering the expectation and perception about service quality, gap is identified and then the impact of service quality constituents' gap as well as overall gap in relation to customer satisfaction in Paradise Lodge is assessed.

### Fig 1: Conceptual model of the study

Customer satisfaction towards service quality is a dependent variable and the five variables viz.,

Tangibility gap, Reliability gap, Responsiveness gap, Assurance gap and Empathy gap are independent variables. The conceptual model is shown in fig 1

$$CS = \beta_0 + \beta_1 TG + \beta_2 RG + \beta_3 Res G + \beta_4 AG + \beta_5 EG + U$$

Where,

CS = Customer satisfaction towards service quality in Paradise Lodge

$\beta$  = is intercept & constant

$\beta_1 - \beta_5$  = Coefficients

TG = Tangibility gap

RG = Reliability gap

Res G = Responsiveness gap

AG = Assurance gap

EG = Empathy gap

U = Random error

## Hypothesis of the Study

**Ha1:** Tangibility gap has a significant impact on Customer satisfaction towards service quality in Paradise Lodge hotel

**Ha2:** Reliability gap has a significant impact on Customer satisfaction towards service quality in Paradise Lodge hotel

**Ha3:** Responsiveness gap has a significant impact on Customer satisfaction towards service quality in Paradise Lodge hotel

**Ha4:** Assurance gap has a significant impact on Customer satisfaction towards service quality in Paradise Lodge hotel

**Ha5:** Empathy gap has a significant impact on Customer satisfaction towards service quality in Paradise Lodge hotel

## Research Methodology

Since the approach aims at analyzing the impact of service quality tangibility, service quality reliability, service quality responsiveness, service quality assurance, service quality empathy on Customer satisfaction towards service quality in Paradise Lodge hotel, the research was conducted between Jan-March 2016. The measurement scale for the instrument is considered seven point Likert Scale representing the intervals. The primary data was collected by distributing structured questionnaire for 373 customers out of which 109 were international customers and 264 were Ethiopian nationals of Paradise Lodge in Arba Minch town.

The effect of each independent variable can be discussed simultaneously by taking each result by keeping others not changing (constant).

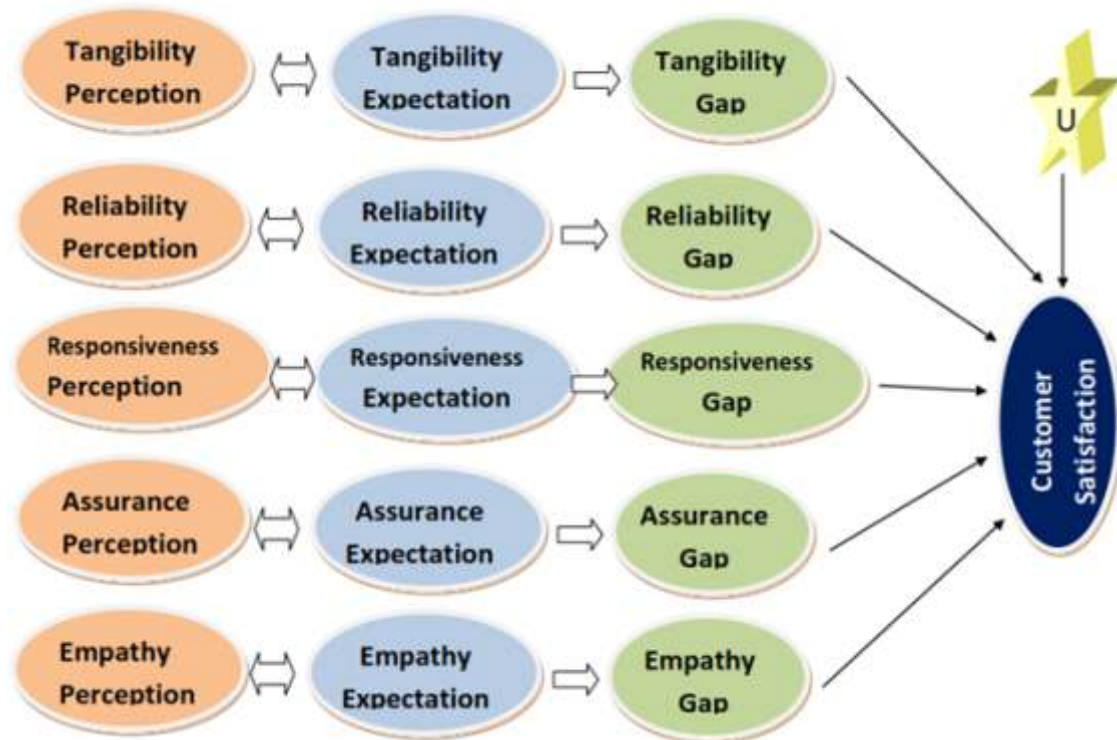


Fig 1: Conceptual model of the study

Looking at t value indicates that Empathy has highest impact ( $t = 5.982$ ) followed by Responsiveness ( $t = 5.093$ ) and least Tangibility ( $t = 2.003$ ).

All five independent variables (tangibility, reliability, responsiveness, assurance, empathy) have significant impact on customer satisfaction of service quality of Paradise Lodge hotel as  $p < .05$ .

Regression model can be summarized as:

$$CS = \beta_0 + \beta_1 TG + \beta_2 RG + \beta_3 Res G + \beta_4 AG + \beta_5 EG + U$$

$$CS = 2.159 + 0.230 TG + 0.252 RG + 0.369 Res G + 4.0304 AG + 5.0405 EG$$

## Hypothesis Testing

From table 10 hypotheses can be tested, as:

**Ha1:** Tangibility gap has a significant impact on Customer satisfaction towards service quality as  $.041 = P < .05$  in Paradise Lodge hotel. Hypothesis is accepted.

**Ha2:** Reliability gap has a significant impact on Customer satisfaction towards service quality  $.031 = p < .05$  in Paradise Lodge hotel. Hypothesis is accepted.

**Ha3:** Responsiveness gap has a significant impact on Customer satisfaction towards service quality as  $.000 = p < .05$  in Paradise Lodge hotel. Hypothesis is accepted.

**Ha4:** Assurance gap has a significant impact on Customer satisfaction towards service quality as  $.011 = p < .05$  in Paradise Lodge hotel. Hypothesis is accepted.

**Ha5:** Empathy gap has a significant impact on Customer satisfaction towards service quality as  $.000 = P < .05$  in Paradise Lodge hotel. Hypothesis is accepted.

## Conclusion

Study of mean of expectation & perception of customer satisfaction we can infer that there is wide gap of service quality for all the dimensions individually as well as totally. The widest gap is in empathy & responsiveness and the least gap is in tangibility which means in comparison to other factors the guests expectations are somewhat met by tangibility. This is true for Ethiopian as well as international customers.

Table 6 shows that there is significant difference in service quality gap in various components of service quality it shows that both groups' expectations about service quality are not met by Paradise Lodge hotel.

## Analysis & Discussion

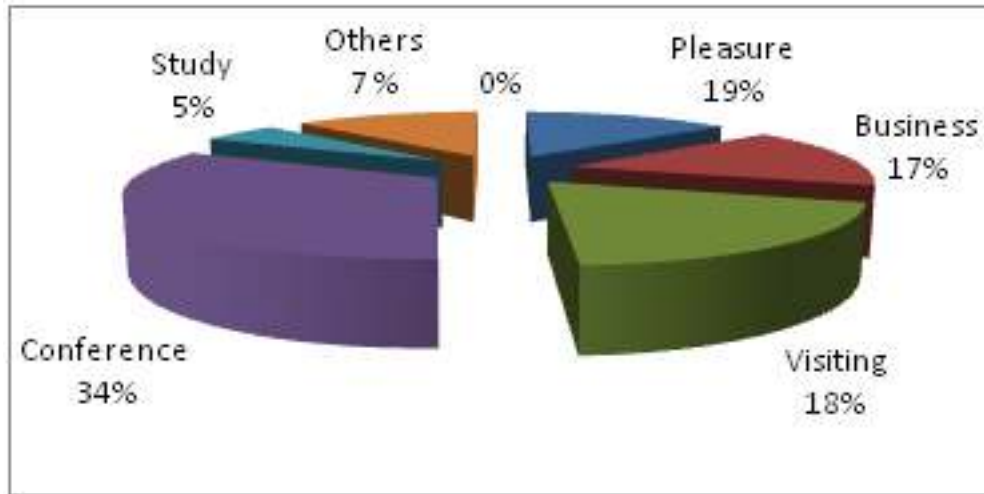


Fig 2: Purpose of respondents stay at Paradise Lodge

Table 3: Mean of expectation, perception and service quality gap of service quality constituents and overall of all customers

Variables	N	Expectation		Perception		Service Quality (P-E)	
		Mean	Std Deviation	Mean	Std Deviation	Mean	Std Deviation
Tangibility	373	6.1120	.45465	4.0477	.92601	-2.0643	1.03373
Reliability	373	5.9494	.44550	3.7515	.75382	-2.1979	.8710
Responsiveness	373	5.9122	.49795	3.5307	.67675	-2.3816	.74816
Assurance	373	5.8769	.43310	3.6427	.66838	-2.2343	.76391
Empathy	373	5.8320	.4203	3.68659	.68659	-2.3477	.87178
Overall SQ	373	5.9237	.37099	3.6786	.55669	-2.2451	.62835

From table 3 we can infer that there is huge service quality gap for individual constituents as well as overall elements for all customers. It shows that the expectations are not fulfilled by the service quality provided by Paradise Lodge hotel.

**Table 4: Mean & expectation, perception and service quality gap of service quality constituents and overall service quality of international customers**

Variables	N	Expectation		Perception		Service Quality (P-E)	
		Mean	Std Deviation	Mean	Std Deviation	Mean	Std Deviation
Tangibility	109	6.1018	.26445	3.9901	.94161	-2.1117	.99049
Reliability	109	6.0974	.30301	3.7508	.65389	-2.3465	.74337
Responsiveness	109	5.9646	.31649	3.6747	.63603	-2.2900	.66469
Assurance	109	5.8502	.33635	3.5978	.68388	-2.2525	.74162
Empathy	109	5.8304	.38226	3.3428	.62691	-2.4876	.71818
Overall SQ	109	5.9689	.23483	3.6712	.50905	-2.2977	.57702

From table 4 we can infer that there is huge service quality gap for individual constituents as well as overall elements for international customers. It shows that international customers' expectations are not met even remotely the service quality provided by Paradise Lodge hotel.

**Table 5: Mean of expectation, perception and service quality gap of service quality constituents and overall service quality of Ethiopian customers**

Variables	N	Expectation		Perception		Service Quality (P-E)	
		Mean	Std Deviation	Mean	Std Deviation	Mean	Std Deviation
Tangibility	264	6.1156	.50501	4.0680	.92127	-2.0476	1.04965
Reliability	264	5.8976	.47531	3.7517	.78692	-2.1458	.90699
Responsiveness	264	5.8938	.54682	3.4802	.68436	-2.4137	.77382
Assurance	264	5.8863	.46242	3.6584	.66335	-2.2279	.77274
Empathy	264	5.7461	.63801	3.4475	.70534	-2.2986	.91566
Overall SQ	264	5.9079	.40729	3.6812	.57328	-2.2267	.64532

From table 5 we can infer that there is huge service quality gap for individual constituents as well as overall elements for national customers. It shows that Ethiopian customers' perception is far below what they expect the service quality provided by Paradise Lodge hotel.

**Table 6: Analysis of variance of service quality gap for International and Ethiopian customers**

		Sum of squares	df	Mean square	F	Sig.
Service Quality gap of Tangibility	Between Groups	1.307	1	1.307	1.287	.019
Service Quality gap of Reliability	Between Groups	1.012	1	1.012	1.001	.026
Service Quality gap of Responsiveness	Between Groups	2.145	1	2.145	3.051	.005
Service Quality gap of Assurance	Between Groups	2.045	1	2.045	3.077	.004
Service Quality gap of Empathy	Between Groups	2.671	1	2.671	4.538	.001
Overall Service Quality gap	Between Groups	2.376	1	2.376	2.353	.003

Table 6 shows that there is significant difference in service quality gap in various components of service quality it shows that both groups' expectations about service quality are not met by Paradise Lodge hotel.

**Table 7: Mean of customer satisfaction from services delivered**

	N	Mean	Level
<b>All customers</b>	373	3.6864	Neutral to somewhat satisfied
<b>International customers</b>	109	3.5672	Neutral to somewhat satisfied
<b>Ethiopian customers</b>	264	3.7282	Neutral to somewhat satisfied

Table 7 shows that overall and nationality wise the customers of Paradise Lodge hotel are almost not satisfied with the services delivered by the hotel.

**Table 8: Correlation of service quality perception with customer satisfaction and degree of variability by independent variables on customer satisfaction**

	CS	Sig. (1 - tailed)	R <sup>2</sup>
<b>Customer satisfaction</b>	1.000		
<b>Tangibility</b>	0.451	.000	.203
<b>Reliability</b>	0.409	.000	.167
<b>Responsiveness</b>	0.535	.000	.286
<b>Assurance</b>	0.505	.000	.255
<b>Empathy</b>	0.563	.000	.316
<b>Overall SQ</b>	0.587	.000	.344

Table.8 summarizes that all variables independently as well as collectively are reasonably correlated with customer satisfaction. The value of R2 tells the variability shown by factor on dependent variable which is .203, .167, .286, .255, .316, and .344 for tangibility, reliability, responsiveness, assurance, empathy and overall variables. It shows that independent factors shows satisfactory variability on customer satisfaction.

**Table 9: Model summary of regression**

Variables	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Durbin-Watson
<b>IV - Tangibility, Reliability, Responsiveness, Assurance &amp; Empathy DV - Customer satisfaction</b>	0.723	.522	.516	.14752	1.480

Table 9 depicts the model summary. It shows that the all independent variables explain 52.2% variability on customer satisfaction. The difference between R2 And adjusted R2 is .006 which is very less; it means that the model can be generalized for total population.

**Table 10: Analysis of variance of customer satisfaction on Service quality variables**

Variables		Sum of squares	df	Mean squares	F	Sig.
IV - Tangibility, Reliability, Responsiveness, Assurance & Empathy DV - Customer satisfaction	Regression	25.003	5	5.001	16.681	.000
	Residual	114.817	367	.300		
	Total	139.819	372			

Table 10 states that F value is on the higher side and p value is .000 which shows that model explains significant variability on customer satisfaction.

**Table 11: Coefficients of independent variables**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.159	0.190		11.388	.000		
Tangibility G	0.230	0.041	0.000	2.003	.041	.543	1.842
Reliability G	0.252	0.052	-0.059	3.014	.031	.631	1.585
Responsiveness G	0.369	0.055	0.212	5.093	.000	.456	2.193
Assurance G	0.304	0.053	0.116	3.953	.011	.613	1.631
Empathy G	0.405	0.051	0.234	5.982	.000	.621	1.611

Table 10 shows the regression coefficients taking five independent variables into account namely; tangibility, reliability, responsiveness, assurance, empathy. The customer satisfaction of service quality increases by .230 when keeping other four independent factors influence at zero.

The level of customer satisfaction was very moderate and this is true for overall guests as well as for national and international customers

Regression result shows that all service quality variables viz., tangibility, reliability, responsiveness, assurance, empathy gaps have significant impact on customer satisfaction. The model explains 52.2% variability by these five factors on customer satisfaction and model can be generalizes for total population also.

Coefficients of service quality tells that empathy and responsiveness gap have most important impact as it looks the guests are most dissatisfied with these factors. In comparison to other factors comparatively, the guests were little bit satisfied with tangibility.

All hypotheses were accepted.

### Recommendations

As all factors have significant impact on service quality and at the same time there is wide service quality gap the management of Paradise Lodge hotel must try to reduce these service quality gaps.

As empathy service quality was found to be most important, the management must improve them by giving undivided attention 'from the front desk, clearly explaining charges on guest's account, reserving the suite as desired, the staff must have genuine concern for the guests, the service at the hotel must be available for round the clock and the feedback must be obtained from the guests at the time they leave the hotel.



For improving responsiveness the management must ensure that employees of the hotel must give prompt response for my requests, Informative literature about the hotel is provided and information is accessible, hotel room service & restaurant serving time is prompt, The response time to handle guests complaints must be reduced and the employees should have the knowledge to answer the guest's questions.

Assurance can be improved by treating the guests with dignity, the room rent must be at par with the facilities, the employees must be professionally trained and the employees must have the knowledge of local places of interest as nearly more than 70% of the customers who stay in hotel for conference, pleasure, business & visiting also want to visit the city.

For improving reliability the management must ensure that food provided at the restaurant is tasty & well garnished, the rooms must be ready as promised as the toilet, bath & seats are tidy and clean and TV, radio, AC, lights, and other mechanical equipment must work properly.

Tangibility can be improved by making the front desk visually appealing with up-to-date equipments, the employees have' clean & neat uniforms, The hotel restaurant's atmosphere must be clean & inviting, the receptionists must be polite and friendly to guests and the hotel's interior and exterior must be well maintained.

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# New Concept of Urban Marketing Analysis in India

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## Abstract

The paper is divided into 5 parts which are shortly entitled as- 'URBAN'- which further imply as follows-U for Unstablensness, R for Rising, B – Barrier, A for Advantage and N stands for Neutralization. Indian economy has become the most dynamic centers of economic change in the international-global economies. More than 300 million people are staying living in Urban Areas since 2011. Indian has 7935 Towns; 4041 Statutory Towns; 3894 Census Towns in its 28 states and 7 union territories. In the year 199, India adopted the policy of LPGM, Privatization, globalization and modernization are the four pillars, which have completely transformed the marketing/ Commercial scenario; Moreover opportunities raised by demographic environment have increased the importance of urban commerce. Urban environment is quite different from the social and cultural rural environment. To achieve success in marketing management a thorough knowledge of urban scenario is necessary. This research paper aims to analyses the urban market.

**Keywords:** Urban market, barriers of urban market and neutralization.

## Introduction

### URBAN (AREA)

The definition of 'urban' varies from country to country, and, with periodic reclassification, can also vary within one country over time, making direct comparisons difficult. An urban area can be defined by one or more of the following: administrative criteria or political boundaries (e.g., area within the jurisdiction of a municipality or town committee), a threshold population size (where the minimum for an urban settlement is typically in the region of 2,000 people, although this varies globally between 200 and 50,000), population density, economic function (e.g., where a significant majority of the population is not primarily engaged in agriculture, or where there is surplus employment) or the presence of urban characteristics (e.g., paved streets, electric lighting, sewerage). **Definition** - Urban Areas/ Urban Unit (or Town):

- All places with a municipality, corporation, cantonment board or notified town area committee, etc. (known as Statutory Town)
- All other places which satisfied the following criteria (known as Census Town):

- a. A minimum population of 5,000;
- b. At least 75 per cent of the male main workers engaged in non-agricultural pursuits; and
- c. A density of population of at least 400 per sq. km.

**Metropolitan area/region:** A formal local government area comprising the urban area as a whole and its primary commuter areas typically formed around a city with a large concentration of people (i.e., a population of at least 100,000).

**Megacity:** An urban agglomeration with a population of 10 million or more.

**Metacity:** A major conurbation – a megacity of more than 20 million people. As cities grow and merge, new urban configurations are formed. These include megaregions, urban corridors and city-regions.

**Megaregion:** A rapidly growing urban cluster surrounded by low density hinterland, formed as a result of expansion, growth and geographical convergence of more than one metropolitan area and other agglomerations. Examples include the Delhi-

Table No - 01

Particulars	Census 2001	Census 2011	Increase
Towns	5,161	7,935	2,774
Statutory Towns	3,799	4,041	0242
Census Towns	1,362	3,894	2,532

Source: Census of India

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Ghaziabad-Noida-Gurgaon megaregion.

**Urban corridor:** A linear 'ribbon' system of urban organization: cities of various sizes linked through transportation and economic axes, often running between major cities. Urban corridors spark business and change the nature and function of individual towns and cities, promoting regional economic growth but also often reinforcing urban primacy and unbalanced regional development. Examples include the industrial corridor developing between Mumbai and Delhi in India.

### Population (in Crore)

Table No - 02

	2001	2011	Difference
India	102.9	121.0	18.1
Rural	74.3	83.3	9.0
Urban	28.6	37.7	9.1

Source: Census of India

The extensive urbanization led to the endorsement of the urban marketing concept; after 1990 the term begun to be widely used because of the increased competition between cities eager to attract more tourists, inhabitants, potential investors, all these things leading to a better living standard.

According to Friedrichs and Dangschat, referring to large cities in Germany, showed that the reconstruction of international economy led to an increased competition between those cities, while for small cities, entering the competition became a survival ordered necessity (Friedrichs J., Dangschat, 1994), whilst Harris, the cities have become the most dynamic centers of economic change in the international-global economies (Harris, 1997).

Jan van der Meer considers that urban marketing can be described as a set of activities directed to enhance the correlation between the urban functionalities offer and the demand from its inhabitants, local companies, tourists and other visitors (Jan van der Meer, 1992).

Thus, in Corsico's opinion, urban marketing is the alignment of the urban politics to the requirements of the local economic stakeholders and to the hopes and expectations of those operating outside of it, in order to better promote the local economy (Corsico, 1994).

The marketing literature focuses on underlining the importance of city development and constant promotion of its elements, the increased competitiveness being an indirect effect of the applied strategies. Urban marketing must be designed as a general principle focused on city development, thus, on problems

## Urban Marketing

The globalization had a direct impact over the public sector which is now required to reinvent itself and to apply strategies and methods which were until now, distinctive for the private sector. More experienced in this area, the United States and several Western European Countries applied urban marketing in their regional and local strategies and published their experiences as "best practice" models in order that other organizations use it too. The cities begun to be treated as marketing products that have to be sold in order to survive and to develop.

regarding housing, jobs, communications, facilities, environment. It is also characterized by a planning process including all stages of task allocation, current situation, strengths and weaknesses analysis, definition of its' own level of competitiveness and implementing, monitoring and evaluating the activities. All these must lead to a concurring vision over the city and tasks for all the stakeholders involved in the process. The development based on local potential, significant projects, joint activities and the enhanced image as a whole must represent the goal achieved through the urban marketing process.

The leaders of different countries, regions, cities begun to realize that a positive image combined with a successful marketing mix is a powerful instrument in the competition for resources and other economic activities. The cities' management system suffered a change for the better by introducing some elements regarding commercials, public relations, direct marketing and sales promotions (Avraham, Eli et al, 2009).

A key element in urban marketing refers to the difficulty of defining the city's identity and values in a way that can be widely accepted and easily marketed for all target groups. The challenge is given by the need to create a common identity from values that are not always intangible and which represent the interests of different social and economic groups. City branding must determine how culture, history, economic growth, social development, infrastructure, architecture, landscape and environment, among other components, can be combined in an identity later to be "sold" (Zhang, Li et al, 2009). In this process, the decision maker's role is crucial, and in order for urban

marketing to succeed, a long term vision, both from the marketing and management point of view, is needed.

Economic development has always been a priority for cities, regions and states, but only in the last decade they decided to change the perspective, from a rather narrow point of view over economic progress, to a more widespread strategy aimed to attract new companies and to maintain the existing ones, to develop international trade and tourism and to bring new external investors (Kotler et al, 2001).

The states, regions and cities have transformed their circumstantial economic campaigns in complex marketing strategies aiming to create competitive markets, to guide potential buyers and to distribute community's resources, thus it will respond to the needs and expectations of the expert consumers.

FIGURE 1 - SUCCESS FACTORS OF URBAN MARKETING (SEPPO, 2003)

The economics of Indian consumerism is buoyant, with India ranking as the fourth largest economy in terms of Purchasing Power Parity (PPP), next only to United States, Japan and China. India is expected to outpace Japan by the year 2010 to become world's third largest economy. With 54 per cent of the Indians aged below 25, the young Indian consumer is buying big to look good and feel good. India's GDP growth of 9.4 per cent in 2006-07



is the highest posted for over 18 years, reflecting the booming economy of the country. Retail is one of India's largest industries, contributing to about 10 per cent of the GDP and providing employment to 8 per cent of the nation's workforce. Indian urban retail business promises to be one of the core sectors of the Indian economy, with organised urban retail sector estimated to grow by 400 per cent of its current size by 2012-13. Against the backdrop of an ageing world, India possesses the advantage of having a largely young population. 35 percent of India's population is under 14 years of age and more than 60 per cent of the population is estimated to constitute the working age group (15-60) till 2050. Two-thirds of Indian population is under 35, with the median age

of 23 years, as opposed to the world median age of 33. India is home to 20 percent of the global population under 25 years of age. Mobile phone as a product category has witnessed the highest growth in consumer demand amongst all retail product offerings, with increasing penetration of telecommunications in towns and villages. The Telecommunications sector has been adding on an average 5 million new users every month. India has a vast resource base of talent and skilled labour. With English being the language for business in India, the language skills of the Indian workforce score higher than that of emerging economies. To facilitate easier flow of Foreign Direct Investments ("FDI") inflow, instead of having to seek Foreign Investment Promotion Board ("FIPB") approval, FDI up to 100 per cent is allowed under the automatic route for cash and carry wholesale trading and export trading. FDI up to 100 percent is allowed, with prior Government approval for retail trade in 'Single Brand' products with the objective of attracting investment, technology and global best practices and catering to the demand for such branded goods in India. This implies that foreign companies can now sell goods sold globally under a single brand, such as in the case of Reebok, Nokia and Adidas.

#### Purpose /Aims-

- (i) To make us understand what is urban marketing.
- (ii) The major causes of rising of urban market.
- (iii) To understand the factors contributing the urban unstability.
- (iv) Measures to increase the urban market.
- (v) Advantage of the urban market.
- (vi) Leakages of the urban market.

#### Research Methodology

Exploratory research gives valuable insight, generates ideas and valuable aspect in more explorative manner. Primary data gives first hand information for specific purposes in hand, whereas secondary data consist of information important to describe and highlight valuable insights in the research. Secondary data have been obtained from the published reports, internet, libraries, journals /magazines, and reports of certain government agencies. Firms which work in urban areas and market were being surveyed. Data was collected by preparing schedules and questionnaires. 200 people were made subjects. Out of these 50 were traders, 100 urban consumers, 30 were agents working in urban areas, and 20 were company managers. The respondents have been chosen randomly and requested to grant interviews. The questions have then been asked in a pre-determined sequence. These data are analyzed/sorted with the help of computer.

#### 1.- Factors of Unstablensess in the urban market (Unstablensess)- .

In most Urban areas, the enormous pressure for shelter and services has frayed the urban fabric. Much of the housing used by

the poor is decrepit. Civic buildings are frequently in a state of disrepair and advanced decay. So too is the essential infrastructure of the city; public transport is overcrowded and overused, as are roads, buses and trains, transport stations, public latrines, and washing points. Water supply systems leak, and the resulting low water pressure allows sewage to seep into drinking water. Given the distribution of incomes, given the foreseeable availability of resources national, local, and worldwide given present technology, and given the present weakness of local government and the lack of interest of national governments in settlement problems, I don't see any solution for the urban areas. Urban Areas cities are and they will increasingly become centres of competition for a plot to be invaded where you can build a shelter, for a room to rent, for a bed in a hospital, for a seat in a school or in a bus, essentially for the fewer stable adequately paid jobs, even for the space in a square or on a sidewalk where you can display and sell your merchandise, on which so many households depend. A growing number of the urban poor suffer from a high incidence of diseases; most are environmentally based and could be prevented or dramatically reduced through relatively small investments. In parts of many cities, poor people can expect to see one in four of their children die of serious malnutrition before the age of five, or one adult in two suffering intestinal worms or serious respiratory infections. Air, water, noise, and solid waste pollution problems have increased rapidly and can have dramatic impacts on the life and health of city inhabitants, on their

economy, and on jobs. Even in a relatively small city, just one or two factories dumping wastes into the only nearby river can contaminate everyone's drinking, washing, and cooking water. Free-market approaches, trade liberalization and the arrival of multinational companies resulted in real estate booms in many cities and led to rapid increases in land prices. The number of buyers in large in urban market but there is instability in it. The following table studies the major factors affecting the urban market.

Above table analyses the instability is caused by Income inequalities/uncertainty of income, inflation and uncertainty of demand, Change in Purchasing Power or behavior of the consumer.

**2. Main factor of Rising in the urban market (Rising)-** The fast and furious pace of growth of the Indian economy is the driving force for Indian consumerism; with the Indian consumers confident about their earnings and are spending a large portion of their high disposable incomes. India is home to 20 per cent of the global population under 25 years of age. The most attractive component of India's value proposition is its cost attractiveness. The two trends are clearly related, both are reactions to the central planning approach that dominated past development policies and schemes of national governments. The economic reforms further accelerated the process by introducing competition in the

#### Factors for Unstability Urban Market

Analytic Table No - 03

S.N.	Particular of Factors	Rank
A.	Income inequalities./ Uncertainty of Income in urban area.	1
B.	Mounting inflation./High cost of leaving./Crude & petroleum products price.	2
C.	Change in Purchasing Power or behavior of the consumer.	3
D.	Product innovation and obsolescence.	4
E.	Devaluation in rupee.	5
F.	Uncertainty in Market demand and seasonal demand.	6
G.	Change in distribution channel and physical distribution.	7
H.	Lack of organized marketing system./Shortage of entrepreneurs.	8
I.	Skewed distribution and object poverty.	9
J.	Change in company/consumer desires.	10
K.	Unemployment problem remains./ Proportion of casual workers has tended rise.	11
L.	Change in technical process./Competitor's actions and reactions.	12
M.	Higher Fiscal deficit and adverse balance of payment.	13
N.	Social infrastructure are changed./ Major social problems./Social traditional attitudes	14
O.	Decline in percentage share of agricultural exports and GDP.	15

Source: Self Survey



markets. Steadily, the urban market has grown for household consumables and durables. This is an important moment for urban marketing, as it starts to be placed and perceived in the larger context of local and regional development. The Government is currently considering modernising and developing eight strategically located “Mandis” with cold storage, sorting and grading facilities made available as a part of the infrastructure services.

Taking into account the urban environment characteristics and the great number of persons and interests involved, the approach of the city problems from the urban marketing point of view is the most suitable, since it is multidimensional, requires an active involvement from the community, which is both subject and also object of the urban development programs. The urban marketing success is conditioned by direct involvement of several socio-economic actors and ensuring the mobility of present and potential urban elements (inhabitants, economic agents building facilities etc.) that can present the following evolution stages: (1) inclusions; (2) integration with other elements; (3) exclusion. During 1951 marketing in urban area was non-existent, however, Indian economy developed rapidly with the introduction of five year plans. Purchasing power of urban population increased with the commencement of programmes like urban development, poverty eradication. Major factors of urban development are as follows-

The analysis of the above table says that the largest contribution in urban market development is due to increase in GDP and Per Capita income. Apart from these, other factors include growing consumerism by media, improvement in social and economic structure, Increase in rate of urban population and awareness, Integrated with global economy.

**3. Barriers-** There are many barriers to be tackled in urban marketing, despite rapid strides in the development of the urban sector. Some of the common barriers are discussed below:

(i) Branding: Day by day, though national brands are getting popular, local brands are also playing a significant role in urban areas. This may be due to illiteracy, ignorance and low purchasing power of consumers.

(ii) Communication: A part from low levels of literacy, and their overall economic backwardness add to the difficulties of the communication task. In India, there are 22 recognized languages.

(iii) Warehousing: Due to lack of adequate and scientific storage facilities in urban areas, stocks are being maintained in few towns only.

(iv) Urban markets and sales management: Urban marketing involves a greater amount of personal selling. He may have to spend a lot of time on consumer visits to gain a favourable

### Factors for Rising of Urban Market/Marketing

Analytic Table No - 04

S.N.	Detail of Rising Factors	Rank
A.	Increase in per capita income and Rapid economic growth in urban area.	1
B.	Growing consumerism by media./The mall phenomenon/Franchising	2
C.	Improvement of economic and social infrastructure.	3
D.	Increase in rate of urban population and awareness.	4
E.	Integrated with global economy.	5
F.	Abundant availability of skilled Labour/Rise in state of skilled workers and literacy.	6
G.	Change in occupational structure.	7
H.	Low cost of operations/Rise in state of capital formation.	8
I.	Increase in public expenditure and investment.	9
J.	Increase in credit facilities for urban consumers.	10
K.	Reduction of direct taxes.	11
L.	Growth and diversification of product/service industry.	12
M.	Growth of civilisation and conscious of their quality life.	13
N.	Growth of sunrise industry in urban area.	14
O.	Role of the government in consumer movement.	15

Source: Self Survey

response from him. Channel management is also a difficult task.

(v) Inadequate banking and credit facilities: In markets, distribution is also handicapped due to lack of adequate banking and credit facilities.

(vi) Market segmentation in urban markets: Most firms assume that urban markets are homogeneous. It is unwise on the part of these firms to assume that the rural market can be served with the same product, price and promotion combination.

(vii) Transportation infrastructure/ High cost of Transportation: Transportation is an important aspect in the process of movement of products from urban production centers to urban market. The transportation infrastructure is extremely poor in India.

(viii) Lack of Right Competence: While the top management commitment to understand the urban market exists, the competence necessary for interacting & comprehending rural attitudes & behavior is lacking at the lower field staff level.

(ix) Partial Approach: the research findings of marketing research and advertising agencies present different pictures of markets.

(x) Packaging: It is also found that the labeling on the package is not in the local language. These factors are responsible for the barriers of expansion of urban market.

Above table reveals that there is Corruption and parallel economy leakage, Barrier of discretionary income./ Debts cancellation /increase in bad debts. Other factors are also responsible for the barrier in the urban market and are very well explained in the table.

4- **Advantages** - The world market and the local development are considered together, as the two perspectives; local and global of city development are strongly related. The "world market" term suggests that urban areas have to take part in the international competition to attract resources and acquiring new markets. "Local development" indicates the importance that municipality has to give to local urban development in order to be a strong competitor on international market. The world market implies a harsher competition, but this also involves creating new opportunities for the urban area. In urban marketing, municipality has to establish local economic development programs approaching an international perspective on segmentation and positioning. Even the small towns can find their own segment on the market they can be superior to other urban communities. The way business is done has undergone fundamental changes during the last decade or so. There is a big urban middle class in India, which is being watched continuously by the corporate world. The urban market with fast growth rate, improved transportation, ever-rising communication facilities and rising standard of realities is a logical corollary of the rising income offer tremendous potential to innovative marketers in

#### Main Barriers in Urban Market /Marketing

Analytic Table No - 05

S.N.	Detail of barriers Factors	Rank
A.	Corruption and parallel economy leakage.	1
B.	Barrier of discretionary income./ Debts cancellation /increase in bad debts.	2
C.	Barrier of growth /Lopsided growth process leakage.	3
D.	Illiterate./ Non -utilization of man power. / Low rate of return /purchasing power.	4
E.	Barrier of social and economic infrastructure	5
F.	Barrier of low productivity.	6
G.	Increase in price/Taxation./ Additional and expensive distribution cost.	7
H.	Barrier of market by monopoly sellers./ Skimming the cream price strategies.	8
I.	Product /services complaint tendency./ Price bargaining leakage in profit.	9
J.	Barrier of Financial activities.	10
K.	Lack of consumer awareness for new product /services.	11
L.	Product defects, doubts, and confusion/fraud by customer or institute.	12
M.	Hoarding of liquidity/Assets.	13
N.	Unorganized consumer	14
O.	Barrier of product /service security.	15

Source: Self Survey



India. Urban economic development also implies establishing a long-term marketing strategy oriented towards preserving and developing the natural, economic, human and potential of the local collectivity. A number of factors have been recognized as responsible for the market boom. Some of them are: a. Increase in population, and hence increase in demand. b. A marked increase in the urban income due to agrarian prosperity. c. Large inflow of investment for urban development programmes from government and other sources. d. Increased contact of urban people with their urban counterparts due to development of transport and a wide communication network. e. Increase in literacy and educational level among rural folks, and the resultant inclination to lead sophisticated lives. Following are the beneficiaries of urban market- Producers, intermediaries, Sellers, and consumers. The expansion of urban market will strengthen the economy. Following are the advantage of urban marketing.

The analysis of the above table reveals that marketing measures will expand the urban market. Increase in sale of the organization brings hype in managerial capability. Expansion of urban market also brings industrial stability. Other benefits are listed in the table.

5- **Neutralisation/Nursing (Remedy)-** The difficulties of rural market can be eradicated and producers can expand their. Trade By removing the factors of uncertainty by the strategy of

marketing can be made successful. It has been observed that the companies which cater to both urban and rural markets tackle the recession in a better way. The demand for goods in the urban market often follows a cyclic whereas in the market it is steady. This much needed transition can be weighed according to the 4A model. (Availability, Affordability, Acceptability & Awareness)

**Availability** deals with making the product reach the consumers. For this purpose a highly integrated extensive distribution network is necessary

**Affordability** involves pricing the product in such a manner that the people are attracted and at the same time it covers all the cost incurred.

**Acceptability** encompasses issues how the product or service could be made more acceptable to the consumers by incorporating attractive features

**Awareness** is linked to the issues of promotion of product in urban areas. The promotion needs to be adapted to the urban environment, the local language and means of communication used. The main factor of expansion of market is the increase in income of consumers following table analyses the remedial measures necessary for market expansion.

#### Advantage of urban Marketing/Market

Analytic Table No -06

S.N.	Detail of barriers Factors	Rank
A.	Wide scope of marketing./ Expansion of market/ Increase in amount of sales.	1
B.	Optimum utilization of enterprise.	2
C.	Increase in managerial capacity.	3
D.	Protection against slump.	4
E.	Increase in profit capacity of the enterprise.	5
F.	Generation of employment	6
G.	Proper utilisation of resources.	7
H.	Production for consumer needs. /Standardizing and grading of goods.	8
I.	Generation of revenue.	9
J.	Increase in amount of capacity.	10
K.	Advantage to a small firm.	11
L.	Delivery of standard of living.	12
M.	Increase in knowledge of consumers./ Consumer welfare	13
N.	Decrease in distribution cost. / Assists in sales promotion./ Integration of marketing.	14
O.	Development of tertiary sector in urban area.	15

Source: Self Survey

The above table proves that priority should be given to the avoid jobless growth. / programmes concerning achievement of full employment, Absolution of intermediaries/ Stability in price level Moreover, promote the demand for durable consumer goods, etc.

## Conclusions

New avenues have been opened with the investment of FDI in the urban retail market. A midst a sense of fear and apprehension, URBAN analysis can serve as a guide in the realm of urban marketing. URBAN analysis very easily and comprehensively studies the urban market the conclusion/findings may vary according to variety of study methods. But, more or less, the above paper helps in collecting, analyzing and discerning information regarding the urban market. The loopholes in the urban market can be eradicated and remedial steps be taken to accelerate the growth of urban market. In the future, urban development will be also sustained by decision maker's interest to apply strategies which used to be the exclusive practice of the private sector.

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**Neutralisation/Remedy for Urban Market /Marketing Development**  
**Analytic Table No -07**

S.N.	Detail of barriers Factors	Rank
A.	Avoid jobless growth. /programmes for full employment.	1
B.	Absolution of intermediaries/ Stability in price level.	2
C.	Promote the demand for durable consumer goods.	3
D.	Loan on priority basis/ Promote to consumer credit by cheap money policy.	4
E.	To prevent concentration of power in few hands/ Equitable distribution	5
F.	Protection and growth of MSMS Industry for social justice.	6
G.	Co-operative marketing /SHG /financing.	7
H.	Increase the public transport facilities and etc.	8
I.	Innovative skills and vocationalisation of education.	9
J.	Analysis of environmental & resources factors.	10
K.	Effective product /service distribution system.	11
L.	Special focus on backward urban areas.	12
M.	Use of latel resources.	13
N.	To remove doubts and confusion /to educate the consumer.	14
O.	Creation of utilities & separate marketing strategy.	15

Source: Self Survey

# Measuring Post Merger and Acquisition Performance: Evidence from Indian Banking Sector

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## Abstract

The present paper examines the impact of mergers and acquisitions on the financial efficiency of the banking sector in India. The analysis consists of two stages. Firstly, by using the ratio analysis approach, we calculate the change in the position of the banks. The sample of the study is based on data of banks where mergers and acquisitions took place; covering period of twelve years from 2000 to 2011. Secondly, we examine changes in the efficiency of the companies during the pre and post merger periods by using nonparametric Wilcoxon signed rank test. The result of the study indicates that M&A cases in India show a significant correlation between financial performance and the M&A deal. Thus, it can be said that mergers help banks to improve overall profitability, efficiency, short term and long term solvency position.

**Keywords:** Mergers and Acquisitions, Corporate Performance, Banking Sector, India, Wilcoxon Signed Rank Test

## Introduction

Mergers and acquisition (M&A) can be generally defined as activities involving takeovers, corporate restructuring, corporate control as well as changes in the ownership structure of firms in any industry. Merging of two firms into one or the acquisition of one firm by another is a very popular strategic maneuver, which is still fashionable among corporations in most developed economies over the world.

Merger is defined as any combination of two or more firms with the larger being considered the acquirer (Gaughan, 2005). However, the acquisition of one firm by another just like the direct meaning of the word is the act of one corporation acquiring a controlling interest in another corporation: this can be in an unfriendly hostile takeover or through a friendly merger. The buying corporation may offer incentives to stockholders such as offering a price well above the current market value. However, no distinction is made in the literature over the use of the words between mergers and acquisitions because the effects of both are virtually indifferent (Green and Cromley, 1982; Gaughan 2005).

## Review of Literature

Over the past half a century, banking efficiency has been a hot research topic and extensive literature has been carried out in developed nations. The focus of efficiency research in developed countries has been on the implications of efficiency results for financial institutions in the areas of government policy, such as deregulation, bank failure, merger and acquisition, and so on (for an extensive review of literature on the subject matter, see Berger et al., 1993; Berger and Humphrey, 1997; Berger and

Mester, 1997; Ashton and Hardwick, 2000; Casu and Molyneux, 2001; Mokhtar et al., 2006 Kwan and Eisenbeis 1997; Altunbas et al. 2000; Williams 2004; Rao 2005; Chang and Chiu 2006; Altunbas et al. 2007; Pasiouras 2008; Murinde and Zhao 2009; Papanikolaou 2009; Fiordelisi, Marques-Ibanez, and Molyneux 2011. Further, in the last two decades, reforms in Indian banking sector have also attracted various mergers and acquisitions, which has attracted researchers and policy makers to study the effects of various reforms on bank performance. This chapter reviews the empirical literature on the benefits of mergers focuses on the changes in the cost efficiency using accounting data.

Studies that use accounting measures-based have inconsistent results; where some studies reported slight improvements in the financial performance at insignificant level (Choi and Harmatuck, 2006), other studies reported significant positive performance (Healy et al., 1992; Ghosh, 2002; Heron and Lie, 2002; Ramaswamy and Waegelein, 2003) or negative impact on financial performance (Mueller, 1980; Sun and Tang, 2000; Yeh and Hoshino, 2002; King et al., 2004). In addition, the analysis of the effects of M&A on performance revealed positive impact on specific aspects of performance and negative impact on other aspects of performance (for example, Gugler et al. 2003, who reported significant increase in profitability but negative effect on sales; Mantravadi and Reddy 2008, who reported increase in profitability and decrease in return on net worth).

## Research Design and Methodology

### Sample Selection

The sample of the study is based on data of banks where mergers

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and acquisitions took place; covering period of twelve years from 2000 to 2011. The data collection part for this study was conducted in the year 2011, so the ending point of the sample period has been taken as 2010.

The data for the empirical analysis is extracted mainly from the PROWESS database (Release 4.0); as well as from the annual reports of the banks. The study obtains data for the calculation of bank performance and other control variables from PROWESS database. In case of any discrepancy, the firms' websites have been accessed for checking the validity of the data. In addition, the collected data was also compared and verified with another database called CAPITALINE<sup>2</sup>.

## Analytical Framework and Estimation Models

The study utilizes a range of measures like impact of post mergers synergy on the company's performance through –Banking Ratios– liquidity, profitability and solvency.

## Wilcoxon Signed Rank Test Methodology

This also analyses the financial data of selected merging banks in the period 2000-2011. In order to evaluate the financial performance of the merging banks in the long run, we compare the financial performance of the cases pre merger and post merger during 2000-2011. In order to test the hypothesis Wilcoxon Signed Rank Test is used for four parameters.

These are:

- Overall profitability parameters from Return to Equity Shareholders point of view, return on net worth and earning per share are calculated.
- Liquidity parameters- current ratio is measured
- Solvency parameters - debt to equity is calculated
- Overall efficiency parameters- profit before tax and profit before tax to total income

Wilcoxon Signed Rank Test is a non-parametric statistical hypothesis test for the case of two related samples on a single sample. The Wilcoxon signed rank test compares the median of a single column of numbers against a hypothetical median. The formulas in this technique are:

$$U = n_1 n_2 + n_1(n_1 + 1)/2 - R_1 \quad (5)$$

$$E[U] = n_1 n_2 / 2 \quad (6)$$

The test is the counterpart of paired difference t-test for difference in two population means. The paired differences are taken, the ties are discarded, and the remaining differences are ranked. A statistic denoted by T is computed. For a 1-tailed test on the left, T is the sum of the ranks of positive differences; for a 1-tailed test on the right, T is the sum of the ranks of negative differences; for a 2-tailed test, T is the minimum of the two sums. For small samples one needs to look up the table in the textbook for p-values. For the normal approximation, the formulas for mean and standard deviation are

$$E[T] = n(n + 1)/4 \quad (7)$$

$$s_T = \sqrt{\frac{n(n+1)(2n+1)}{24}} \quad (8)$$

where n is the number of observations excluding ties.

The raw figures were obtained for the above said parameters and signed rank test is carried out to assess the difference in the performance between pre-merger and post-merger. In our study XA denotes pre-merger and XB denotes post-merger. The Wilcoxon signed rank test computes  $W_{\pm}$  and the number of signed ranks is designated as ns/r that is equal to number of XA XB pairs (that is number of companies) minus the number of pairs for which XA- XB=0. The test statistic z is computed and probabilities observed are compared with desired level of significance (0.05) to accept or reject null hypothesis.

## Wilcoxon Signed Rank Test: Findings and Discussion

### Overall profitability parameters (Return to Equity Shareholders)

In the present study Return to Equity for shareholders is measured with the help of two ratios: Return on Net Worth and Earning Per Share. The use of both these ratios presents a broad picture of a company's efficiency, financial viability and its ability to earn returns on shareholders' funds and capital employed.

## Return on Net Worth (RONW)

RONW measures the rate of return on the shareholders equity of the owners. It measures the company's efficiency of using the

<sup>1</sup> The PROWESS database is maintained by CMIE and is broadly similar to Compustat database of US firms. It is increasingly being employed in the literature for firm-level analysis of Indian industry and contains financial information on around 27,000 companies, either listed on stock exchanges or the major unlisted companies.

<sup>2</sup> The CAPITALINE Plus database provides fundamental and market data on more than 20,000 Indian listed and unlisted companies, classified under more than 300 industries, along with powerful analytic tools.

capital (shareholders funds) entrusted to it and generating profits. The average amount of net worth of financial sector companies after merger was higher than that of pre merger period.

Out of 12 merger cases of banking sector, 9 merging banks showed a positive sign, i.e. increase in RONW and 3 merging banks showed decline in net worth. Among the sample, 3 merging banks showed negative net worth during post merger period.

In the next step, non-parametric (Wilcoxon) test is performed to verify whether there is difference between the pre and post merger efficiencies. The result seems to be reject our null hypothesis at 5% level of significance ( $z = -2.803 < 1.64$ ) with p value  $0.01 > 0.05$  (2-tail test) and  $0.005 > 0.05$  (1-tail test). Therefore, for banking sector companies we reject the null hypothesis and observed the difference between pre and post merger RONW to be statistically significant.

### Earning Per Share (EPS)

In order to get true idea of return on investment owner should evaluate his investment returns not on the basis of the dividend received, but on the basis of the EPS i.e. earnings per share. The more the EPS better are the performance and prospects of the company.

### Major Observations.

The EPS of merged company during pre and post merger It is interesting to note that among the sample of 12 merging cases, 11 merging banks indicate increase in EPS and only 1 merging banks showed decrease in average of three year of EPS during post merger period when comparing with pre merger performance of same cases.

Also out of 12 merging cases, EPS of 6 banks increased more than doubled during post merger period as compared to pre merger performance.

This study also find that the null hypothesis is rejected as  $z = -2.981 > 1.64$  at significance level of 5% and the difference is statistically significant at two tail test (p value=0.003) and one tail test (p value=0.001). Hence, it is found that there is a significant correlation between financial performance and the M&A deal.

### 5.3.2 Liquidity Parameters

Liquidity ratios measure the short term solvency i.e. the firm's ability to pay off current dues. In the present study current ratio is

used to check the liquidity of the firm. In a sound business, a current ratio of 2:1 is considered an ideal one. A very high ratio will result in idleness of funds and therefore, is not a good sign. On the contrary, a low ratio would mean inadequacy of working capital.

The results of the current ratio of sample merging banks before and after merger. Among the 12 merging cases, 10 merging banks showed increase in current ratio and only 1 merging banks showed decrease in current ratio.

The increase can be interpreted that the banks may have idle funds available as current assets, which increased relatively with greater speed than current liabilities.

By running Wilcoxon test null hypothesis is proved for banking sector companies as  $z = 2.803 > 1.64$  at 5% level of significance and difference between pre and post merger current ratio position is statistically significant as inferred by p value (2-tail)=0.005 and p value (1-tail)=0.001.

### Solvency Parameters

Solvency parameters indicate the ability of an enterprise to meet its long term indebtedness (obligations). In this study debt-equity ratio is used to measure the solvency position.

### Total Debt/Equity Ratio

The debt to equity ratio is worked out to ascertain soundness of the long term financial policies of the firm. A higher ratio indicates a risky financial position while a lower ratio indicates safer financial position. The debt to equity ratio of sample merged companies during pre and post merger period of banking sector. Out of 12 merging banks, there was increase in debt to equity ratio of 11 merging banks, which means that debt (leverage) in the firm increased.

As per the results from the Wilcoxon test we reject the null hypothesis for banking sector companies with  $z = 1.78 > 1.64$  at 5% level of significance. The difference is statistically significant as p value = 0.42 (1-tail test) and p value = 0.084 (2-tail test).

### Overall Efficiency Parameters

The main objective of business is to earn profit. Therefore, efficiency in business is measured by profitability. To check the overall efficiency of the merging cases, profit before tax, profit after tax is calculated.



## Profit after tax (PAT)

Profit after tax, or PAT, measures the profits of the companies after paying corporate taxes. PAT of the merging cases in banking sector and can be interpreted .

It is interesting to know that all merging banks taken under study have shown increase in the profit before taxes. It can be interpreted as good sign for the companies going for merger. Profit after tax to Total income

When we perform non-parametric Wilcoxon signed rank test, the results of PAT to total income were found to be consistent with the null hypothesis at  $z = 2.803$  at 5% significance level and  $p$  value = 0.005 (1-tail) and 0.002 (2-tail).

## Summary and Conclusion

The Indian banking system too experienced drastic and comprehensive consolidation through the mergers and acquisitions (M&A) route, when government of India adopted the route of mergers among others with a view to restructure the banking system. Notable among which have been Grind lay Bank merged Standard Chartered Bank, Times Bank with HDFC Bank, Bank of Madura with ICICI Bank, Nedungadi Bank Ltd. with Punjab National Bank and most recently Global. ICICI Bank merger with Bank of Rajasthan (BoR), whose promoters are being pushed by the Reserve Bank of India (RBI) to offload their stake.

The merger and acquisition in banking sector shows that more than half of the banks merged had improved financial performance in post merger period in comparison to pre merger period. This study leads to various conclusions. First of all, the overall profitability parameters i.e., return on net worth and earnings per share showed a strong financial viability and its ability to earn returns in post merger period as compared to pre merger period in banking sector firms. Secondly, the liquidity ratios depicts the short term solvency position of merged firms are higher and they have idle funds to invest in their productive purposes. Thirdly, the debt to equity ratio of merged banks has risky financial position i.e., debt has increased. Fourthly, overall efficiency of the post merged banks is more as compared to pre merged banks. Thus to conclude it can be said that mergers help banks to improve overall profitability, efficiency, short term and long term solvency position.

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# A Study on Economic Development in Priority Sector Lending in Kumaun Region

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## Abstract

Priority sector lending is mainly expected to make sure that the hold up from the financial institution to the sector of the economy which has not received sufficient hold of institutional finance. The realization of the socio- economic priority of the management like improvement of agriculture, encouragement of SSI & development of insecure area etc is the major legal responsibility of commercial banks. Since 70's RBI have predetermined strategy for PSL by banks. The same was revised on April 30, 2007 and in universal PSL goal was fixed at 40% for home banks and 32 per cent for overseas banks. However, the bank is not able to arrive at the set aim of lending to PSL. The small entrepreneurs and farmers are continued to be both credit and demand constraint. Thus, it can be practical that the demand for finances for PSL viz., small business units and farming sector is vast. With this backdrop, the present thesis is an effort to identify a variety of lacunas of PSL by business banks in the area under concern in the context of countrywide scenario.

**Keywords:** District development plan , credit rationing , district plans , credit control methods .

## Introduction

PSL is a vital role given by the RBI to the banks for as long as a particular portion of the bank lending to a small quantity of specific sectors like agriculture or small scale industries. Basically this is meant for all surrounding growth of the economy apart from only focusing on the financial sector.

This type of crediting could be for the reason of corporation , pre-and-post harvest actions (spraying, weeding, harvesting, grading, sorting) and export credit for exporting their own farm construct, bank loans to (MSE) engaged in providing or depiction of services would be entitled for direct finance under PSL upto an total limit of Rs 2 crore per borrower/unit.

Loans to governmental group for structure of lodging units or for slum permission and treatment of slum dwellers up to Rs 10 lakh per lodging unit would come under PSL. Loans to economically weaker sections and low-income groups, loans to home economics companies for refinance, lending for purchase or structure or renovation up to a maximum amount of Rs ten lakh.. Reserve bank of India further clarified "banks should guarantee that loans extensive under PSL are for settled purposes and the end use is always monitored.

The Institution should place proper controls and systems in this regard."The RBI has authorization goals for PSL to meet needs of large sections of people who had no right of admission to institutional finance. One of the fundamental objectives of nationalization was to recover the productivity of big as well small

sector. The concept of PSL was to ensure the flow of endeavor credit to the society, RBI and central government strategy for the improvement of credit under the three years scheme base on the recommendation of committee related to special issue .The help of these section will be of no use unless it is ensure that the beneficiary utilize the support for the utility reason and generate sufficient profits to repay the loans and to recover the standard of living .As the schemes is in action for 3 decades, an pragmatic evaluation of this act was made so that trouble could be make out and the presentation could be improved with a apparition to emphasize and conscious on the schemes, to inspect the participation of the banks in to it execution, to evaluate the extent of achievement, to recognize the problems associated therewith and to improve its working.

It is importance to look at the impact of PSL credit on the people and the nation .RBI further clarified "banks should make sure that credit extensive under PSL is for authorized purposes and the end use is continuously monitored. The banks should put in proper monitoring in this regard."

As the banks are urban partial in their approach they are less likely to finance these sectors because the latter are: (1) less profitable, (2) lack guarantee, and (3) are high-risk sectors. Without providing necessary help to these sectors it will impossible to accelerate the growth of the nation.

In India, agriculture sector play a important role in solving problems. This has been documented throughout the world by the policy makers, governments as well as researchers. As these

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sectors can be developed with limited accessible capital and light technology, it permits more population to contribute in profitable economic activities with which we can solve the difficulty of poverty, reduce the inequalities in the sharing of profits and wealth at the nationwide level and redundancy problem at the individual level.

## Need for a new Approach

The PSL guidelines built-in in the master circular updated up to June 2010 were reportedly an incorporation of about 22 circulars issued from 1977 onwards. After the Malegam report and M.V. Nair's report, it has undergone further complex change as late as up to Sep 2012. Despite the stated intention of banking outreach and moving helpless groups of population, PSL targeting, as per the present structure, has left the major part of the people unaffected.

This has led to the similar growth of new policy initiative in monetary insertion and gaining of drive of other credit release models such as the microfinance. These changes have not been recognized and integrated into the approach towards PSL. It is very important that the PSL should be more refine from the viewpoint of growth and service, and the equity angle should be left to be best served through the plan of financial enclosure.

Mostly, it could include sectorial categorization, leaving the beneficiary leaning groupings to be served by monetary inclusion strategy. If one follow this principle, infrastructure finance should gain a important main concern and innovative ways should be explore to permit the banks to finance infrastructure, while cultivation and micro enterprise should continue to get attention. But, the level and sub-targets should be rearranged to cover really the weak groups as suggested by the Narasimham committee, and Nair committee. It is not the average and large agriculturist who committed suicide but the small and minor ones. It is not the small and average enterprise as a whole that knowledge constraint of acknowledgment but it is mostly, as the monetary census shows, the micro enterprises.

## Growth and Equity Angle

Direct loan also absolutely gave a steady life to the function of credit channel of financial policy, along with growing prominence of the IR since the reforms of 1990s. But, the PSL rule, which form the basis of work out this policy, have lost their early thrust both from growth and justice angles. Reprioritization is measure also from the angle of minimize the adverse shocks emanate from financial and outside shocks and to ensure credit flow to really susceptible groups. The sacrifice of enlargement for contain price rises and the price of correcting unfavorable redistributive effects

of price rises need not be that large, if reprioritization of going to credit is tactically attempted.

## Scope of PSL extended

The RBI, eased norms for PSL by bank and also expanded the scope for distribute loans to cultivator and weaker sections of the society. "The add-ons and alteration will be prepared with effect from July 20," the RBI said in a announcement. The RBI allowed banks to include loans to corporate, including partnership firms, farmers' producer companies of individual farmers, and co-operatives of farmers directly engaged in agricultural and allied activities — fishery, animal husbandry dairy, poultry, bee-keeping and sericulture up to an aggregate limit of Rs two crore to be considered as a PSL.

Further undersized credit for raise crops, which include traditional/non-traditional plantation, horticulture and allied behavior, would be incorporated in the PSL. Loans for post-harvest and pre-harvest activities, weeding, grading harvesting, spraying, and categorization will be included in the PSL. Now PSL would also comprise overseas recognition for export own farm produce The RBI added. Bank loans to Micro Enterprises (MSEs) and undersized engaged in providing services will be allowed for categorization as direct sponsorship to the MSE division under the PSL up to a total limit of Rs.2 crore per borrower/unit,. Bank loans to any legislative agency for creation units or for slum treatment and authorization of slum dweller subject to a ceiling of Rs.10 lakh/unit would be measured as PSL. "For the use of recognize the low income groups and weaker sections, the family income of Rs.1.120 lakh per annum, irrespective of places.

Bank credit to HFCs — approved by the NHB for their refinance for lending for the purpose of pay for, reconstruction and structure of individual lodging units or for slum clearance and rehabilitation, focus to a total loan limit of Rs.10 lakh per borrower, would come below PSL though, the RBI set that all inclusive IR charged to the last borrower would not beat the lowly lending rate of the lending bank for housing loans plus 2% / annum.

The PSL loans to HFCs is restricted to 5 per cent to every bank's total PSL, on a continuing basis. The RBI also ask banks to make sure that recognition extensive under the PSL are for average purposes and the end use is always monitor. "The banks should put in position proper inner control and systems", added RBI said lending by banks to corporate, comprise agri-companies, co-operatives of farmers in agriculture, corporation firms and related activities -- fishery, animal husbandry, dairy, poultry, bee-keeping, and sericulture up to an aggregate limit of Rs 2 crore would qualify for PSL. This kind of lend could be for the purpose to raise crops, pre and post harvest activities and export credit for their

own farm produce. In case the credit frontier per borrower is more than Rs 2 crore, the complete credit should be treated as indirect finance to agriculture, it added. Also, bank MSE engaged in providing of services would be entitled for direct finance under PSL up to an collective limit of Rs 2 crore per borrower/unit.

Loans to legislative agency for structure of dwelling units or for slum approval and therapy of slum dwellers up to Rs 10 lakh / dwelling unit would come under priority sector. Loans to cost-effectively weaker sections and low-income group, loans to housing finance company for refinance, on-lending for buy or building up to a ceiling of Rs 10 lakh / dwelling would also be entitled for PSL.

### Different Schemes under PSL:

The PSL includes lending to agriculture small scale industries, transport operators, self-employed persons, rural artisans and the weak sections, comprise: (1) small and minor farmers with land property up to 5 acres, landless laborers, renter farmers and share croppers, (2) artisans, rural community and small house industries enjoy credit limits up to Rs. 25,000/-, (3) Integrated Rural Development Programme (IDRP). Differential IR Scheme (DRI) and Self-Employment Programme for the city Poor (SEPUP) beneficiary and belonging to Scheduled Castes & Tribes. In accordance with the guidelines recently issue by the Government of India, Ministry of Rural Development. (Swamajayanthi Gram

Swarozgar Yojana ) has come into force replacing all the earlier programmes viz, Integrated Rural Development Programme , Training of Rural Youth for Self-Employment (TRYSEM). Development of Women and Children in Rural Areas and so on. Areas under PSLRBI has divided the PSL into following ten areas or categories the main areas under PSL scheme are as follows:

- Agriculture sector.
- Housing loan Consumption loan State-sponsored corporations for SC/ST.
- Small-scale industrial loans.
- Professional and self-employed. Retail trade loan.
- Educational loan.
- Small road and water transport operators

Growing model of industrialization in Kumaun region Since 1991 India is earning solid from monetary sector as we have shown huge success in, infrastructure, power sector service and agriculture sector of India - backbone of NI suffers from various drawback because of seasonal variation and less education to farmers, technical updating, land irrigation and many more .

It raises a need of PSL though the hill policy had paying attention over Rs 220 crore in conditions of savings during the past three years, The policy. which was brought in 2008, by Khanduri for a period of 10 years would now be accessible till 2025. industry setting up new units would be given incentives like price purchase

Trends in Ground level Credit (GLC) Flow  
Sector wise GLC flow in the state for last six years. \*

crore Year

year	Crop Loan (CL)	Agri. Term Loan (ATL)	Non-Farm sector/MSME	Other Priority Sector (OPS)	Total GLC Flow
2008-09	1050.86 (25.48)	739.31 (17.93)	719.77 (17.45)	1613.90 (39.14)	4123.84 (100)
2009-10	1319.80 (25.46)	1016.55 (19.61)	1026.19 (19.79)	1822.10 (35.14)	5184.64 (100)
2010-11	1548.75 (27.00)	1013.80 (17.70)	1134.05 (19.80)	2029.02 (35.50)	5725.62 (100)
2011-12	1972.53 (31.90)	973.55 (15.80)	1217.37 (19.70)	2013.44 (32.60)	6176.89 (100)
2013-14	1260.82 (17.44)	2009.63 (27.81)	1353.06 (18.72)	2603.08 (36.02)	7226.58 (100)
2014-15	2553.19 (25.71)	1634.12 (16.25)	2543.60 (24.93)	4074.66 (33.11)	9932.22 (100)
<b>CAGR</b>					<b>19.22%</b>

[Figures in parenthesis indicate %age share in total; Source: SLBC (but 2013-14 GLC has been compiled as per the figures collected by NABARD from LDMs directly)]

#### Credit Projections -SFP 2015-16

A credit potential of '14744.00 crore has been estimated in SFP for the year 2015-16 in Uttarakhand under priority sectors. This includes potential of ' 5112.13 crore for Crop Loan (short term loans for agriculture), ' 1995.13 crore for Long Term investments in agriculture sector, ' 3084.60 crore for Non-farm sector including MSME and Food Processing and ' 4551.64 crore for Other Priority sector.

preference and convey subsidy for 10 years in case they come into manufacture by 2015, maximum of Rs 30 lakh which has now be doubled to a limit of Rs 60 lakh. Industry going for expansion either by invest 25 % of the total asset or rising the production output by more than 25 % would also be allowed for all the benefits.

**Kumaun economy** is growing at fast rate with CAGR of 12.75% during 2004-05 to 2013-14 . Farming still holds very significant place in the state financial system looking at the detail that still about 45%of the main employees in the state are needy on agriculture for their living.

There is no financial system of scale & output of major crops is very low. Wheat and paddy are the main , constituting 31.65 and 23.16 % cropped Area. The other important crops are maize, pulses , sugarcane, and oil seeds, horticulture, Medicinal & Aromatic Plants, food processing, agricultural marketing infrastructure, micro irrigation, floriculture, organic farming, etc., have vast possible for growth etc Paddy, Wheat, Pulses, Horticulture, Floriculture ,Kharif crops, Medicinal and aromatic plants. Though share of primary division in GSDP has declined from 22.27% in 2004-05 to just 9.59% in 2013-14, farming still holds very vital place in the state economy look at the fact that still about 45% of the staff in the state are reliant on cultivation. Share of secondary Sector is endlessly rising with a increase in the share of tertiary sector.

Status of Agriculture after secretarial for forests and wasteland, only 7.23 lakh has constitute 13% of total report area is accessible for farming minor and Small land holdings constitute 91% of land-holdings. There is no economy of scale. The major banks of the State are State Bank of India Uttarakhand Gramin Bank, Punjab National Bank, Bank of Baroda, Uttarakhand and State Cooperative Bank and District Central Cooperative Banks .

Banking Business & CD Ratio Outstanding advances of all the banks as on 31 March 2015 registered a growth of 27% over preceding year whereas growth in deposits was to the tune of 21%. As on 31 March 2016 the overall CD ratio was 64.29% in the State which varied between 30.78% in Almora District to 98.82% in US Nagar District.

## Investment credit in agriculture

Capital formation in hills is very low. Area specific scheme would go a extended way to enlarge Bank finances for asset in agriculture. Further, as affirmed earlier, marginal and small land holders comprise 91% of land holdings which is deterrent for investment. State govt take initiative in have tie-up with corporate

who may support aggregation move toward as well as promote POs using CSR interference. State govt may consider promote POs produce milk, vegetables ,spices etc.

Govt may also make plan in formation of micro infrastructure which may comprise input supply, storage, marketing infrastructure, grading, processing, etc. Issues for discussion other farm inputs stores , Seed Production Programme, rise of Seed stores, farmer training centers, plant protection programme , consolidation of land holdings ,transfer of technology, etc. require focused attention . May be established for flow of quality planting material of remedial and aromatic plants. Establishing fruit preservation centers & agro-processing facilities close to the points of production in backward areas and developing cold chain facilities will help in falling post-harvest losses as also in maintaining quality and freshness of the fruits. Shared cold chains may be set up on public private partnership model. Some initiatives taken by the state government like setting up of gravitational ropeways to Provide road head access to high value and perishable fruits like apple and pear need to be taken at a larger scale. Organic farming may be popularized for crops like ginger, chilly, litchi etc.

Government may consider setting up aromatic and medicinal plants clusters in both Garhwal And Kumaun regions. As of now, banks are not providing finance for maintenance of Horticulture crops. Scales of Finance may also be fixed by DLTC for maintenance Other recommended PSLs

## Objective

1. To identify the challenges and difficulties experienced by the bank and the borrowers in the implementation of the PSL schemes
2. To critically evaluate and analyze the agriculture sector in kumaun region in terms of loaning by commercial banks
3. To examine the performance in terms of banks the target of PSL.
4. To review the performance of District credit plans in the implementation of PSL schemes

**Hypothesis 1:** District credit plans significantly do not influence the performance of banks.

## Literature Review

There are many studies regarding the impact of PSL to agriculture. They have concentrated on individual schemes (IRDP, DRI, Service area approach as such).



Also there are plenty of studies on the role of credit in alleviation of poverty (NCAER, 1972), Planning Commission Draft VI Plan, Rao and Aziz (1989), Gunashekar (1985), Krishnarnaraju (1992), Rao, Malya and Kurian (1980). But not many studies are there which throw light on PSL to SSI. A study conducted by Arundati (1991: 168), is a macro level study, which concludes that there is growth in the credit to SSI in absolute values, but in percentage terms this growth is insignificant, and also declining. Some studies have analyzed the impact of government policies on SSI.

The findings of these studies are the following: The standard size of investment on fixed assets, annual turnover and employment were found to be larger in Bangalore District than those in other 3 districts namely, Mysore, Dharwad and Gulbarga (Tiwari, and Others, 1991:198). The units in backward regions have financial constraints and therefore, more liberalisation in the scheme of financial incentives is required.

For, financial incentives have brought up labour-intensive units (Bharathan, D. 1990). Bala's study (1981:302) shows that the smaller the size of the units, the lesser was its strength to borrow from institutional sources. A survey made by the RBI found that this was so in India as a whole.

Studies carry out by Sandesara (1988:649) revealed that, assisted units had higher labour productivity, higher surplus and higher average wage than non-assisted units in a majority of industries. It is estimated PSL sector accounts for nearly four-fifth of the total workers employed in manufacturing. In the above-mentioned studies pre and post loan framework has been made use of.

There are some more studies (Gunashekar (1985); Rosen, George (1988); Krishnarnaraju (1992); NCAER (1972) and others are based on secondary data alone. They do not give us micro picture of the situation Generally, small entrepreneurs accumulate capital funds from their own savings. As the aggregate savings of the individual in the country are very low because of low per capita income. this provides a meager source of funds for investment. But as the majority of the entrepreneurs who come forward to start SSI units are financially poor. and as they have to depend on the unit for their daily needs they are not be in a position to invest more. So they can accumulate only small quantity of capital that too with great hardship. When compared to other sources of finance the cost incur here is the interest income that they would get if the same amount had been kept in fixed deposit or lent to someone else. Apart from this they have to take risk and bear the liquidity cost. The point made by the Society for Social and Economic Studies (1959:25). that " the dearth of capital resulted from a low income level. a small capacity to save and hence a lack of capacity to invest" is quite apt here. After

pooling the money which they have small entrepreneurs turn to their relatives and friends for financial assistance. This source can be generally used for fixed capital purpose because working capital needs will be there throughout the process of production for which they cannot rely on relatives and friends. Also the financial position of their relatives and friends is somewhat the same as those of the entrepreneurs. Even here they have to pay interest at a rate that exists in the unorganized sector of the money market which is higher than that of the bank interest rate. Again lenders may demand the cash back at any time of financial crisis of the business, which make things worse. So the small entrepreneurs cannot consider this as reliable source of credit.

Indigenous bankers or Money Lenders: Long before the formal establishment of the banking industry in India, indigenous bankers were providing credit to business and industry. In the beginning nearly 95 % of credit needs were met by these lenders. Even today they are playing prominent role in the supply of funds. As they do not work under the control of the RBI, they charge a very high IR, which will be a real burden on the poor entrepreneurs (interest rate is almost double that of the bank interest). They lend money against movable and immovable assets. One big advantage is, they are ready to sanctioned credit. On the other side, the borrower has to wait for more than a week or even for months to get bank loans. The indigenous bank is not worried about the reason of borrowing as they lend money both for productive and unproductive purposes. Such lending may result in misutilization of funds by the borrowers, which may lead to failure of the business.

Another problem of this source of finance is that, in case of non-repayment of loans, the moneylenders take over the assets against which loan is lent. So the fear of losing the property also on the part of the borrower. This works as a deterrent on attempts to misutilize borrowed funds. Review of available literature on financial sources of SSIs reveals some interesting points about costs and benefits of borrowing. It is said "Informal sector enterprises generally have virtually no access to credit facilities from formal sector institutions and where credit is available from informal sources, interest rates are exorbitant". (Sethuram, 1977a: 345). ILO studies have also highlighted this fact. According to a study conducted by Thippaiah (1993), "It is found that 40.12 percent of the informal sector units borrowed by paying interest of Rs.5 per month on Rs.100 which comes to 60 percent per annum. 13.77 percent of the households paid 120 per cent interest on their loans. These are largely loans borrowed from the informal money markets. 19.78 percent of the households paid interest of Rs.12 to Rs.18 percent per annum, which are the usual lending rates of commercial banks. The rest (15.57 percent) obtained loans from friends and relatives, which are interest

free." Small firms face some problems such as the following while borrowing from banks:

- a) Small firms are not fully aware of the priority loan facilities.
- b) lenders have less knowledge about the affairs of small firms than of large firms . Hence, they do not come forward to credit money to small firms. Small firms are also not in a position to verify their credit worthiness to lenders.
- c) As the transaction cost tends to vary inversely with the size of loan, transaction cost for small loans will be more.
- d) After applying for loans, they have to wait, some times for months to get the money

## Research Methodology

The research envisages visiting the bank's branches at different location handling various PSLs lending schemes .The basic nature of the research shall be descriptive.

The attempt shall be made to recognize the impact of PSL who are concerned with the credit facility of banks .The Research Methodology is proposed as under

### (a) Research design:

A Research Design is methods and procedures for acquiring the information needed to structure or to answer the problems .It is a series of advanced decision that taken together form specific master plan for the conduct of the investigation. As the present study researcher adopted both deductive and inductive approach as there are large bodies of evidence exists on the farmers attitude towards loan. Although evidence exists, the shifting nature of the culture due to globalization and entry of multinational national organization, researcher wanted to test these theories through the collection of empirical data .

Further researcher adopted quantitative data collection approach, where data is collected through Pre-determined instrument (such as validated questionnaire) in order to yield statistical data. The data obtained through quantitative nature could be interpreted and analyzed readily. In addition to quantitative, qualitative data will be collected from different banks. Since, qualitative research techniques are less structured and more intense than questionnaire based interviews. There is longer and more flexible relationship with the respondent so that the resulting data provide the researcher a greater insight and perspectives

**Statistical tools and tests used:** K-Means Cluster Analysis- K-means cluster study is an instrument designed to assign cases to a fixed number of groups whose features are not yet known but are based on a set of specified variables.

$$c \sum_{i=1}^c \sum_{j=1}^{c_i} ||x_i - v_j||^2$$

- Where  $||x_i - v_j||$  is the Euclidean distance between  $x_i$  and  $v_j$  ,
- $c_i$  is the number of data points in  $i$ th cluster
- ' $c$ ' is the number of cluster centers

Algorithmic steps for k-means clustering

**Let  $X = \{x_1, x_2, x_3, \dots, x_n\}$  be the set of data points and  $V = \{v_1, v_2, \dots, v_c\}$  be the set of centers.**

- 1) Randomly select ' $c$ ' cluster centers.
- 2) Calculate the distance between each data point and cluster centers.
- 3) Assign the data point to the cluster center whose distance from the cluster center is minimum of all the cluster centers.
- 4) Recalculate the new cluster center using  $v_i = (\sum_{j=1}^{c_i} x_j) / c_i$  where, ' $c_i$ ' represents the number of data points  $j = 1$  in  $i$ th cluster.
- 5) Recalculate the distance between each data point and new obtained cluster centers. 6) If no data point was reassigned then stop, otherwise repeat from step 3.

- Discriminant Analysis linear equation-  $D = V_1 X_1 + V_2 X_2 + V_3 X_3 + \dots + V_i X_i + a$ .  $V_i$  = the discriminant coefficient or weight for  $i$ th variable
- $X_i$  = respondent's score for the variable  $a$
- $A$  is constant

These  $v$ 's maximize the distance between the means of the criterion (dependent) variable. Standardized discriminate coefficients can also be used like beta weight in regression. Good predictors tend to have large weights. What we want this function to do is maximize the distance between the categories, i.e. come up with an equation that has strong discriminatory power between groups. After using an existing set of data to calculate the discriminate function and classify cases. The number of discriminate functions is one less the number of groups. There is only one function for the basic two group discriminate analysis.

### (b) Sampling

(i) **Population** The study will be carried out in kuamun region around 500 respondents. The data will be collected through questionnaire and interview. A structured questionnaire will be developed to measure farmer decision making pattern in the raising the loan. The questionnaire consists of questions relating



to farmer behavior, their demographic and decision making styles information of respondents and their choice between kinds of banks.

(ii) **The Target area** is kumaun region. The six cities will be judgmental selected to conduct the retailer and consumer based survey. The district are Almora, Bageshwar, Champawat, Nainital, Pithoragarh,

(iii) **Sample design:** Sampling design deals with specification which include the method of selecting the sample by stratified Quota sampling it involves both theoretical and practical consideration as systematic Random sampling was used in this study since it is the best known form of probability sample and selects borrowers without showing bias for any personal characteristics In random sampling about 500 respondents will be selected randomly and 5 commercial banks from each district will also be interviewed.

(c) **Data Collection Method :** This research is based on primary data. The information required for the research is taken from books, journals, past research, news articles and directly from bankers and borrowers of kumaun region. The research is conducted by taking interviews of borrower in order to recognize their current functioning and decision-making capabilities and

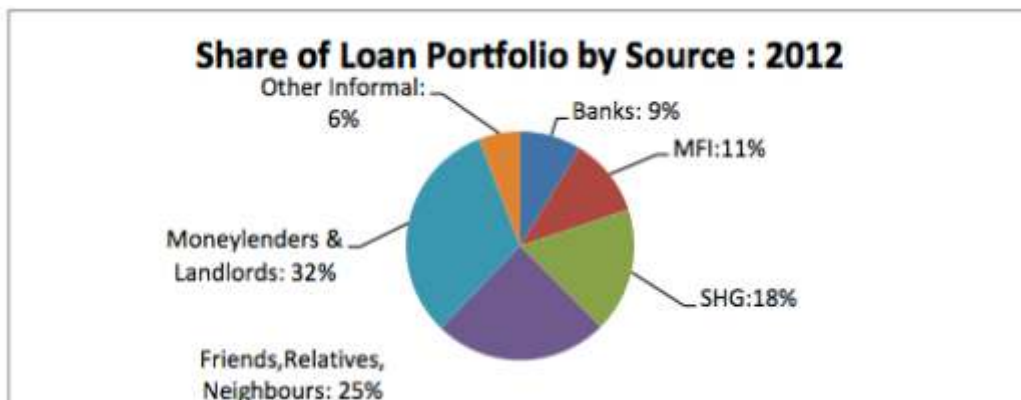
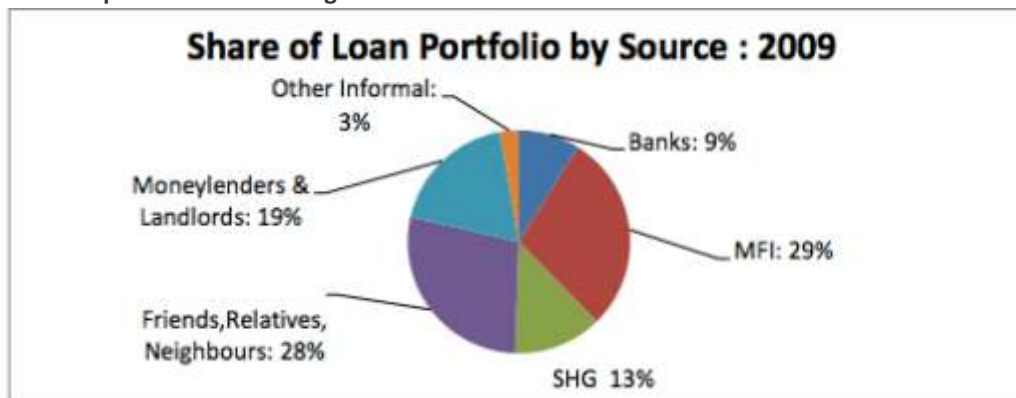
also survey among bankers and borrowers about the impact of PSL schemes.

The primary reason to choose this topic is to examine the impact of advent of agriculture loan and its importance in kumaun region, with the primary focus on the farmer’s behavioral changes and also interview among them. This study can be used by the bankers in evaluating the policies and considerations to be taken care in order to win over in a given complex situation of a city in kumaun region.

Secondary data is information gathered previously on the similar topic by some other researcher. Researcher collected secondary data from academic publications, journals, news papers, government publications, policies, annual reports, and company websites.

(d) **Analysis and Interpretation:** Data in the table shall be compiled, interpreted and analyzed accordingly before their meaning and implication are understood. Various statistical techniques shall be including for testing the hypothesis and drawing the inference and conclusion about the relationship. Computer facilities shall be used wherever needed. Raw data collected will be entered into an excel sheet and exported into statistical analysis software for further analysis. The data was

**Data Interpretation and finding**



analyzed using SPSS software. Descriptive statistic are used to analyze and categorical data and presented in the form mean, standard deviation and percentage, while proportions are analyzed using chi-square test. Factor and regression, ranking will be used.  $P < 0.05$  was considered significant. The data so collected would be compiled, tabulated and analyzed with the help of statistical tools and techniques e.g. Correlation, regression, chi-square test, T-test, Factor analysis, descriptive statistics etc. For extracting more meaningful results SPSS will be used.

The proposed study will be based on mixed methods but will focus more on quantitative research method. Objectivism, positivism and deductive approach are the main characteristic of quantitative research method. Moreover, the main goal is to explain the factors that affect investors' behavior which may be done effectively by using quantitative research as long as the quantitative research is designed to define and describe the variables for making relationship between them.

(Assessing the Impact of uttrakhand Microfinance Crisis on Access to economics of the MFI Clients, CMF Working Paper Series)  
Operationalisation of financial records opened through BCs is

required. For the purpose, focused financial literacy activities to ensure 2-3 transactions per account per month may be undertaken & same may be reviewed in DLRC meetings There is need to intensify SHG movement by promotion of model SHGs in various districts Production Credit Potential for credit flow for Production and marketing credit in the state during 2015-16 has been assess at ₹5112.13 crore. The existing average yield level of important crops is low in hills.

Non-adoption of improved technologies, dependence on rain fed agriculture, less soil fertility, low seed replacement, continuation of traditional system of agriculture, small size of land holdings and low farm mechanization are the major reasons for low crop yield.

### Conclusion

**Commercial Viability:** A commercial venture is profitable only when it is capable enough to tap sizeable market. The enterprise will be commercially viable if it precisely assesses the demand for the product. The demand assessed at the planning stage should be realistic. Many praposal have failed due to lack of proper market survey, which is an important factor to be considered

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Family income(Rs)	9.356E3	3	3615010.960	86	258.816	.000
Additional income(Rs)	2.142E3	3	1164676.796	86	183.980	.000
Additional savings(Rs)	9032554.900	3	78111.783	86	115.636	.000

Table 1 Group variation in terms of income & savings is statistically evidenced from above ANOVA table

	Indicators	Mean	Std. Deviation
0 (Non Entrepreneur)	Family income(Rs)	9353.98	4763.774
	Bank loan(Rs)	1807.23	5538.023
	Education level(standard)	3.10	2.761
	Land(centa)	22.67	28.406
1 (Entrepreneur)	Family income(Rs)	26514.29	6615.988
	Bank loan(Rs)	19571.43	8341.803
	Education level(standard)	18.27	2.699
	Land(centa)	68.43	51.810
Total	Family income(Rs)	9069.22	5918.697
	Bank loan(Rs)	8033.33	7139.776

It is observed from table 7 that economic status, particularly gross income of the family, educational level, asset possession (land) and access to credit are statistically significant ingredients sufficiently discriminating between

Family income(Rs)	.377
Bank loan(Rs)	.473
Education(standard)	.223

The discriminant function is:  $D = 0.377 \text{ Gross income} + 0.473 \text{ Bank loan} + 0.223 \text{ Education} + 0.326 \text{ land}$

Function	Eigen value	% of Variance	Cumulative%	Canonical Correlation
1	.740 <sup>a</sup>	100.0	100.0	.652

**Discriminate Functions:**

Test of Function (s)	Wilks' Lambda	Chi-square	df	Sig.
1	.575	47.617	4	.000

	Function
	1
Bank loan (Rs)	.860
Family income (Rs)	.796
Education (standard)	.625
Land (cotta)	.471

**Structure matrix**

Pooled within groups correlation between discriminating variables and standardized variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

while assessing the demand. The deciding issue for assessing the demand for the product is demand and supply gap and seasonal fluctuations.

**Technical Feasibility:** Technical feasibility deals with whether the desired output can be achieved with the available facilities. Following factors are to be measured for evaluating the technical possibility of the project:

- Plan Layout
- Raw Materials
- Labour
- Power
- Manufacturing
- Location
- Land & building
- Plant & machinery

The entire production flow chart from the state of raw materials to finished product has to be examined in detail.

Location has its own influence on the success of the unit. The proximity to market, availability of raw materials, skilled labour, power, etc., are the vital points for the success of a project. Land and Building: The entrepreneur should be advised to start the activity in a rented building. Many projects have failed because of heavy investment on land and building.

**Raw Materials:** Raw materials play a very important role in the production process. Adequate and regular supply of raw materials at reasonable price has to be ascertained before granting the credit.

**Labour:** SSIs require skilled, semi-skilled and unskilled labourers. Arrangements should be made by the entrepreneur to employ all categories of workers.

**Power:** Without power, production cannot be carried on. The power requirement and the cost of power should be correctly ascertained.

Before considering the loan, it should be checked that the concerned authorities sanction the power.

**Financial Viability:** The monetary viability deals with the total project cost and the means of financing the project.

**Economic Viability:** Operating profit, break-even point, gestation period are to be taken into account to assess the economic viability of the unit.

The entrepreneurs have to survey the market regarding input-output linkages. After examining the viability of the project, one should prepare the project plan giving details regarding all the aspects. The entrepreneur can approach Small Industrial Service

Institute for guidance regarding these matters. SISI provides proper guidance for the entrepreneurs regarding all these factors.

**ASSET Liability Management (ALM):** Availability of credit at right time in adequate amount on appropriate terms has a bearing on production.. As a result of liberalization and deregulation of IR, there is a sort of interest war between competing banks. Hence, today IR are market driven which has resulted in narrowing down of interest spread, (i.e., interest income minus interest expended). Net interest income (spread) of public sector banks as a percentage to assets has shown a decrease of 25 basic points from 3.16 in 1996-97 to 2.91 in 1997-98.

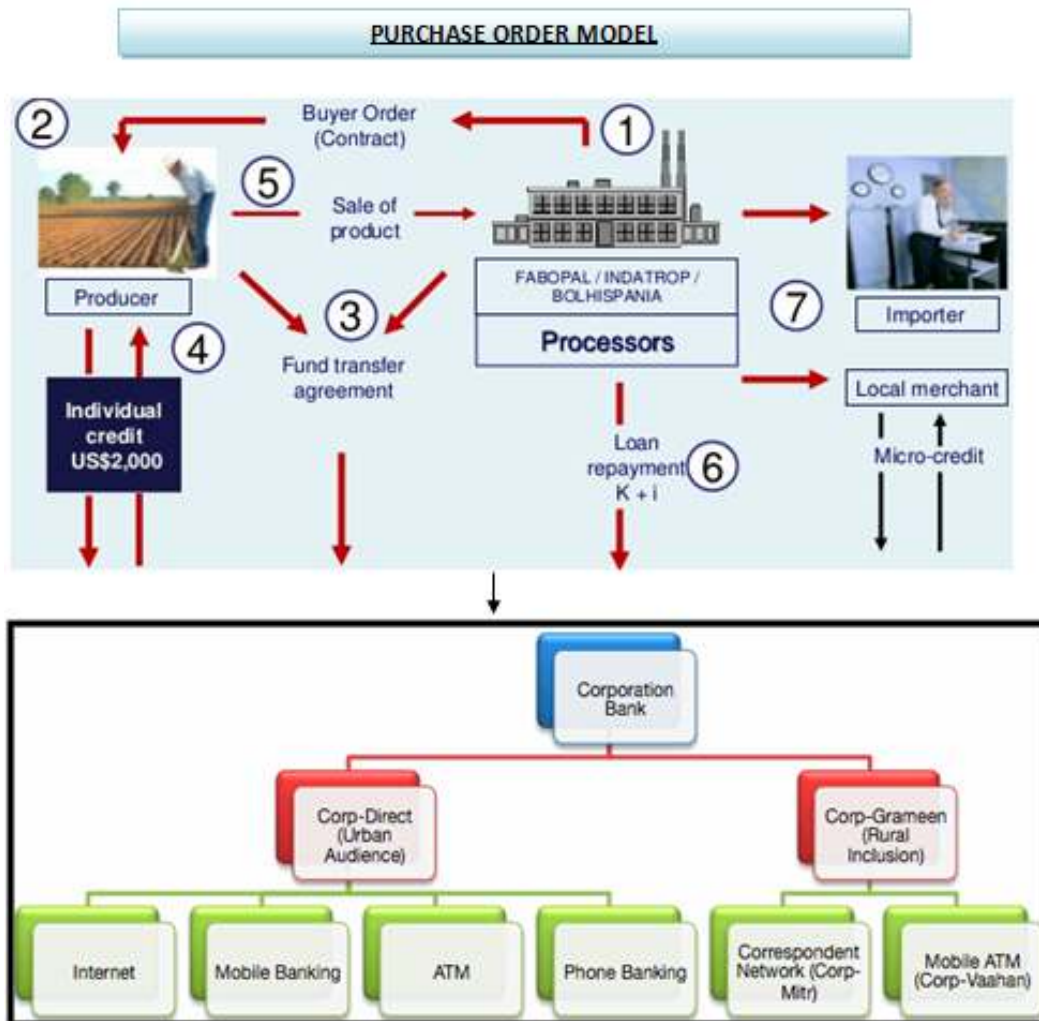
This has led to liquidity crunch and forced the banks to go for costly source of funds, which has a direct bearing on profitability of banks. To avoid liquidity crunch, there should'nt be any mismatch of assets and liabilities. So, this should be dealt scientifically for which commercial banks have to undertake a comprehensive asset-liability management.

Financial organization in the process of providing financial services assume a variety of financial risks viz., credit, foreign exchange, interest rate, and liquidity risks. To a narrow scope this could be eliminated through sound business practices and also through a combination of product design and pricing. Till now banks were concentrating solely on asset-management with liquidity and profitability being regarded as two opposing considerations. So, given certain liquidity levels, banks have to distribute the remaining assets in a way as to get maximum returns.

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