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# **International Research Journal of Management and Commerce**

## **Aims and Scope**

International Research Journal of Management and Commerce (IRJMC) is a double blind peer reviewed, refereed monthly International Journal that provides publication of articles in all areas of business and management and its applications. The journal welcomes publications of high quality papers on theoretical developments and practical applications in business and management. Original research papers, state-of-the-art reviews, and high quality technical notes are invited for publications. The journal focuses on issues related to the development and implementation of new methodologies and technologies, which improve the operational objectives of an organization. The journal welcomes publications of high quality papers on following areas-

Organization Behaviour, Business Studies, Corporate Governance, Management Development, Accounting and Finance, Project Management, Production and operations Management, e-commerce, Mergers & Acquisitions, Takeovers, Entrepreneurship, Strategic Management Policy, Knowledge Management, Business Ethics, Corporate Social Responsibility (CSR), Hotel Management, Environmental Management, Quality Management, Risk Management, Decision Support systems, General Management, Banking, Insurance and emerging trends in allied subjects. Empirical research using primary, secondary or experimental data is also encouraged.

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# A Comparative Study on Customer Satisfaction Towards Amazon and Flipkart Online Purchase in Theni Town

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## ABSTRACT

*Amazon and Flipkart are one of the leading online shopping websites in India. In this paper, an attempt has been made to find customers satisfaction towards amazon and flipkart. A sample of 120 respondents were conveniently selected from Theni town. Online shopping business transactions are conducted directly between a company and customers who are the end-users of its products or services. While most companies that sell their products/ services directly to customers. The research also concludes that even though amazon is giving branded and quality product but customer are very much attracted towards the best services of flipkart.*

**Key Words: Amazon, Flipkart, Online Shopping & Customer Satisfaction.**

## INTRODUCTION

Internet became more powerful and basic tool for every person's need and the way people work. By integrating various online information management tools using internet, various innovative companies have set up systems for taking customer orders, facilitate making of payments, customer service, collection of marketing data, and online feedback respectively. These activities have collectively known as e-commerce or internet commerce. Online shopping made so easy for everyone with their product variations and simple way to buy things. An attempt has been made to critically examine the comparison of customer satisfaction of two big-tailors and those are flip kart and amazon. Both these big players made their own mart in India. A comparative study of customer satisfaction between amazon and flip kart delivers the information about the factors that impacts customer satisfaction to succeed in e-commerce market.

Ever since internet has been introduced to the world, it has made a huge impact on people; business is one of such example where internet has made the difference. In July 1995 amazon.com started selling books online and the response they received was unexcepted as in short time span books sold online in all 50 states of USA and 45 countries. Amazon presently offers music, movies, toys, electronics, and home equipment, there are seven different international websites of amazon with distributed customer service centers in seven countries and over 17000 people work in amazon world wide. Today there are over 100 popular e-commerce websites are providing online services worldwide.

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## **HISTORY OF THE STUDY**

### **AMAZON**

The parent company, amazon was founded by an American technology entrepreneur Bezos in 1994 in the united states, thereafter, it's started its operations in various country in the world such as china, India, japan, French, Singapore, Italy, Germany, UK, Spain, Netherlands, Canada, Mexico, Brazil and Australia Amazon. In was launched in india2013. Amit Agarwal leads and handles Amazon India, he is currently the managing director of the company, amazon India.

### **FLIPKART**

Flip kart was founded in 2007 by Sachin Bansal and Binney Bansal both alumni of the Indian institute of technology Delhi. They had been working for amazon.com previously. The business was formally incorporated as a company in October 2008 as flip kart online services pvt ltd. Flip kart now employs more than 4500 people, and is ranked among the top 10 Indian websites. Flip kart's offering of products on cash on delivery is considered to be one of the main reasons behind its success. Flip kart also allows other payments methods- credits or debit card transactions, net banking, e-gift voucher and card swipe on delivery.

## **SCOPE OF THE STUDY**

This study covers the ' A Comparative study customer satisfaction towards amazon and flip kart online purchase in Theni down Tamilnadu'.

## **OBJECTIVES OF THE STUDY**

- To understand and estimate the consumer perception and factors affecting their behavior for choosing e-commerce sites.
- To understand the workflow of amazon and flip kart in theni down.
- To compare the customer satisfaction level of amazon and flip kart customers and the aspects online shopping provider which satisfies the customer.
- To investigate the major factors that implies customer satisfaction towards amazon and flip kart.
- To find out new opportunities and to succeed in those procedure.

## **PERCENTAGE ANALYSIS**

Percentage method has been used to analysis the profile of the respondents, the percentage method is used to know the accurate percentage of the collected data, it is easy to graph at through the percentage the framework percentage method is



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Percentage of respondent = Number of respondent \*100

Total number of respondent

## **FINDINGS OF STUDY**

### **1) Age wise distribution:**

According to the age wise distribution out of 120 respondents there is 28% respondent are in the group of between 20-30 years and 20% respondent are in the group of between 31-40 years and 18% respondent are on the age group of below 20 years and 16% respondents are in the group of between the 41-50 years and same as the above 50.

### **2) Gender wise distribution**

In this study out of 120 respondents 48(40%) respondents are male respondent and 72(60%) are female respondent.

### **3) Marital status wise distribution**

In this distribution out of 120 respondents 33% respondents are married and 67% respondents are unmarried.

## **REVIEW OF LITERATURE**

Samadi and ali (2010) compared the perceived risk level between internet and store shopping, and revisit the relationships among past positive experience, perceived risk level, and future purchase intention within the internet shopping environment.

D.K. Gangeshwar (2013), " E-commerce or internet marketing: A business review from Indian context", international journal of u-and e-service, science and technology. Concluded that the e-commerce has a very bright future in India although security, privacy and dependency on technology are some of the drawbacks of e-commerce but still there is a bright future to e-commerce.

## ANALYSIS AND INTERPRETATION

The age wise classification of the respondents are given the following table.

S.NO	AGE	RESPONDENT	PERCENTAGE
1	Below 20 years	40	33
2	21-45 years	55	46
3	Above 45 years	25	20
Total		120	100

That out of 120 respondents taken for the study 55(46%) respondents are in the group of between 21-45 years and 25(20%) respondents are in the group of above 45 years 40(33%) are in the age of group of 20 years.

The Gender wise classification of the respondents are given the following table.

S.NO	GENDER	RESPONDENT	PERCENTAGE
1	Male	48	40
2	Female	72	60
Total		120	100

That out of 120 respondents taken for the study 48(40%) respondents are male respondent and 72(60%) are female respondent.

The marital status classification of the respondents are given the following table.

S.NO	MARITAL STATUS	RESPONDENT	PERCENTAGE
1	Married	40	33
2	Unmarried	80	67
Total		120	100

That out of 120 respondents are taken for the study 40(33%) respondents are married and 80(67%) respondent are unmarried.

## PURCHASE DURING IN ONLINE SHOPPING

S.NO	FACTOR	RESPONDENT	PERCENTAGE
1.	Once in a month	40	33
2.	Once in 2 months	32	27
3.	More frequently	20	70
4.	More often	28	23
Total		120	100

That out of 120 respondents are taken in the study 20 (40%) respondent are purchasing duration are purchasing duration in once in month and 32(27%) respondent are purchasing duration in once in 2 months and 28(23%) respondents are purchasing duration in most often and 20(17%) respondent are most frequently in purchase duration in online shopping.

The Customer preference in online shopping classification of the respondents are given the following table.

SL.NO	FACTORS	RESPONDENTS	PERCENTAGE
1	Amazon	50	42
2	Flip kart	70	58
	Total	120	100

That out of 120 respondents are taken in the study 50(42%) respondent are preferred in amazon and 70(58%) respondent are most preferred in flip kart product.

Satisfaction of the price of the respondent are given the following table.

SL.NO	FACTORS	RESPONDENTS	PERCENTAGE
1	Amazon	40	33
2	Flipkart	80	67
	Total	120	100

That out of 120 respondents are taken in the study 40(33%) respondent are satisfied with the price of amazon and 80(67%) respondent are satisfied with the price of flip kart product.

Problem faced on online shopping of the respondent are given the following table.

SL.NO	FACTORS	RESPONDENTS	PERCENTAGE
1	Amazon	70	58
2	Flipkart	50	42
	Total	120	100

That out of 120 respondents are taken in the study 70(58%) respondent are faced with the problem of amazon product and 50(42%) respondent are faced with the problems of flip kart product.

## CONCLUSION

Online shopping is a new technology that has been created along with the development of the Internet. The study consisted with the aspects in which customers of flip kart and amazon are satisfied and the comparison between the customer satisfactions of both the sites. The innovative thinking of both online shopping sites to reach more and more consumer is appreciable. They increased their network as much as possible with ultimate aim of reaching more and more customers. In this competitive market one has to

be lead and rest will follow. Based upon consumer's survey, flip kart satisfied the customer in terms of website usage, delivery, and order tracking. However, amazon gives tough competition to flipkart which satisfies the customers in the aspect of quality of products. Even though it is an international company it understood Indians very well and made its roots stronger in India. It may take some time to overcome, but definitely both are doing very well in Indian e-commerce market.

Online shopping is playing a vital role among the various peoples for various purposes. The development of online shopping in more offers provided and fast delivery services. Most of the customers were getting the awareness of the online shopping and they were getting a boon from the facilities. While amazon and flipkart product service it will give much more facility and customer get benefit from it. Flipkart product was satisfied the customer and other services.

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# Growth of Mutual Funds Industry In India: A Comparative Analysis of Public Sector and Private Sector

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## ABSTRACT

*The Indian mutual fund industry has come a long way since its inception in 1963. The industry witnessed sufficient growth on all parameters - the number of fund houses, the number of schemes, funds mobilized, assets under management, etc. The uncertainty and volatility in the stock markets is a global phenomenon. The everchanging stock markets across the globe have always fuelled jitters among the investors, particularly the small and medium investors. To protect the interest of the investors" financial innovations always take place in the financial markets. Financial intermediaries play a great role in financial innovation and protection of investors" interest. Mutual Funds have emerged as an important financial intermediary globally, particularly in India where retail investors represent 97.7% of the 4.70 crore investor accounts. Mutual Funds protect the interest of the small investors not only from the downside market risk through the diversification of risks, but also provide the benefits from the upward market returns. It also plays a key role in the inflow of capital to the financial market. The present paper is divided into two parts; the first part studies the evolution of mutual funds in India and second part analyses the growth trend of the mutual funds industry in India.*

**Keywords: Mutual Funds, Assets under Management, House Hold Savings, Risk, Returns, Investors**

## INTRODUCTION

With progressive liberalization of economic policies, there has been a rapid growth of capital market, money market and financial services including merchant banking, leasing and venture capital. Consistent with this evolution of the financial sector, the mutual fund industry has also come to occupy an important place. For all investors, particularly the small investors, mutual funds have provided a better alternative to obtain benefits of expertise-based equity investments to all types of investors. Mutual Fund is a type of an Investment institution which mobilizes savings of individuals and institutions and channelizes these savings in corporate securities to provide investors a steady stream of returns and capital appreciation. Mutual funds are based on the principle of „Trusteeship“ which means working on the behalf of someone else for the benefit of interested party and providing a protection to such party.

## OBJECTIVES OF THE STUDY

- 1: To know the concept and meaning of the Mutual Fund.
- 2: To study the historical evolution of Mutual Fund in India.
- 3: To analyses the growth trend of the mutual funds industry in India.

## **MEANING AND DEFINITION OF MUTUAL FUNDS**

The term "mutual" signifies a mechanism wherein the benefits of investment accrue to all the investors in proportion to their investment. A mutual fund is a financial intermediary which acts as an instrument of investment. It is a financial institution through which the pooled investible funds of investors are invested in a well-diversified portfolio of securities thus spreading and reducing the risk and ensuring a good return (dividend or capital gains or both) to the investors. Small and medium investors who are unable to participate in the capital market, can access the stock market through the medium of mutual funds under the direction of an investment manager.

Investors subscribe to units of a mutual fund just as shareholders subscribe to shares of a company. Each unit of a mutual fund represents a unitholder's proportionate ownership of the fund's portfolio holdings. The investors of mutual funds are known as unit holders. The companies that operate the mutual funds are known as Asset Management Companies (AMCs) or Investment Managers. An AMC may float more than one fund (also called schemes), each with an objective and investment mandate of its own. The terms mutual fund, fund or scheme are often used interchangeably.

According to Frank Reilly, "Mutual funds are financial intermediaries, which bring a wide variety of securities within the reach of the most modest of investors".

According to Quartely Market Guide to Merrill Lynch, "Mutual Fund is an investment company that pools the money of many individuals and invests in a portfolio of stocks, bonds and /or cash equivalents, actively managed by a portfolio manager who buys and sells securities in an attempt to take an advantage of current or expected market conditions".

According to Securities and Exchange Board of India Regulations, 1996 a mutual fund means "a fund established in the form of trust to raise money through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments".

## **GROWTH AND DEVELOPMENT OF MUTUAL FUNDS IN INDIA**

The Mutual funds industry that started its journey in the country in 1963 has turned as one of the important constituents of the financial sector. The industry has witnessed sufficient expansion and standardization in terms of products and services offered, regulatory mechanism, and the proliferation of large number of private sector funds both domestic and foreign. The fact is that the fund market in the country has graduated from offering plain vanilla equity and debt funds, to an array of diverse products such as Gold Funds (GF), Exchange Traded Funds (ETFs), and capital protection oriented funds and

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even the native funds (Fozia, 2013). Truly, the mutual fund industry in the country has come from long-way but the moot question is that whether it has realized its potential fully. In order to answer this question, we would need to critically analyze its growth. For this purpose in the following para's the growth that the mutual funds industry has achieved over a certain period of time has been analyzed in respect of the following parameters:

- Number of funds
- Fund Schemes offered
- Mobilization of Funds
- Assets Under Management
- Household Savings mobilized
- Performance of AMCs in terms of earnings and profitability

### **Different Phases of Growth of Indian Mutual Fund Industry**

The growth of Mutual Funds in India is divided into six different phases depending on the structural changes which have taken place in the mutual fund industry.

#### **Phase 1: Establishment and Growth of UTI (1964- 1987)**

Unit Trust of India (UTI) was established in 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and it continued to operate under the regulatory control of the RBI until the two were delinked in 1978 and the entire control was transferred in the hands of Industrial Development Bank of India (IDBI).

UTI launched its first scheme in 1964 named as Unit Scheme 1964 (US-64) which attracted the largest number of investors in any single investment scheme over the years. The US-64 scheme is unique because it predates all other mutual fund activity in the country. Basically modelled as an income scheme offering regular and stable dividends, it had a strong emphasis on debt rather than equity until about 1979 when the Foreign Exchange Regulation Act (FERA) was diluted, allowing foreign companies to hold a maximum of 40 per cent equity in Indian companies. The UTI's exposure to equity increased substantially after 1979.

US-64 is the oldest scheme of UTI and has been attracting a lot of attention among the financial circles in the past. Investors invest in any savings scheme from the point of view of safety, liquidity and yield. US-64 has provided to be 100% safe, quite liquid and has offered a satisfactory yield. It has offered dividend every year which was ever lowered till 1995. Investors interest in US-64 has grown and sustained since it was launched. By 1964-65 outstanding unit capital was 18.73 crore, in 1970-71 outstanding unit capital



had reached Rs.92,25 crores and by 1980-81 it had reached 389.78 crores. Outstanding amendments took place in SEBI Regulations.



### **Phase 2: Entry of Public Sector Funds (1987-1993)**

In 1987, Government of India permitted the Commercial Banks in the public sector to form subsidiaries that would perform the functions of mutual funds through the amendment of Banking Regulation Act, 1949 which earmarked as an end of an era of UTI as the sole participant in the mutual fund sector. A number of Commercial Banks in the public sector, such as State Bank of India, Canara Bank, Punjab National Bank, Indian Bank, Bank of India and Bank of Baroda started mutual funds. Government also permitted insurance companies like, Life Insurance Corporation of India and General Insurance Company of India to launch mutual funds to mobilize the savings of the small investors. In October 1989, the first regulatory guidelines were issued by RBI, but they were applicable only to the mutual funds sponsored by banks. Subsequently, the Government of India issued comprehensive guidelines in June 1990 covering all mutual funds. These guidelines emphasized compulsory registration of with the SEBI and an arm's length relationship be maintained between the sponsor and asset management company (AMC). With the entry of public sector funds, there was a tremendous growth in the size of mutual fund industry with net resources mobilized by mutual funds has increased to Rs.13021crore.

### **Phase 3: Emergence of Private Sector Funds (1993-1996)**

Ever since, non-UTI funds came into existence in 1987, the exclusion of private sector was being widely criticised. As such, the mutual fund industry appeared poised for a phenomenal growth. However, at this juncture, the shocking revelation of the 1992 securities scam shook the investor confidence and forced



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SEBI to put all the forthcoming schemes of mutual funds on hold. Unexpectedly, the scam did not dissuade the government from throwing open this industry to the private sector. By December, 1993, thirteen companies in the private sector were permitted to launch mutual funds.

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. In 1993 the first Mutual Fund regulation came into being under which all Mutual Funds, except UTI was to be registered. The Kothari Pioneer (now merged with Franklin Templeton) was the first private sector Mutual Fund registered in July 1993. During the year 1993-94, four others also entered the fray – ICICI Mutual Fund, 20th Century Mutual Fund, Morgan-Stanley Mutual Fund, and Taurus Mutual Fund, launching their schemes.

During the year 1994-95, seven more players entered the market- Apple Mutual Fund, JM Mutual Fund, Shriram Mutual Fund, CRB Mutual Fund, Alliance Mutual Fund, Birla Mutual Fund and H.H. Mutul Fund. In 1995-96, three big players entered the Indian market-Tata Mutual fund, Reliance Capital Mutual Fund Jardine Fleming Mutual Fund.

Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI. The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996.

The net resources mobilized by UTI, Bank Sponsored Mutual Funds, FI (Financial Institutions) Sponsored Mutual Funds and Private Sector Mutual Funds. The mobilisation of resources in the first two years of Phase 3 worked well, though the initial collections by the private sector were slow. In the year 1993-94, out of Rs.11242.5crore, UTI share was Rs.9297crore (83%), public sector mutual funds share was Rs.386crore (3.43%) and private sector mutual funds contributed Rs.1559.5crore (13.87%). During 1994-95, out of Rs.11274.8crore, UTI share was Rs.8611crore (76.3%), public sector mutual funds share was Rs.1342crore (11.9%) and private sector mutual funds contributed Rs.1321.8crore (11.72%).Inspite of entry of private sector mutual funds, UTI remained the dominant player in resources mobilisation.

However, year 1995-96 was a disappointing one for the industry. The total mobilisation by all Mutual Funds, including UTI fell drastically to Rs.-5833 crores.In this year UTI was worstly affected which resources mobilistaion was Rs.-6314 crore. In 1995-96, the total mobilisation registered a negative growth of -48.26 percent over the previous year. The share of public sector fell from Rs.1342crores in the

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previous year to a meagre Rs.348crores. Private sector also presented a poor show by falling from Rs.1321.8 crores in 1994-95 to a dismal low of Rs.133 crores in 1995-96.

#### **Phase 4: Growth and SEBI Regulation (1996-1999)**

The Mutual Fund industry witnessed robust growth and strict regulations from SEBI after 1996. The mobilization of funds and the number of players operating in the industry reached new heights as investors started showing more interest in Mutual Funds. Investors' interests were safe guarded by SEBI and the government offered tax benefit to the investors. In order to encourage them, SEBI (Mutual Funds) Regulations 1996 was introduced by SEBI that set uniform standards. The union budget in 1999 exempted all dividend incomes in the hands of investors from income tax. As part of these measures, SEBI issued standard offer documents and memoranda containing key information. The guidelines issued by RBI for Money Market Funds were incorporated in the SEBI Regulations. Various investor awareness programmers were launched during this phase both by SEBI and Association of Mutual Fund in India (AMFI).

During 1996-97, eight new mutual funds- Templeton Mutual Fund, ITC Classic Threadneedle mutual Fund, Cholamandalam Cazenove Mutual Fund, Sundaram Newton Mutual Fund, First India Mutual Fund, Escorts Mutual Fund, Anagram Wellington Mutual Fund launched their schemes. In the year 1997-88, two new foreign players-DSP Merrill Lynch Mutual Fund and Sun F& C Mutual Fund set up their mutual funds in India. The year 1998-99 also witnessed the entry of two other players- Kotak Mahindra Mutual Fund and Dundee Mutual Fund in Indian mutual fund industry. By the year ended 1999, 37 mutual funds were operating in India.

#### **Phase 5: Emergence of a Large & Uniform Industry (1999-2004)**

This Phase was marked by very rapid growth of the Indian mutual fund industry & the market share of private sector mutual funds increased significantly crossing Rs.1,00,000crore. The tax break offered to mutual funds in 1999 created arbitrage opportunities for a number of institutional players.

During this Phase, there was bifurcation of UTI. In February 2003, following the repeal of the UTI Act 1963, UTI was bifurcated into two separate entities. One is the SUUTI (Specified Undertaking of the UTI) with assets under management of Rs.29835 crores as at the end of January 2003, representing broadly the assets of US-64, Assured Return and certain other schemes coming under this. The SUUTI was functioning under an administrator and under the rules framed by the Govt. of India.

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The second is the UTI Mutual Fund Ltd. sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. For the first time UTI Mutual Fund became SEBI complaint. This Phase also witnessed with the recent mergers taking place among different private sector Funds and with many foreign Mutual Funds setting up Funds in India and the like, the mutual fund industry in India can be viewed as entering a new phase of consolidation and growth.

During this Phase eight more mutual fund companies were registered with SEBI to float new schemes. During the year 1999- 00, two large mutual funds-ING Saving Trust Mutual Fund, IL & FS Mutual Fund were registered with SEBI. In the year 2000-01- HDFC Mutual Fund and Standard Chartered Mutual Fund launched their schemes in India. Benchmark Mutual Fund came to India in the year 2001-02 to operate as an Asset Management Company. The year 2002-03 also witnessed the entry of two large foreign mutual fund companies- Deutsche Asset Management, and HSBC Mutual Fund. Principal Mutual Fund set up its Fund in India in the year 2003-04.

#### **Phase 6: Consolidation and Growth (2004 onwards...)**

Today, there are 1475 schemes offered by 31 mutual fund players as of April 30, 2004. However of late, as the consolidation process gained momentum, the industry has seen a slew of mergers & acquisitions. It was Franklin Templeton, which fixed the first salvo in this competition by acquiring Kothari Pioneer Mutual Fund in the year 2004. This has been followed by acquisition of Zurich Mutual Fund by HDFC Mutual Fund, IF&LS Mutual Fund by UTI Mutual Fund & recently First India Mutual Fund by the Sahara group. In between the mega deals, the market did see a number of smaller takeovers. Principal Mutual Fund bought out Sun F&C Mutual Fund's schemes, while Canbank Mutual Fund took care of GIC Mutual Fund and Indbank Mutual Fund sold out to the Tata Mutual Fund.

According to sources, Birla Sun Life AMC acquired Alliance Capital AMC in 2005. With this acquisition, Birla Sun Life Mutual Fund's total AUM will increase to Rs 11,049 crore and will become the fifth largest fund house in India. Currently, UTI Mutual Fund is leading the pack with assets of Rs 20,224 crore, followed by Franklin Templeton (Rs 18495 crore), HDFC Mutual Fund (Rs 15,035 crore) and Prudential ICICI Mutual Fund (Rs 14,854 crore). Birla Sun Mutual Fund is ranked seventh with AUM of Rs 9,098 crore. as on September 30, 2004 Mutual fund industry has been going through a wave of consolidation post October 2008, when mutual funds faced a severe liquidity crisis and the Reserve Bank of India had to step in to provide them a line of credit. The problem did not stop there as several mutual funds' investments in real estate and NBFCs' (non-banking finance companies') papers went wrong. Religare acquired Lotus Mutual Fund in November 2008 after the latter went into trouble due to its huge exposure to fixed maturity plans (FMPs). ABN Amro Mutual Fund was changed to Fortis

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Mutual Fund in November 2008 after Fortis acquired the investment management business of ABN Amro in a global deal.

Infrastructure Development Finance Corporation (IDFC) acquire Standard Chartered Mutual Fund for \$205 mn. On the date of merger Standard Chartered Mutual Fund has around eight equity funds--the Stan Chart Classic (a multi-cap fund), Stan Chart Premier Fund (a mid & small cap fund), Stan Chart Imperial (large cap fund), Stan Chart Enterprise Fund(that largely invests in IPOs and in the Nifty when there are no IPOs), the ELSS fund( a close ended fund), the Stan Chart SME fund and two arbitrage funds( one open ended and the other close ended).

The mutual fund industry was set for a major shake-up with mergers and acquisitions (M & As) gathering momentum when in September 2009, L&T Finance acquired DBS Cholamandalam for Rs 45 crore. All regulatory approvals have been taken from authorities (December 23, 2009 from SEBI), and now DBS Chola Mutual Fund will be renamed as L&T Mutual Fund, while DBS Cholamandalam Asset Management Ltd (DCAM) will be renamed as L&T Investment Management Ltd, while DBS Cholamandalaam Trustees Ltd. will be renamed as L&T Mutual Fund Trustee Ltd.

On May 27, 2009 Sundaram BNP Paribas has acquired all the operations of Fortis which include asset management, private banking, merchant banking and consumer finance outside the Netherlands. This, in effect, means that Fortis Mutual Fund will be a part of Sundaram BNP Paribas Mutual Fund. However, under Indian regulations, a mutual fund cannot have two licences. This made the merger mandatory.

Fidelity MF and L&T MF has announced the merger of few of its schemes subsequent to L&T Mutual Funds acquisition of Fidelity AMC. Effective November 16, 2012, Fidelity Flexi Gilt Fund will merge with L&T Gilt Fund, Fidelity Wealth Builder Fund - Plan A with L&T Monthly Income Plan, Fidelity Wealth Builder Fund - Plan B and Fidelity Wealth Builder Fund Plan C with L&T MIP - Wealth Builder Fund Furthermore, certain schemes of L&T Mutual Fund will also be merged with schemes of Fidelity Mutual Fund. L&T Contra Fund and Fidelity India Value Fund will merge to form a new scheme named 'L&T India Value Fund'. L&T Hedged Equity Fund, L&T Opportunities Fund and L&T Growth Fund will merger with Fidelity India Growth Fund to form a new scheme named 'L&T India Large Cap Fund' Both the AMCs have provided investors with an option to exit without paying any exit load between October 15,2012 to November 15,2012.

SBI Mutual Fund acquired Daiwa AMC on November 16, 2013. Following the acquisition of Daiwa AMC by SBI Mutual Fund, SBI MF has renamed the acquired schemes. Daiwa Industrial Leaders Fund,

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a large cap scheme has been renamed to SBI Small & Midcap Fund and will be a part of the mid and small cap category of funds. Daiwa Treasury advantage Fund would now be recognised as SBI Treasury Advantage Fund. Daiwa Government securities Fund- Short Term Plan would be called SBI Benchmark G Sec Fund. Daiwa Liquid Fund has been merged into SBI Magnum Instacash Fund- Liquid Floater Plan.

HDFC Mutual Fund acquired Morgan Stanley Mutual Fund schemes on May 22, 2014. HDFC MF merged the four schemes offered by Morgan Stanley MF with itself, while it would change the name of another four schemes. The changes were announced pursuant to the acquisition of Morgan Stanley MF schemes and to avoid similar products being offered to the investors. Besides, HDFC MF had given an exit option to the unit holders of Morgan Stanley MF. "An exit option from May 22, 2014 to June 20, 2014 has been provided to the unit holders who are not agreeable to the transaction/changes to the schemes wherein they may submit redemption request to MSMF (Morgan Stanley MF) to exit the scheme without any exit load. The Board of ING Investment Management India, ING Trustee, Birla AMC and Birla Trustee have approved the merger and the market regulator SEBI has also given its nod to the proposed deal on September 6, 2014. Birla Sun Life MF, part of Aditya Birla Financial Services Group firm, will merge all the 26 schemes offered by ING MF with its own funds, according to a public notice. Besides, Birla Sun Life MF has given an exit option to the unit holders of ING MF. "The option to exit the schemes without any exit load can be exercised from September 8 and is valid up to October 9. The option to exit is available to all unit holders except for unit holders who have pledged their units.

On November 20, 2014, Kotak Mahindra Mutual Fund's acquired the schemes run by Pine Bridge Mutual Fund. Under the scheme of combination, Kotak Mutual Fund would acquire control of the schemes of Pine Bridge Mutual Fund by way of change in trusteeship, management and administration. Kotak AMC manages the mutual fund schemes offered by Kotak MF, a trust with Kotak Mahindra Bank Ltd as the sponsor. PBI Asset Management Company is into managing the schemes of PBI Mutual Fund - a trust sponsored by Pine Bridge Investments Japan Co. As per report of the market regulator, "The parties' combined market share in the overall market of mutual funds in India would be 3.67 per cent which is significantly lower than the other large players in the mutual fund industry.

Recently, State Bank of India has initiated a proposal to acquire UTI Mutual Fund and merge it with its asset management arm SBI Mutual Fund. SBI had made the proposal to the department of financial services, which in turn has forwarded it to the department of economic affairs for consideration. Both departments are part of the finance ministry, whose view on the matter is still to be firmed up. The merger plan, if it does pass muster, will create India's biggest mutual fund by assets while giving the country's

biggest bank a majority stake in such an entity as well as a dominant role in the mutual fund business where it today is one of many players.

**Table 1: Net Resources Mobilised by Mutual Funds (Rs. Crore)**

Year	UTI Mutual Fund	Bank Sponsored Mutual Fund	FI Sponsored Mutual Fund	Private Sector Mutual Funds	Total
1	2	3	4	5	(2+3+4+5)
2004-05	-2467	707	-3384	7933	2789
2005-06	3424	5365	2112	41581	52482
2006-07	7327	3032	4226	79477	94063
2007-08	10678	7786	2178	163356	183998
2008-09	-3658	4490	5954	-34018	-27236
2009-10	12499	9855	4871	54928	82153
2010-11	-16636	1304	-16988	-16281	-48601
2011-12	-3179	389	-3098	-39525	-45413
2012-13	4629	6708	2241	65284	78862
2013-14	401	4845	2572	46761	54579
2014-15	-1278	-700	-1035	112390	109377

**Source: RBI, SEBI Handbook on Indian Securities Market**

**Note: 1.Data for 2014-15 are provisional.**

**2. Data for UTI from 2004-05 onwards pertain to UTI Mutual Fund only.**

The analysis of the table shows that resources mobilized by private sector mutual funds was Rs.7933crore in the year 2004-05 rose to Rs.1,63,356crore in the year 2007-08 showing an increase by 20 times. During the same period, UTI mutual fund showed a merely 5 times increase in resource mobilization, i.e, from Rs.-2467crore in the year 2004-05 to Rs. 10678crore in the year 2007- 08.The share of public sector mutual funds have increased by 4.7 times i.e, from Rs.-2677crore in the year 2004-05 to Rs. 9964crore in the year 2007-08.By the year end 2008, the private sector mutual funds contributed 88.78 percent of the total resources mobilized in the Indian mutual fund industry, while the share of UTI mutual fund and public sector mutual funds together constitutes only 11.22percent during the corresponding period.

The year 2008-09 was marked by negative resources mobilization in the industry because of US Sub-Prime Lending crisis. During this period the major financial markets lost more than 30% of their value. Except public sector mutual funds, all private sector mutual funds including lost their market share due this global factor. During this period the private sector mutual funds resources reduced by -79.17 percent compared to the immediate preceding year.



The market again took momentum in the year 2009-10. The total resources mobilized during this period was Rs. 82153 crore gaining wide margin over the previous year. But, the recovery of the market did not last for a long period of time because, a continuing downslide in the banking stocks, largely on concerns about rising bad debts due to a slowdown in economic growth, and apprehensions that the corporate profitability being hit due to increased interest rates and rising input costs added to the market woes during 2010-11. The problems in global economy was seen as a major reason for the downslide in 2011 also, but concerns about domestic economic growth, a perceived notion of policy paralysis and slowdown in corporate sector added to the concerns towards the year-end.

Again, the Indian economy's performance in 2011-12 was marked by slowing growth, high inflation and widening fiscal and current account gaps. The economy grew at its slowest pace in nine years with mining, manufacturing and construction dragging growth down. Weakening of both domestic and external demand contributed to the slowdown. Importantly, in spite of slowing growth, inflation stayed high for larger part of the year. In response, the Reserve Bank persisted with tightening till October 2011 and paused before easing in April 2012. Slowing growth, high inflation and widening twin deficits, along with global flight to safety amidst a deepening euro area crisis put pressures on the financial markets and the exchange rate during the year. Because of the above cited reasons Indian mutual funds industry entered into the negative zone of growth during 2010-11 to 2011-12.

From the year 2012 onwards the market showed a sharp rise in the resources mobilization. The private sector mutual funds completely captured the market under their arms and dominated the Indian mutual funds industry. The share of private sector mutual funds in terms of resources mobilization increased to 102.76 percent in the year 2014-15 from 82 percent in the year 2012-13.

**Table 2: Net Assets under Management of the Indian Mutual Fund Industry**

Year	Net Assets			Total (Rs. Crores)	Year on Year Growth Rate (%)
	UTI MF	Non – UTI Public Sector MF	Private Sector MF		
2003-04	-	34624 (24.8)	104992 (75.2)	139616(100)	
2004-05	-	32113 (21.56)	104992(70.5)	148886(100)	6.64
2005-06	-	50348 (21.71)	181514 (78.29)	231862(100)	35.5
2006-07	35488(11.02)	26525(8.24)	259854(80.74)	321867(100)	38.82
2007-08	48982(9.25)	43301(8.18)	437260(82.57)	529543(100)	64.52
2008-09	48754(9.93)	55543(11.32)	386509(78.75)	490806(100)	-7.32
2009-10	80217(10.73)	93064(12.45)	574057(76.82)	747338(100)	52.27
2010-11	67188(9.59)	67092(9.57)	566529(80.84)	700809(100)	-6.23
2011-12	58922(8.86)	65329(9.83)	540540(81.31)	664791(100)	-5.14
2012-13	69450(8.50)	88715(10.86)	658492(80.64)	816657(100)	22.84
2013-14	74233(8.20)	101454(11.21)	640970(80.59)	905120(100)	10.83
2014-15	92750(7.80)	112633(9.48)	983307(82.72)	1188690(100)	31.33

The table shows the assets under management of UTI Mutual Fund, Non-UTI Public Sector Mutual Funds and Private Sector Mutual Funds. From the following analysis it is found that private sector mutual funds have completely dominated the Indian mutual funds industry the share of private sector mutual funds in the market rose substantially from 75.2 percent in 2003-04 to 82.72percent in 2015, while the share of UTI and non-UTI public sector together constitutes only 17.28percent during the corresponding period. It can be seen that the share of public sector mutual funds have declined to 9.48percent in the year 2015 from 24.8percent in the the year 2004 with a total decline of -15.32percent. It is also observed that the share of public sector mutual funds have started gradual declining from the year 2006-07 onwards. Similarly, due to the bifurcation of UTI, the share of UTI mutual fund have declined to a very low level of 7.80percent in the year 2015 from 11.02percent in the year 2007 with a total decrease of -3.22 percent. But, during the same period the private sector mutual funds have increased by 7.52percent. During this Phase the year on year growth rate of the industry was more fluctuating due to global market turmoil. The year on year growth rate declined to -7.32percent in the year 2008-09 from 64.52percent in the year 2007-08 with a further fall to -5.14 in the year 2011-12. This happened as during this period the Indian economy was moving through a slow growth rate due to both domestic and global effect. The industry started gaining in the year 2015 showing year on year growth rate of 31.33percent.

## **CONCLUSION:**

The Indian mutual fund industry has come a long way since its inception in 1963. The industry has witnessed sufficient growth on all parameters be it; number of fund houses, No. of schemes, funds mobilised, assets under management etc. The fund industry in the beginning consisted of UTI mutual fund only, but today the industry consists of all the three sectors viz. public sector, private sector and foreign fund houses. The fund houses which were just 31 in 1997-98, have grown to 44 funds as on 2013. Similarly the number of schemes in operation have grown from 235 in 1997-98 to 1,131 schemes at a compound growth rate of 14 percent. The major schemes in operation are regular Income Schemes which account for 52 percent of the total schemes, followed by Growth Schemes with 29 percent of the total schemes. ELSS is the only scheme which has recorded negative growth during the period.

The Money Market Mutual Fund (MMMFs) emerged as a major contributor to the funds mobilised and since 2000-01 it continues to dominate the industry in terms of funds mobilised. Contrary the Income Scheme which was initially the major contributor, has gradually lost its ground to the MMMFs. Product wise Indian fund industry is broadly consisted of six product categories viz. Liquid & Money Market, Equity Oriented, Debt Oriented, Balanced, Gilt and Gold ETFs. While looking at AUM composition by investor segment, corporate investments constitute nearly half of the AUMs, followed by high net worth



investors. The retail segment account for just 20 percent of AUMs. As such, it can be inferred that the mutual funds have failed to penetrate deep into the retail segment. Retail investors in the country continue to prefer bank deposits and the real estate sector. The poor participation of the retail segment through mutual funds is reported due to very low levels of awareness in financial literacy, cultural and behavioral factors. The other important factor is the failure of the mutual fund industry to reach out to the nook and corner of the country. The top five cities namely: Mumbai, Delhi, Chennai, Bangalore and Kolkata contribute 74 percent of the total funds mobilised. Therefore, among other things, the need is to increase the penetration ratio.

One of the important goals of the mutual fund industry is to attract and mobilise major portion of the House Hold Savings (HHS) in order to enable the small savers to benefit from the economic growth by facilitating them to park their savings into the assets which yield better risk-adjusted returns. Further, the house hold sector which account for major position of the Gross Domestic Savings have shown least preference for mutual funds, rather these have been found to prefer most deposits, both banking and non-banking.

Though, the mutual fund industry has recorded significant progress on all fronts yet it has not been able to utilize its potential fully. On almost on all parameters it is far behind the developed economics and even most of the emerging economics of the world. The industry is confronted with number of challenges like low penetration ratio, lack of product differentiation, lack of investor awareness and ability to communicate value to customers, lack of interest of retail investors towards mutual funds and evolving nature of the industry. Therefore, if the industry has to utilize its potential fully, it has to address these challenges. To address these challenges the need is to penetrate into the tier II & tier III cities which among other things would require to seek more awareness of the investors through strategic initiatives and investor education drives. Apart from this, the mutual fund industry has to continually deliver superior risk-adjusted returns to the investors. This would require the fund managers on the one hand to exhibit superior stock selectivity and market timing performance consistently and on the other hand to keep the fund costs under check. Delivering superior risk-adjusted returns consistently will automatically create a niche for the mutual funds.

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# Market Movement Analysis With Reference to BSE Sectoral Indices

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## ABSTRACT

*The present study is an attempt to find out the market movement analysis of selected sectoral Indices namely BSE Capital Goods, BSE Consumer Goods, BSE FMCG and BSE Metal Indices listed in Bombay stock Exchange (BSE). To analyse Index movement of Selected Sectoral Indices Listed in Bombay Stock Exchange, Descriptive Analysis, Augmented Dickey Fuller Test (ADF), Phillips Perron Test for Stationarity (PP), Normality test using Kolmogorov- Smirnov and Shapiro - Wilk Test, ARCH and GARCH model during the study period 01st April 2005 to 31st March 2017 of selected Sectoral Indices listed in Bombay Stock Exchanges were used. The findings of the study indicated that there is a change in the price, the investors can easily identify the risk in the market and time.*

**Keywords:** Market Movement, Equity Shares, Indices, ADF, ARCH and GARCH.

## 1. INTRODUCTION

A stock market (also known as an equity market or share market), is a collection of buyers and sellers of stocks. These stocks represent ownership interests in companies. These may include publicly or privately traded securities. Usually, large companies will list their stock on a stock exchange because it makes their shares more liquid (i.e., easy to buy and sell), which investors find irresistible. This liquidity also attracts international investors. In a long position, the owner benefits when the stock or share gains in value. The potential profit is unlimited. So the "long" position is said to be "bullish." When the stock is down, the most that the owner can lose is the amount of money he has originally paid for it. Since it is impossible to lose more, it is said that the owners have "limited liability."

It is an art of trying to determine the future value of the stock market or other financial instrument traded on a stock exchange. The successful stock market prediction will reveal the increase and extra earnings of the share. Generally, the Efficient Market Hypothesis, Fundamental Analysis, Technical Analysis and Internet - based data Sources are used for analyzing the share price movements and prediction of share return.

Stock Exchange makes available stock market indices, which are useful in understanding the level of prices and the trend of the price movements of the market as a whole. Stock markets indices are meant to capture the overall behavior of equity shares. A stock market index is created by selecting a group of stocks that are capable of representing the whole market or a specified sector or segment of the market.

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Bombay Stock Exchange came out with a stock index in 1986, which is known as BSE SENSEX. It is an index composed of 30 stocks representing a sample of large, well established financial sound companies selected from different industry groups. The base year of BSE SENSEX is 1978-1979 and the base value is 100.

## 2. REVIEW OF LITERATURE

The following are the different studies undertaken in the different period to analysis stock market movement, using different tools which were used for Market movement analysis.

Using Typical Price, Bollinger Bands, Relative Strength Index, Moving Average, Bollinger signal, Chaikin Money Flow Indicator, and Stochastic Momentum Index, Senthamari Kannan. K, Sailapathi Sekar. P, Mohamed Sathik .M and Arumugam .P (2010), in the paper entitled "**Financial Stock Market Forecast using Data Mining Techniques**" analyzed future closing stock price, to predict increase or decrease better than the level of significance. The findings indicated that the algorithm was able to predict the increase or decrease in closing price better than chance (50%) with the high level of significance.

Suresh Kumar K. K and Elango N. M (2011), in the paper entitled "**An Efficient Approach to forecast Indian Stock Market Price and their Performance Analysis**" analyzed prediction of future share prices and their performance, using Gaussian Processes, Isotonic regression, Least Mean Square, Linear Regression, Multilayer perceptron, Pace regression , Simple Liner regression and SMO regression. It was found that isotonic regression functions offer the ability to predict the stock prices more accurately than the other existing techniques. Using Back Propagation, Naga Bhushana Rao. A and Eswara Rao. K (2014), in the paper entitled "**Estimize Bull speed using Back Propagation**" used computational data mining methodology to predict seven major market indices, using two learning algorithms Linear Regression and Neural networks standard feed forward back propagation. The findings indicated that Backpropagation was a better predictive model to improve forecast accuracy.

P. K Sahoo and Krishna Charlapally (2015), in the paper entitled "**Stock Price Prediction Using Regression Analysis**" predicted the stock prices, using Auto Regressive model. It was found that predicting the return on investment will help in a great way to financial institutions and stock brokers to predict the future price in uncertain conditions.

Using Support Vector Machines, Random forecast, and K – Nearest neighbor, Seyed Enayatolah Alavi, Hasanali Sinaei and Elham Afsharirad (2015), in the paper entitled "**Predict the trend of stock prices**

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**using Machine Learning Techniques"** analyzed the movement of stock prices Tejarat Bank of Iran using Machine Learning Techniques and Economic Indicators. The findings indicated that the random forecast classifier, support vector machine, and the K nearest neighbors have the best accuracy in categories.

Jaydip Sen and Tamal Datta Chaudhuri (2016), in the article, **"Decomposition of Time Series Data of Stock Markets and its Implications for Prediction – An Application for Indian Auto Sector"** analyzed the structural analysis to forecast and computed their accuracy in prediction of India Auto sector, during the study period 2010 to 2015, using Neural network, Back Propagation network, ARIMA and Bayesian Autoregressive model. It was found that the accuracy of our decomposition results and efficiency of forecasting techniques even in presence of a dominant Random component in the time series.

Using R/S Statistic, LO Statistic, Robinson's Estimate, Soumya Guha et al (2016), in the paper entitled **"Investigating the Efficiency of the Indian Currency market: A Persistence Perspective"** measured long-range persistence and its impact on policy decisions in the Indian Forex market during the period 2000 to 2015. The findings indicated that the long memory in volatility and absolute return series of each currency pair were evidence but the logarithmic return series of each currency pairs indicated proclivity towards random walk. Bhagyashree Nigade, Aishwarya Pawar et al (2017), in the paper entitled **"Stock Trend Prediction Using Regression Analysis – A Data Mining Approach"** analyzed the development and implementation of stock price prediction application using machine learning algorithm and object-oriented approach of software system development, for the period of 1203 days, using regression analysis. The findings indicated that the proposed model uses regression analysis as a data mining techniques and develops a system for exploiting time series data in the financial institution.

In the paper **"An analysis on the Demonetization Effect on Sectorial Indices in India"**, by Veerangna Singh (2017), analyzed the demonetization effect on performance and volatility of the sectorial indices India, using paired T- test, Mann- Whitney U Test /Wilcoxon Rank Test, Shapiro – Wilk Test and Beta coefficient for the period of pre demonetization (7<sup>th</sup> August to 7<sup>th</sup> November 2016) and post demonetization period(8<sup>th</sup> November 2016 to 8<sup>th</sup> February 2018) for a twelve sectoral indices of NSE namely Auto, Bank, Energy, Financial Services, FMCG, IT, Media, Metal, Pharma, Private Bank, PSU Bank, Reality Index and Nifty 50 Index. It was found that all sectoral indices perform significantly different in pre and post demonetization period except the PSU Bank.

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**“ARIMA/ GARCH (1,1) Modeling and Forecasting for a GE Stock Price Using R”**, by Varun Milk (2017), developed an understanding of the time series analysis, modeling and forecasting performance using ARIMA, GARCH (1,1) and R during the study period 2001 to 2014. It is found that ARIMA and GARCH (1,1) model is applied to observe the forecasting values of low and high stock price in (USD) for GE company.

In the paper **"Volatility Behaviour of Indian Stock Market: A Study with Special Reference To Sectoral Indices of BSE"**, by M. Babu & C. Hariharan (2018), investigated the volatility behavior of Indian sectoral indices, using Descriptive statistics, Augmented Dickey Fuller Test and GARCH (1, 1) Model, during the period from January 2012 to December 2016 for a twelve sectoral indices of BSE. It was found that S&P BSE Healthcare and S&P BSE Bankex recorded moderate and high risk, with high return during the study period and investors should watch the market movement before investing their money in stock markets.

### **3. RESEARCH METHODOLOGY**

The present study considered selected sectoral Indices listed in Bombay Stock Exchange of India Ltd to analyze Market movement of Indices using Descriptive Statistics, Augmented Dickey Fuller Test Phillips Perron Test for Stationarity, Normality test using Kolmogorov- Smirnov and Shapiro –Wilk Test, Volatility Test using ARCH and GARCH model during the study period 01<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017 for selected sectoral Indices of BSE namely, BSE Fast Moving Consumer Goods, BSE Capital Goods, BSE Consumer Durables and BSE Metal to identify the market movement of indices listed in Bombay Stock Exchange of India Ltd.

#### **3.01 Research Gap**

The study is different from earlier studies in the way that Sectoral Indices listed in Bombay Stock Exchange of India Ltd namely; BSE Fast Moving Consumer Goods, BSE Capital Goods, BSE Consumer Durables and BSE Metal were taken into consideration for the present study during the period 01<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.

#### **3.02 Statement of the problem**

It is to be noted that the different forms of market movement analysis of Bombay Stock Exchange are used several methods. While analyzing the previous work related to the present study, the following points were noted. M. Babu & C. Hariharan (2018), Varun Milk (2017) Veerangna Singh (2017), Bhagyashree Nigade , Aishwarya Pawar et al (2017), Soumya Guha et al (2016) used various method like Descriptive statistics, Augmented Dickey Fuller Test, ARIMA, GARCH. The results found that model is plied to forecast the values of low, high risk and high return indices of Bombay Stock Exchange.



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The studies found that the market movement analysis of Selected Sectoral indices listed in Bombay Stock Exchange. Taking into account, the above analysis, the present study considered the Market Movement Analysis with reference to BSE Sectoral Indices for analyzing the Market movement using Descriptive statistics, Augmented Dickey Fuller Test, Phillips Perron Test for Stationarity, Autocorrelation, Normality test using Kolmogorov- Smirnov and Shapiro –Wilk Test, ARCH and GARCH model during the study period 01<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017 of BSE Fast Moving Consumer Goods, BSE Capital Goods, BSE Consumer Durables and BSE Metal Generally, a change occurs in the price of the stock only because of certain changes in the economy, industry or company. Information about these changes alters the stock prices immediately and stock moves to a new level, either upwards or downwards, depending on the type of information. Therefore, it becomes necessary to evaluate the market movement of returns from time - to - time.

### **3.03 Need for the Study**

The present study is based on the Market movement analysis of selected sample sectoral indices listed in Bombay Stock Exchange of India Ltd. This study will help the investors to assess how the current prices of stock already fully reflect all the information that is contained in the historical sequence of prices. Generally, the Efficient Market Hypothesis, Fundamental Analysis, Technical Analysis and Internet-based data sources are used for analyzing the share price movements and prediction of share return.

Investors in stock exchange need to maximize their profit by buying and selling of securities at an appropriate time. Stock market index nonlinear pattern, so predicting the future prices of the shares is highly difficult.

Forecasting of stock market index gains more attention as the Key factors of investors in the stock market mainly is profitability, if the direction of the stock price is successfully predicted the investors can yield enough profit out of stock market using various stock prediction model.

### **3.04 Objectives of the study**

1. To analyze the normality and stationarity of the daily returns of selected sectoral Indices listed in Bombay Stock Exchange of India ltd.
2. To test the Volatility of the returns of selected sectoral Indices listed in Bombay Stock Exchange of India Ltd.
3. To summarize the findings and suggestions of the study.

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### 3.05 Null Hypothesis of the study

**H01:** There is no normality in the daily index returns of selected Sectoral Indices listed in Bombay Stock Exchange of India Ltd (BSE).

**H02:** There is no stationarity in the daily returns of selected Sectoral Indices listed in Bombay Stock Exchange of India Ltd (BSE)

**H03:** There is no significant Volatility in the selected sample returns.

### 3.06 Methodology of the Study

#### a) Sample Selection

As on 27<sup>th</sup> Oct 2017, totally 4 major indices listed in Bombay Stock Exchange of India Ltd, was taken as a sample for the study based on the following conditions:

- ✓ The data availability of the selected sample from 1st April 2005 to 31st March 2017.
- ✓ The data availability of the selected sample with the Open, High, Low and Close price of the daily share returns of the study period.
- ✓ The selected sample returns only from sectoral Indices listed in Bombay Stock Exchange in India BSE Capital Goods, BSE Consumer Durables, BSE Fast Moving Consumer Goods and BSE Metal (for the entire study- specify that is applicable for the selected sectors alone)

#### 3.07 Sources of Data

The data for the present study was collected through secondary data. The daily Index price of selected sectoral Indices listed in Bombay Stock Exchange of India Ltd was taken from the official website BSE ([www.bseindia.com](http://www.bseindia.com) and other relevant data were collected from various Books, Journals, and online sources.

#### 3.08 Period of Study

The present study is an attempt to find the market movement analysis of selected Sectoral Indices listed in Bombay Stock Exchange of India Ltd during the study period of 12 years from 1st April 2005 to 31st March 2017.



### 3.09 Tools used for Analysis

The following statistical tools were used for the analysis of the returns and stock prediction for the selected sample during the study period from 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.

**Table 3.1 Tools used for Analysis**

S.No	Statistical Tools	Meaning
1	Return	To convert the daily closing price of the selected Indices into logarithmic returns
2	Mean	It used to measure for representing the entire data by one value called an average.
3	Standard Deviation	It is a measure of how much "Spread" or "variability" is present in the sample.
4	Skewness	When a distribution is not symmetrical it is called a skewed distribution. It is said to be positive (Mean < Mode) or negative Distribution (mode < mean).
5	Kurtosis	It refers to the degree of flatness or peakedness in the region about the mode of frequency curve.
6	Normality Test (Kolmogorov-Smirnov and Shapiro -Wilk)	A normality test is used to determine whether sample data has been drawn from a normally distributed population (within some tolerance).
7	Stationarity test (using ADF and PP)	If trend persists, prediction is not possible, data convert trend data to stationarity data. In simple trend data convert into times series data.
8	Volatility Test	Volatility refers to the amount of uncertainty or risk about the size of changes in a security's value. A higher volatility means that a security's value can potentially be spread out over a larger range of values. A lower volatility means that a security's value does not fluctuate dramatically, but changes in value at a steady pace over a period of time.

### 3.10 Limitations of the Study

1. The data for the present study was based only on Secondary source and as such, all the limitations of a secondary source of data applies to the study also.
2. The duration of the study period is restricted to twelve years from 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.
3. While Calculating Descriptive, Normality, Stationarity, and Volatility only Closing Stock Returns of a selected sample are considered.

**Table 4.1 Results of Summary Statistics of Sample Indices during the Study period**

Measures	Bombay Stock Exchange			
	BSE Capital Goods	BSE Consumer Goods	BSE FMCG	BSE Metal
Mean	-0.999	-0.998	-0.998	-0.999
Maximum	0.000	0.000	0.000	0.000
Minimum	-1.096	-1.116	-1.082	-1.142
Standard Deviation	0.026	0.025	0.022	0.028
Skewness	18.67	19.27	29.23	14.22
Kurtosis	711.23	752.35	1300.17	505.55

**Source: Data collected from [www.bseindia.com](http://www.bseindia.com) and computed using E-views.**

**Table 4.1** shows the results of Descriptive statistics of BSE Capital Goods, Consumer Goods, FMCG and BSE Metal during the study period 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017. The Minimum and Maximum values of selected sample ranged between – 1.142 (BSE Metal) to 0.0000 (All the Selected Sectors). The average returns of selected sample were -0.999 which indicates that the investors of selected sectoral Indices earned negative returns during the study period. It is to be noted that the standard deviation value BSE FMCG (0.022), BSE Consumer Goods (.025), BSE Capital Goods (.026) and BSE Metal (0.028) respectively, which indicates a low volatility. With respect to the data distribution, a positive skewness with a value of least 14.22 (BSE Metal) and Highest BSE FMCG (29.23) was recorded. The Kurtosis which measures, the peakedness of the data distribution was found to be greater than three i.e 1300.17 (BSE FMCG) which indicated Leptokurtic distribution.

**Table 4.2 Summary Results of Normality Test using Kolmogorov- Smirnov and Shapiro – Wilk Statistic of Sample Indices during the study period 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.**

Particulars	Tests of Normality					
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
S&P BSE Capital Goods	0.133	2979	<0.001	0.550	2979	<0.001
S&P BSE Consumer Goods	0.138	2979	<0.001	0.533	2979	<0.001
S&P BSE FMCG	0.166	2979	<0.001	0.392	2979	<0.001
S&P BSE METAL	0.113	2979	<0.001	0.625	2979	<0.001

**Source: Data Collected from [www.bseindia.com](http://www.bseindia.com) and Computed Using SPSS.**

The results of normality analysis using Kolmogorov-Smirnov and Shapiro-Wilk Test Statistic for S&P BSE Capital Goods, Consumer during the study period 01<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017 are presented in **Table 4.2**. It is to be noted that the Kolmogorov-Smirnov Statistic was found to be 0.133, 0.138, 0.166 and 0.113 respectively for the selected sectors and Shapiro-Wilk Statistic was 0.550, 0.533, 0.392, and 0.625 for BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal during the study period. With respect to the „p“ value, both statistic recorded statistically significant „p“ value at 5% level. Hence the H01.1: "**There is no normality in the daily index returns of selected sample**" is rejected. Therefore it becomes evident that the selected sectoral Indices listed in BSE witnessed normality of data distribution during the study period.

**Table 4.3 Summary Results of Stationarity test using Augmented Dickey Fuller Statistic and Phillips-Perron Statistic of Sample Indices during the study period 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.**

Stationarity test						
Particulars	ADF	PP	1% Level	5% Level	10% Level	Sig.
S&P BSE Capital Goods	-33.799	-33.712	-3.43236	-2.86231	-2.56723	<0.001
S&P BSE Consumer Goods	-34.661	-35.855	-3.43236	-2.86231	-2.56723	<0.001
S&P BSE FMCG	-30.991	-30.643	-3.43236	-2.86231	-2.56723	<0.001
S&P BSE METAL	-37.229	-37.528	-3.43236	-2.86231	-2.56723	<0.001
*MacKinnon (1996) one-sided p-values.						

**Source: Data collected from www.bseindia.com and Computed using E-views**

**Table 4.3** shows the results of Stationarity test using Augmented Dickey Fuller (ADF) and Phillips – Perron (PP) statistics for S&P BSE Capital Goods, BSE Consumer Goods, BSE FMCG and BSE Metal during the study period 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017. The Augmented Dickey Filler S&P BSE Capital Goods (33.799), BSE Consumer Goods (34.661), BSE FMCG (30.991) and BSE Metal (37.229) and Phillips Perron S&P BSE Capital Goods (33.712), BSE Consumer Goods (35.855), BSE FMCG(30.643) and BSE Metal (37.528) (Ignoring the Sign) was greater than Test critical values at 1% level (-3.43236), 5% level (-2.86231) and 10% level (-2.56723) for selected returns of S&P BSE Capital Goods, BSE Consumer Goods, BSE FMCG and BSE Metal at level range. Further, the Prob Value was less than 0.05 for the selected sample return of S&P BSE Capital Goods, BSE Consumer Goods, BSE FMCG and BSE Metal (0.000). Hence the **H02: "There is no stationarity in the daily shares price return of Selected Indices"** is rejected. Therefore the S&P BSE Capital Goods, BSE Consumer Goods, BSE FMCG and BSE Metal confirmed stationarity at level difference.

**Table 4.3 Volatility Analysis using GARCH (1,1) Model for Sample Indices 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017.**

Tests of Volatility									
Particulars	Mean Equation				Variance Equation				
	Var	Coefficient	Std. Error	Z - Statis	Variable	Coefficient	Std. Error	z-Stati	Prob.
BSE Capital Goods	C	-0.998	0.0004	-2442.8	C	1.27E-06	7.24E-08	17.600	00.001
					ARCH(1)	-0.001022	8.17E-05	-12.509	
					GARCH(1)	0.998964	6.92E-05	14440.1	
BSE Consumer Goods	C	-0.998	0.0004	-2441.1	C	2.02E-06	1.02E-07	19.795	00.001
					ARCH(1)	-0.0015	0.00012	-12.390	
					GARCH(1)	0.9978	0.000	9059.0	
BSE FMCG	C	-0.998	0.0002	-4037.7	C	2.98E-07	4.29E-08	6.940	00.001
					ARCH(1)	-0.0008	0.000139	-6.194	
					GARCH(1)	1.0002	5.87E-05	17045.0	
BSE Metal	C	-0.999	0.0007	-1322.7	C	0.000143	4.36E-05	3.2874	0.001
					ARCH(1)	0.04306	0.012615	3.4134	
					GARCH(1)	0.801382	0.059659	13.432	

Source: Data Collected from [www.bseindia.com](http://www.bseindia.com) computed using Eviews.

Table 4.5 presents the results of the mean and variance Equation of GARCH model for BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal daily returns from 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017. It is to be noted that „C“ represent constant. The findings indicates that the mean equation coefficient was negative (-0.999) and significant at 5% level for BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal. The variance equation coefficient of ARCH (1) and GARCH (1) of BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal returns were close to one (0.999). The coefficient of GARCH is closer to one and ARCH (1) parameter was less than Zero. It is found from the above analysis that the volatility was highly persistent. Hence the H03: "There is no significant Volatility in the selected sample return", is rejected.

#### 4. FINDINGS, SUGGESTIONS AND CONCLUSION.

##### 5.1 Major Findings of the Study

From the above study it is to be noted that all the selected sectoral indices of BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal in Bombay Stock Exchange (BSE) provided negative average returns for the Investors i.e (-0.99). The Standard deviation which measures the variation in the dataset was found to be higher for BSE Capital Goods (0.26) and BSE Metal (0.28) and least value was



found for BSE FMCG (0.22). Skewness was found to be positive for all the selected sample returns of sectoral indices, it was found that BSE FMCG recorded highest skewness of 29.23 and least value was found that for BSE Metal (14.22). The Kurtosis which measures the degree of flatness or peakedness of the data distribution was found to be greater than three for BSE FMCG with a value of 1300.17 Similarly, lowest Kurtosis value was noticed in both BSE Metal 505.25.

From the results of Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test of stationarity, it was found that „P“ valued less than 0.05 for Selected indices listed in Bombay stock exchange of which resulted in stationarity at the level difference. It was also found that ADF and PP statistics (Ignoring Sign) was greater than critical values at 1%, 5% and 10% level for all the selected indices at the level range. Therefore BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal indices confirmed stationarity at the level difference. The result of Kolmogorov – Smirnov, and Shapiro –Wilk test witnessed „P“ value of less than 0.05 for BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal which indicated normality of data distribution. It is noted BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal confirmed normality.

The results of GARCH (1,1) which measures the Volatility ( $\alpha + \beta$ ) was found greater than one of the sample indices revealing the persistence of high volatility during the study period. The volatility of selected BSE Sectoral indices reveals that the daily returns were significant at 5% risk level, both in mean and variance Equation for all the selected BSE sectoral indices was found to be Beta and Alpha value were close to one, For S&P BSE Capital Goods 0.998, BSE Consumer Goods (0.998), BSE FMCG (0.998) and BSE Metal (0.999). The volatility of selected BSE Sectoral indices revealed that the daily returns were significant at 5% risk level, both in mean and variance Equation of BSE Capital Goods, BSE Consumer Goods , BSE FMCG and BSE Metal sectoral indices as the Beta and Alpha value were close to one.

## CONCLUSION

The present study made an attempt to find the stock market movement of selected sectoral indices listed in Bombay Stock Exchange of India Ltd and National Stock Exchange of India during the study period of twelve years from 1<sup>st</sup> April 2005 to 31<sup>st</sup> March 2017. The present study used different statistical tools, namely Descriptive statistics (Mean, Standard Deviation, Skewness, and Kurtosis), Normality Test (Kolmogorov – Smirnov and Shapiro Wilk test), Stationarity Test (Augmented Dickey-Fuller and Phillip-Perron) and Volatility test ARCH and GARCH Model (Autoregressive Conditional Heteroskedasticity Model and Generalized Autoregressive Conditionally Heteroskedasticity Model).

From the above analysis and Findings, the time series was not close to the expected value, when there is a change in the price the investors can easily identify the risk in the market and time. It is concluded that Information flow determines the intensity of returns for Investors.

### Scope for further Study

- ✓ A study, with similar objectives, could be made with reference to other types of Stock Indices.
- ✓ A study with similar objectives could be made with reference to Spot, Futures, and Commodity and Derivatives markets.
- ✓ Artificial Intelligent systems such as Fuzzy Inference system and adaptive Neuro fuzzy inference system can be applied to predict stock market Indices.

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# System of Environmental - Economic Accounting: Need, Objectives and Problems

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## ABSTRACT

*Every business has an intervening accountability to make the fullest possible use of its resources both human and material. An enterprise is a corporate civilian. Like a civilian it is esteemed and judged by its actions in relation to the community of which it is a member as well as by its economic act. As far as Incorporate sector of India is concerned it is sad, but true that it has not been acting as a good civilian that's why there are so many laws that have been made and further amended from time to time as and when required to bound the corporate sector to full their social responsibility for better development of Indian Economy. Accountability towards environment has become one of the most essential areas of social responsibility. Recent years have witnessed rising concern for environmental dreadful conditions, which is taking place mainly in the form of pollution of various types, viz. air, water, sound, soil erosion, deforestation, etc. It is a worldwide happening. It spoils human health, reduces economic productivity and leads to loss of facilities. The developing countries like India are facing the double problem of defending the environment and promoting economic development. A tradeoff between environmental protection and development is required. A cautious assessment of the benefits and costs of environmental damages is essential to find the safe limits of environmental poverty and the required level of development. Environmental accounting wants to work as a tool to gauge the economic efficiency of environmental conservation activities and the environmental efficiency of the business activities of company as a whole. Management rarely tries to make proper arrangement to save the environment unless it is mandatory as per law as there is no direct connection between investment and benefits.*

**Key Words:** *Legal Framework, Environmental Financial Accounting, Environmental National Accounting, Corporate Environmental Accounting, Pollution, Union Ministry of Environment*

## INTRODUCTION

Environmental accounting, widely known as Environmental accounting is a type of accounting that tries to issue environmental costs into the economic results of activities. It has been tinted that gross domestic product (GDP) ignores the environment and hence decision makers require a revised model that incorporates Environmental accounting. Efforts towards environment discretion of Indian companies are multifold. India is one among the pioneer of developing countries to practice more of voluntary Environmental performance reporting. As a vigilant Environmental stakeholder there is answerability on us in handing over a Environmental future for our next generations. Global efforts on Environmental Impact Assessment (EIA) must go beyond measurement of air, water pollution etc. to ultimately enhance improved quality of life in future. Environmental friendly programs and practices like conservation of nonrenewable sources' of energy, Environmentalizing, recovery and rehabilitation, a forestation, top soil management, noise abatement and vibration analysis, general aesthetic beauty etc. has resulted in better competence and enhanced environmental performance.

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Reporting and voluntary environmental accounting has changed the way, how by traditional organizations tend to think on their corporate social responsibility (CSR). Compulsory reporting, how so ever severe, is nothing but a minimum prescribed reporting requirement.

Corporate bodies are flourishing for socially responsible reporting. For them compulsory reporting would be just a miniscule form of representing their huge effort towards determining themselves as a socially responsible entity.

## **OBJECTIVES OF ENVIRONMENTAL ACCOUNTING:**

**1. Segregation and Elaboration of all Environment related Flows and Stocks of Traditional Accounts:** The segregation of all flows and stocks of assets related to environment permits the estimation of the total expenditure for the protection of the environment. A further objective of this segregation is to identify that part of the gross domestic product that reflects the costs necessary to compensate for the negative impacts of economic growth, that is, the defensive expenditures.

**2. Linkage of Physical Resource Accounts with Monetary Environmental Accounts:**

Physical resource accounts cover the total stock or reserves of natural resources and changes therein, even if those resources are not affected by the economic system. Thus natural resource accounts provide the physical counterpart of the monetary stock and flow accounts of SEEA.

**3. Assessment of Environmental Costs and Benefits:** The SEEA expands and complements the SNA with regard to costing:

- (a) The use (depletion) of natural resources in production and final demand;
- (b) The changes in environmental quality, resulting from pollution and other impacts of production, consumption and natural events, on the one hand, and environmental protection, on the other.

**4. Accounting for the Maintenance of Tangible Wealth:** The SEEA extends the concept of capital to cover not only human-made but also natural capital. Capital formation is correspondingly changed into a broader concept of capital accumulation allowing for the use or consumption and discovery of environmental assets.

**5. Elaboration and Measurement of Indicators of Environmentally Adjusted Product and Income:** The consideration of the costs of depletion of natural resources and changes in environmental quality permits the calculation of modified macro-economic aggregates, notably an environmentally adjusted net domestic product (EDP).

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## **System of Environmental-Economic Accounting (SEEA)**

The System of Environmental-Economic Accounting (SEEA) is a framework that integrates economic and environmental data to provide a more comprehensive and multipurpose view of the interrelationships between the economy and the environment and the stocks and changes in stocks of environmental assets, as they bring benefits to humanity. It contains the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics and accounts. The SEEA framework follows a similar accounting structure as the System of National Accounts (SNA).

The framework uses concepts, definitions and classifications consistent with the SNA in order to facilitate the integration of environmental and economic statistics. The SEEA is a multi-purpose system that generates a wide range of statistics, accounts and indicators with many different potential analytical applications. It is a flexible system that can be adapted to countries' priorities and policy needs while at the same time providing a common framework, concepts, terms and definitions.

## **Forms of Environmental Accounting**

Forms of environmental accounting are as follows:

**(1.) Environmental Management Accounting (EMA):** Environmental Management Accounting with a particular focus on material and energy flow information and environmental cost information. This type of accounting can be further classified in the following sub-systems:

- (i). Segment Environmental Accounting: This is an internal tool of environmental accounting for selecting an investment action, or a project, related to environmental conservation from among all processes of operations, and to weigh up environmental effects for ascertain period.
- (ii). Eco Balance Environmental Accounting: This is an internal tool of environmental accounting for supporting PDCA for sustainable environmental management activities.
- (iii). Corporate Environmental Accounting: This is a tool for informing the public of significant information compiled in accordance with the Environmental Accounting.

**2. Environmental Financial Accounting (EFA):** Environmental Financial Accounting with a particular focus on reporting environmental liability costs and other relevant environmental costs.

**3. Environmental National Accounting (ENA):** National Level Accounting with a particular focus on natural resources stocks and flows, environmental costs and externality costs etc.

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Environmental Accounting at Corporate Level helps to know whether corporation has been fulfilling its responsibilities towards environment or not.

### **Scope of Environment Accounting**

The scope of Environmental Accounting is very wide. It includes corporate level, national and international level. As far as this paper is concerned the stress is given on the corporate level accounting. The following aspects are included in Environment Accounting:

1. From Internal point of view, investment made by the corporate sector for minimization of losses to environment. It includes investment made into the environment saving equipment/tools. This type of accounting is easy because money measurement is possible.
2. From external point of view, all types of losses indirectly due to business activities. It mainly includes:
  - (i). Dilapidation and destruction like soil erosion, loss of biodiversity, air pollution, voice pollution, water pollution, problem of solid waste, coastal and marine pollution.
  - (ii). Exhaustion of non-renewable natural resources i.e. loss emerged due to over exploitation of nonrenewable natural resources like water, minerals, gas, etc.
  - (iii) Deforestation and carelessness uses of Land.

This type of accounting is not easy. It is so because losses to environment cannot be measured exactly in monetary value. Further, it is very difficult to decide that how much losses were occurred to the environment due to a particular industry. For this purpose, approximate idea can be given or other measurement of losses like quantity of non-renewable natural resources used, how much Square .meter area deforested and total area used for business purpose including employees' residential quarters etc., how much solid waste are produced by the factory, how much wasteful air leave behind through chimney in air and what types of elements are included in a standard quantity of wasteful air, type and degree of noise pollution made by the factory, etc. can be used.

### **Problems of Environmental Accounting:**

The System of Environmental-Economic Accounting (SEEA) method of calculating Environmental NDP is beset with a number of problems discussed below:

1. SEEA does not include comprehensive natural resource accounting because regional natural resource accounts are not reflected in the main accounts of the SEEA.
2. It focuses on the use of natural resource for economic activities and ignores the flows and transformations within the natural resources.

3. The types of data needed for SEEA are not available in the necessary format. Thus lack of data has been one of the main problems in the SEEA.
4. Another problem arises when environmental data are directly connected with data of existing national accounts for the preparation of the SEEA. They require assigning of environmental pollution loads to the appropriate economic activities. However, the costs of preventing pollution can only be determined if the causes of pollution are identifiable.

But the causes of many types of environmental pollution are not clear. If there are several pollution factors which cause environmental damage, the assignment of this damage will be highly arbitrary.

5. Another problem arises when some of the consequences of environmental pollution become visible after a long time. Estimating only the immediate consequences will lead to wrong policy decisions.
6. Unlike the market prices used by the SNA, there is no simple justifiable valuation system for the SEEA. For different aspects of environmental problems, different valuation problems are used such as prevention and restoration costs and contingent evaluations based on surveys. There are mainly theoretical and arbitrary constructions in SEEA.
7. The pricing of all environmental variables in monetary terms in the SEEA has consequences:
  - (i) The accounting system is restricted to those variables which are easily monetized thereby reducing the range of the accounting system,
  - (ii) Monetization of environmental variables and their concentration of only a few aggregates results in a drastic reduction of the SEEA system.

### **It's Superiority over Conventional Accounting System:**

Conventional national income accounting does not fully take into account pollution preventive expenditure. Environmental accounting considers pollution preventive expenditure and also environment impact studies.

Conventional national income accounting does not measure the depletion of natural resources and the degradation of the environment. Environmental accounting considers the costs of depletion of natural resources and changes in environmental quality.

Conventional national income accounting does not fully report different types of resource expenditure:

- (i) Consumption of environmental goods such as exhaustible resources; and
- (ii) Conflicting uses of environmental services such as the atmosphere used by producers as an input into production and by household as a consumption good.

On the other hand, Environmental accounting expands and complements the conventional system of national accounts with regard to costing:

- (a) The use (depletion) of natural resources in production and final demand; and
- (b) The changes in environmental quality, resulting from pollution and other impacts of production, consumption and natural events.

### **Environmental accounting milestones in India**

The National Biodiversity Action Plan 2008 observes that policy implementation in India has been grossly inadequate due to 'non visibility' of environmental deterioration. The Action Plan notably targets, the “valuation of goods and services provided by biodiversity, and use of economic instruments in decision making process.” The Environmental Indian States Trust has been one of the chief institutions advancing the agenda of environmentally adjusted accounts. The Economics of Ecosystem and Biodiversity (TEEB), India Project too had made efforts to publish a number of studies in this regard but have failed to make a substantial impact.

Last year, the ministry of environment, forests and climate change had launched their crucial Environmental Skill Development Programme to combat unemployment and environmental degradation by creating 'Environmental jobs' for the youth and provide training on Environmental GDP implementation. The government is also starting a five-year project to measure the Environmental GDP of Indian states to make climate mitigation and land acquisition decisions easier in terms of compensation policies.

Environmental Accounting is retarded by a variety of methodological barriers, sluggish political will and lack of data. However, this advancement is extremely important in the sustainable development policy framework of a country. It is crucial to revisit the capital assessment agenda, as a part of the corporate social responsibility and R&D functions of big companies to ensure better quality of life intertwined with the environment.

It is important to note that depletion of natural capital is an irreversible process and steps to assess and combat this is urgently needed. The application of natural resource accounting will aid a host of public policies with regard to linear infrastructure development, judicial proceedings in environmental cases, and compensation mechanisms for climate displacements.

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### **Advantages of Environmental Accounting**

- 1) The accounting system helps to detect any leakages spills or any such problems with the operation and process at an early stage, thus reducing the risk of future problem.
- 2) It helps to measure the environmental problem impact of each and every process and operation on the air, water, soil, worker's health and safety and society at large.
- 3) It helps to measure the organization environmental performance.
- 4) It gives an indication of the effectiveness of the environmental management and suggests how it can be improved.
- 5) It provides a database for corrective action and future places it identifies the area where the steps have to be taken to reduce the waste, raw material and energy consumptions.
- 6) The result of the environmental accounting system helps the management to develop its environment strategy for moving toward a Environmental corporate culture.
- 7) Proper environmental accounting system facilitates proper reporting of the results of environment practices followed by the company. It facilitates communicating environmental performance towards stakeholder which goes along way in enhancing the corporate image of the organization.
- 8) Environmental accounting leads substance to verify compliance to local, national and international standards or best available techniques as well as company's own standard as stated in company's environmental policy.

### **Limitations of Environmental Accounting**

1. There is no standard accounting method for Limitations of Environmental Accounting.
2. Comparison between two countries or firms is not possible if method of accounting is different which is quite clear.
3. Input for Environmental Accounting is not easily available as costs and benefits relevant to the environment are not easily measurable.
4. Many businesses and the Government organizations even large and well managed ones don't sufficiently track the use of energy and material or the cost of incompetent materials use, waste management and related issue. Therefore, many organizations, significantly underestimate the cost of underprivileged environment performance to their organization.
5. It mainly considers the cost internal to the concerned institutions and excludes cost to society.
6. Environmental Accounting is a long-term process. Therefore, to draw a conclusion with help of it is not simple and easy.
7. Environmental Accounting cannot work independently. It should be integrated with the financial accounting, which is also not simple and easy.



8. Environmental Accounting must be analyzed along with other aspects of accounting. It is so because costs and benefits related to the environment itself depend upon the results of the financial accounting, tax accounting, cost accounting, management accounting, national accounting, etc.
9. The user of information contained in the Environmental Accounting needs sufficient knowledge of the process of Environmental Accounting as well as rules and regulations prevailing in that country either directly or indirectly related to all environmental aspects.

### **Legal Framework for Environmental Accounting in India**

While industrial licensing has been terminated for all practical purposes, environmental clearance from various Government authorities has now taken the centre stage. With increasing global worry over the protection of the environment, India too has set up a Union Ministry of Environment with the object of coordinating among the various states and the various ministries, the environmental protection and anti-pollution measures. Essential legislation has also been passed. The various laws relevant to environmental protection are as follows:

(i) Directly related to Environment Protection:

- (a). Water (Prevention and Control of Pollution) Act, 1974.
- (b). Water (Prevention and Control of Pollution) Cess Act, 1977.
- (c). The Air (Prevention and Control of Pollution) Act, 1981
- (d). The Forest (Conservation) Act, 1980.
- (e). The Environment (Protection) Act, 1986.

(ii) Indirectly related to Environment Protection:

- (a). Constitutional provision (Article 51A).
- (b). The Factories Act, 1948.
- (c). Hazardous Waste (Management and Handling) Rules, 1989.
- (d). Public Liability Insurance Act, 1991.
- (e). Motor Vehicle Act, 1991.
- (f). Indian Fisheries Act, 1987.
- (g). Merchant of shipping Act, 1958.
- (h). Indian Port Act.
- (i). Indian Penal Code.

(ji). The National Environment Tribunal Act, 1995.

It is to be noted that all new projects need environment clearance. This clearance concerns both the Union Ministry of Environment and Forests and the corresponding State Govt. department of environment. Guidelines have been issued and all such projects are expected to obtain environmental and anti-pollution clearance before they are actually implemented. A Central Pollution Control Board

has also been set up. Wherever cases of violating of standards of water or air pollution have been come into the knowledge, show cause notices have been issued to concerned industrial units and all such units are being kept under constant examination. According to the Annual Report of the Ministry 1997-98, out of 1551 large and medium industries acknowledged in the 17 categories of extremely polluting industries, 1261 have installed the requisite pollution control facilities and 165 units are in the process of installing such facilities. 125 industrial units have been closed down.

During the year 1997-98 approximately 680 complaints regarding various types of pollution i.e. air, water, noise and soil have been received and attended to. The concern of the Ministry to protect the environment in the coastal waters and the coastal belt has led to the burden of a no-construction belt of 300 meters away from the high water tidal limit on the Indian coast line. This has affected the beach hotels and coastal resorts. Apart from the general concern for creation of the environment, the concern for the management of risky substances for the protection of the forest wealth and wild life and for preventing biological dreadful conditions have also brought about some limitations which the existing industrial units and also entrepreneurs wishing to set up new plants and factories should keep in view.

## **CONCLUSION**

Reporting and Environmental accounting is in beginning stage in India and whatsoever presents in the accounts in this regard is more or less conformity of significant rules and regulation in the Act. Actually, unless ordinary people of India are not made conscious towards environmental safety, development of accounting in this regard is complicated.

Business houses have to get ready to make a solid environmental policy, take steps for pollution control, comply with the related rules and regulations, and reveal adequate details of environmental aspects in the annual reports. For sustainable development, a crystal-clear environmental policy as well as proper execution and appropriate accounting procedure is must.

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# Role of Agro-Based Industries in Rural Development in India

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## ABSTRACT

*Indian economy is agro based economy. Most of population of India is dependent on agriculture. Agriculture continues to play a significant role in rural development. Agro based industries which thrive on this major rural economic activity are an important aspect in rural development too. Agro based industry is regarded as the sunrise sector of the Indian economy in view of its large potential for growth and likely socio economic impact on employment and income generation. Present research paper focus on the scenario of agro based industries, importance of agro based industries, problems before agro based industries in India.*

## INTRODUCTION:-

When any under developed country start the process of development; in this stage economy migrate from primary sector to secondary sector. The growth of industrialisation leads economy to the aim of development. Indian economy is agro based economy. So far the process of industrialisation India want abundant of capital and resources, but lack of the situation agro based industries are most essential for agriculture and rural development. Agro based industries facilitate for optimisation of resources used, output management, enhance farmer income, widening of market, addition to national income through value addition and Employment creation.

## OBJECTIVES OF THE STUDY:

1. To study the scenario of agro based industries.
2. To identify the importance of agro based industries in rural development.
3. To study the problems faced by agro based industry.
4. To search remedies agro based industries problems.

## METHODOLOGY:

Present research paper based on secondary data collected from books, government publications, newspapers and relevant literature, journals, internet etc.

## Brief scenario of agro based industries:

Most of agro based businesses are in the nature of food processing units. They have implications on food security and basic needs to human being. So many countries having facing problem of inadequate food and emerged food crises, Indian agro based Industries by tacking their own problems can come up to exploit use potential in domestic as well as foreign markets.

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“Agro based industries are those, which are involved in supplying the firm with agriculture inputs besides handling the products of the farm.”

Occupies a unique position in the Indian economy, because it contributes significantly to industrial production 14%, Employment generation 35 million persons directly, the second largest after agriculture and foreign exchange earnings about 24.6 percent, it contributes for percent of towards GDP. All branches of agro based industry are very important because the increase industrial product provide employment URL for foreign exchange increase income level and also provide employment to women and provide best for development for backward areas An agro industry is an enterprise, which process raw materials, including ground and tree crops as well as livestock. The degree of processing can vary tremendously ranging from the cleaning and grading of Apples to the milling of rice to the cooking, mixing and chemical alteration that create a texturized vegetable food, agro- industry can be roughly categorized according to the degree the raw materials is transformed. In general capital investment, technological complexity, and managerial requirements increases in proportion with the degree of transformation.

#### **Importance of the study:-**

Agro based industries has urgent need for agriculture Industrial and economic development agro based industries are easy to establish and provide income in rural areas with less investment agro based industries are labour intensive and will create more employment opportunities to solve the unemployment problem in the region. These Industries eliminate words stage of agriculture produce to a greater extent and ensure steady and better price to farming community relatively, bulky, perishable typically in edible raw materials are convert into more useful shelf- stable and delicious food or beverage by food processing industries which facilitate to export processing industries with facility to export to domestic as well as global market. These Industries facilitate to pressure perishable agriculture product for long time.

#### **Study of the agro based industrial sector in India:-**

Data from the annual survey of industries shows that 46% of all factories in India are Agro Industrial and they contribute 22% of the manufacturing value added and nearly 43% of manufacture in industry employment. The study shows that 37% of Agro industrial founds produce food and 63% produce non food products the study also shows that 44% of the food related factories are in milling, another 13% are in edible oil, 10% are in sugar and 33% in “other foods” search yes higher value foods with higher income elasticity of demand. The “other foods” category accounts for 49% of total net value added and 43% of employment in agro industry, while only 7% of value added and 20% of employment comes from

❖ grain milling. The study shows that only 18% of total industrial fixed capital in agro industry, compared to Agro Industries 43% share industrial employment. Thus, agro industry continues to be relative labour intensive and capital saving. The labour share of value added is 88% in agro industry versus 35% in Other industries. Agro industry, on average, generates employment for 14 persons for investment of rupees 100,000 versus 3 per Rs. 100,000 for Other industries. Moreover, these figures do not include added employment generated in agriculture and input supply through backward linkages. Finally, agro industry requires less fixed capital and working capital compared to industries. On average agro industry annually generates 51% value-added over fixed capital as compared to only 39% in other industries

**Role of agro based industries:-** Agro base industry has increasing role of the economy in Indian as well as Global context it has great strengths which are providing strong result in order to survive in the competitive business environment. Following points show the importance of agro based economy it

- ❖ Largest producer of tea, accounting for nearly 28% of the Global tea production.
- ❖ Second largest producer of rice, accounting for nearly 22% of the Global Rice production.
- ❖ Largest producer of the world's best basmati rice.
- ❖ Second largest producer of fruits and vegetables.
- ❖ Second largest producer of sugarcane, accounting for nearly 21% of global sugarcane production.
- ❖ Third largest producer of coarse grains including meals accounting for nearly 40% of global coarse grain production .
- ❖ Third largest producer of edible oil seeds accounting for nearly 7% of Global Oil production.
- ❖ Largest livestock population.
- ❖ India produces 6.3 million tonnes of fish.
- ❖ Varied Agro climate zone.
- ❖ Second largest arable land in the world.
- ❖ Largest irrigated land in the world.
- ❖ Largest producer of Wheat accounting for nearly 15% of global production.
- ❖ Largest producer of pulses accounting for nearly 21% of global pulse production.
- ❖ Largest producer of milk.
- ❖ Largest producer and exporter of spices.

### **Problems faced by Agro Industries:-**

- **Lack of infrastructure facility** -In the development process of the any industry infrastructure is the important element which is necessary to be considered consciously in case of the agro based industry infrastructure is not aquadate like Road, Transport, banks, telecommunication etc.

- **Low quality of the raw material** - industry required good quality raw material input to make it quality product but low quality raw material is available in the local market because in some case agricultural output of high quality is exported.
- **Complex export procedure** - the export procedures is very complicated it requires more time than to create problems for this industry it required to completely different types of formalities it requires more time and efforts for them.
- **Political interferences** – In rural agro based Cooperative are under influences of political interferences political leaders interferences the important decision of such organisation in three vested interest it creates hurdle in the growth of agro based industries.
- **Lack of finance** - in the area where no 3 tier banking system is situated here industries are facing problem getting Finance.
- **Lack of professional management** - rural industry may not have professional expertise it is very difficult to utilise full resources of the organisation properly so as to achieve the objective of the company.
- **Traditional approach** - Indian agro based industry are run with the conventional approach life conventional method of production processing planning policies management marketing etc. the outgoing approach increase cost of production of the agro based industry.
- **Lack of modern technology** - use of Technology increases the production capacity of the company with the low cost and time the cost of modern technology is very high which is not affordable to small agro based industry so unavailability of modern technology is become the weakness of the industry.

### **Challenges of agro based industries:-**

The overall performance of industrial sector is not encouraging. The lower growth of agro based industry some reasons are following:-

1. People have no acquired knowledge about the benefit of agro based industries and technological effectiveness. Lack of Information and awareness about opportunities and limitations are major obstacle for growth of rural agro based industries



2. Manpower plays an important role in industrial growth. The inefficiency of Manpower affected in the growth of agro based industries. The main causes of inefficient of labours are illiteracy, awareness and lack of training facilities. The productivity of rural unskilled labour is very low and quality of product is also low.
3. Infrastructural development is one of the biggest indicator for the expansion of industries which is not satisfactory for agro based industries development. The energy, market, transportation and communication sector has not well developed.
4. Credit facility is a major challenge for industrial growth. The financial conditions of people are not satisfactory and commercial banks are not interested in providing finance to this sector. People are not financially sound to establish a new industry.
5. The small scale industries are facing the problem in production due to old and outdated machineries. They are unable to compete with the products of large scale industries. These products are unable to meet the demand of modern people and the production costs of these old machineries are more compared to modern machineries.
6. Agro based industries are facing the problem of efficient marketing. There are lack of organised marketing facilities for this industries. They have to depend on the middle Man and private trader or selling their products. These middlemen are getting more benefits than the producers.
7. Non availability of proper transportation is a major challenge for industrial development. These affect the movement of raw materials and produces from the place of production to market and other parts of the country. Lack of proper transportation facilities increased the cost of production which is contributing to low economic return.
8. Electricity is most important as a source of energy for industrial development. The production of electricity is not sufficient which hamper in the industrial growth. Frequently load shedding is a major problem of industrial development.

### **Remedies for agro based industries:-**

Agro based industries has ample scope of expansion because of abundant raw material and manpower that will helpful for the industrial development its unique geographical and climatic condition has ended this land with wide range of raw material for the food processing industry but the growth of these units are not evenly distributed.

Adaptation following opportunities will bring expansion of agro industries in India.

- Agro based industries can be setup on Cooperative basis ensuring participation of people in the development process the Cooperative method is most important to meet the problem of capital labour raw material its

- The poor economic condition of people badly affected on the industrial expansion government should provide loans to a very low rate of interest for formation of credit to the centre Pune
- Industrial awareness is a program to promote agro based industry which will provide information of profit findings to interfere raw materials agribusiness and education.
- Efficient market system occupies and integral position for overall development of agro based industry. Marketing comprises all activities like supplier of materials in industry and moment of Industrial Products from the industry to the domestic and international market.
- E-marketing will promote non farming producers from various government websites. It gives a platform to showcase the product products which enable the buyer to directly contact the community for business sure e marketing is a marketing with the middle main and Consumers can get the product in National price and producers get better price so promotion of e-marketing will provide opportunities for industrial
- development.
- Infrastructural development is prime for creation of environment for industrialisation and attracts investors in the sector. To achieve the goal government should give urgent priority on the establishment of infrastructural facilities in the form of export processing industrial Park.

Agro based industries plays a vital role in costing the temporal economic development.

Agro Industries provides a means of converting agricultural materials into value added products while generating income and employment in contributing to economic development in both developed and developing countries. Agro based industries facilitate for Optimisation resources used output management in hands farmer income widening of market value addition to National income and Employment generation. Agro based industries broadly include and milk product industry sugar industry food processing Industry and textile industry. The opportunities are lost in the region but we still need a Holistic approach for overall development of the agro based industries. In India abundant raw material and manpower that will helpful for the industrial development through agro based industries.

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