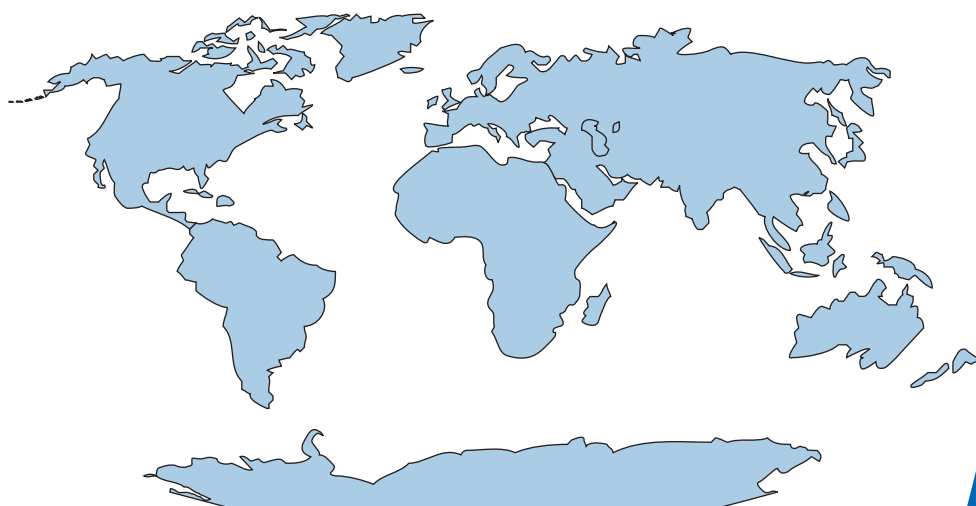


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## A PANORAMIC VIEW ON THE TYPES OF MANAGEMENT INFORMATION SYSTEMS (MIS)

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### ABSTRACT

*'Information' is the critical resource of any organization. Management is always in need of Accurate, Relevant and Timely Information on Customer Preferences, Suppliers Performance, Employees Competency, and latest Technological updates. Right from the days of Electronic Data Processing [EDP] to today's Cloud based E-Commerce Systems and IOT Systems, Enterprises are employing several types of Management Information Systems to facilitate decision making. MIS are a specific category of Information Systems providing structured summarized reports to management. But over a period of time, the term 'MIS' is used to refer to any type of Information Systems that aid decision making. MIS help improve efficiency, enhance communication, expedite problem solving, improve seamless flow of information and help in Management control. There are several types of MIS employed by different levels of Management targeting specific Managerial work. This includes Decision Support Systems, Artificial Intelligence Systems, Data Warehousing Systems, Enterprise-wide Information Systems and so on. Many Systems development companies are offering various types of MIS software packages bundled with several functionalities. Popular Vendors include SAP, Microsoft, IBM, Oracle, Teradata and so on. This being the current business environment, it is highly essential for young management professionals/students to understand and learn the different types of MIS, their capabilities and their intended role in supporting management decision making. This will enable young managers to employ different MIS for different purposes to improve their organization's managerial performance. This paper discusses the evolution of various types of MIS, explains the Conceptual working models of each type of MIS; gives a snapshot on some of the popular vendors offering MIS packages and also provide insights on the current trends in MIS.*

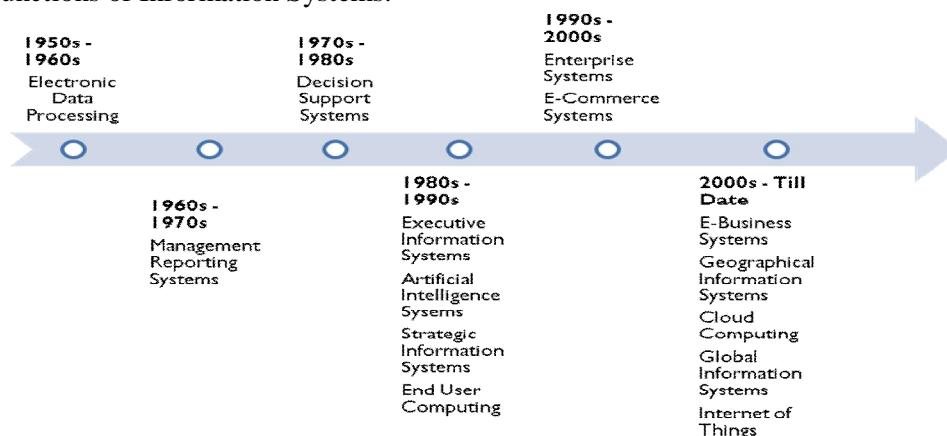
**Keywords:** MIS, EDP, Enterprise Systems

### INTRODUCTION

Decision Making is the essence of Management. According to Peter. F. Drucker, Father of Modern Management, 'What-ever a manager does he does through making decisions [15]'. Managers at all levels take decisions. Information Technology and Information Systems help to improve the quality of decision making and speed up business operations. Over the decades, several types of Information Systems have evolved and Management has started adopting these systems to improve their decision making and operational capabilities. It is highly crucial for budding managers to know the objectives of each MIS and their capabilities. This paper aims at providing detailed information on MIS and is organized into five sections. Section 1 focuses on Evolution of various types of Management Information Systems. Section 2 groups MIS into five Categories. Section 3 gives standard definitions for each type of MIS. Section 4 discusses the Conceptual Working Models of various types of MIS. Section 5 provides insights on some of the popular vendors offering MIS Packages and also documents the current trends in MIS.

### SECTION 1: EVOLUTION OF MIS

The Evolution of Management Information Systems dates back to 1950s when Electronic Data Processing was the primary role of Information Systems [1]. During that period, Transaction processing and record keeping were the only functions of Information Systems.



**Fig-1: Evolution of Management Information Systems**

Source: Management Information Systems, James O'Brien [1]

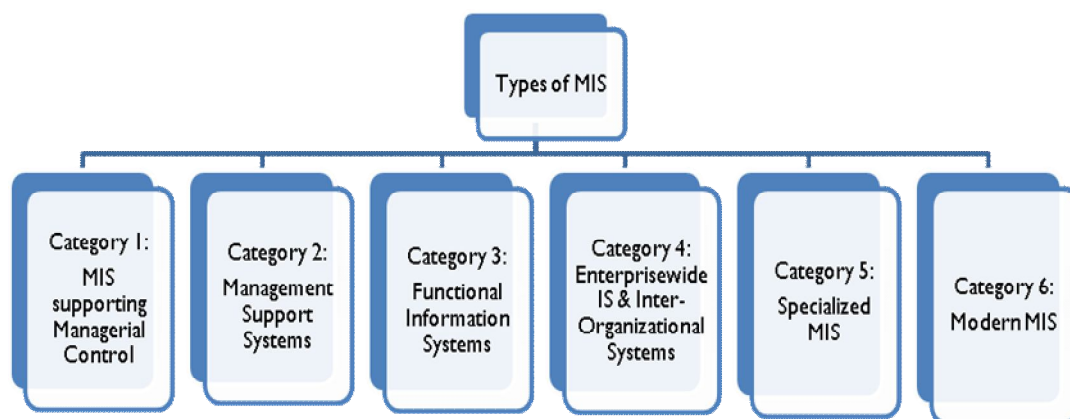
Management Reporting Systems came into existence in 1960s – 70s when it was felt that pre-defined reports on management performance will help in better control. But the regular reports from Management Reporting Systems were not aiding managers to do what-if analysis and were not interactive. This has propelled the emergence of Decision Support Systems in 1970s-80s. DSS were interactive and has the capability to perform various types of analysis.

Executive Information Systems focused to provide critical information of firm's performance to Senior Executives came into operation in 1980s-90s. During this period, Artificial Intelligence Systems that can mimic human intelligence were also introduced. Expert Systems, one of the types of AIS were used extensively in various sectors during those days. With the advent of personal computers, non-technical users also started developing their own applications and this phenomenon was referred to as End-user computing. Information Systems for competitive advantage named Strategic Information Systems also emerged during this period.

Enterprise-wide Information Systems like Enterprise Resource Planning and Inter-organizational Systems like Supply Chain Management Systems, Customer Relationship Management Systems and Internet based E-Commerce Systems emerged in 1990s-2000s. Post 2000's till today, e-business Systems, Cloud Computing and Internet of things are ruling the world of business and have taken Information Systems to the next level.

## SECTION 2: CATEGORIZING MIS

As discussed in Section 1, numerous Information Systems that facilitate and support Decision Making are available right from 1950s-60s. Grouping MIS based on their intended use will help management professionals to understand them better. MIS are categorized into five types as below:



**Fig-2: Categorization of various Types of MIS**

### **Category 1: MIS supporting Managerial Control**

These Systems support low-level, middle and top management in controlling their management functions. Transaction Processing Systems (TPS), Management Information Systems (MIS) and Executive Information Systems (EIS) are positioned in this category of MIS.

### **Category 2: Management Support Systems**

MIS Systems that facilitate management decision making are categorized as Management Support Systems. Decision Support Systems (DSS), Artificial Intelligence Systems (AIS) and Business Intelligence Systems (BIS) are positioned in this category of MIS.

### **Category 3: Functional Information Systems**

MIS Systems that aid in managing specific business function are categorized as Functional Information Systems. Human Resources Information Systems (HRIS), Marketing Information Systems (Mkt IS), Financial Information Systems (Fin IS), Production and Operations Management Information Systems (POM IS) are positioned in this category of MIS.

### **Category 4: Enterprise-wide IS and Inter-organizational Information Systems**

MIS Systems covering the information requirements of entire organization are referred as Enterprise-wide Information Systems (EWIS). Enterprise Resource Planning Systems (ERP) falls in this category of MIS. Information Systems that connect two organizations are referred to as Inter-organizational Systems (IOS). Supply Chain Management (SCM), Customer Relationship Management (CRM) and E-Commerce Systems are positioned in this category of MIS.

### Category 5: Specialized Management Information Systems

Knowledge Management Systems (KMS), Strategic Information Systems (SIS), Office Automation Systems (OAS) and End User Computing are categorized as Specialized MIS in use.

### Category 6: Modern Management Information Systems

With wide adoption of Internet & high penetration of small phones and wireless networks, today e-business systems, Cloud based MIS & Internet of Things are the latest additions to the world of MIS.

## SECTION 3: MIS – DEFINITIONS

Category	Type of MIS	Definition
MIS for Managerial Control	Transaction Processing Systems	Information System used to capture detailed information of day to day business operations and provides detailed transaction reports [2]
	Management Information Systems	Information System that provides periodic reports in summarized format to aid management decision making [1]
	Executive Information Systems	Information System used to provide critical information on Key vital indicators or critical success factors on firm's performance [3]
Management Support Systems	Decision Support Systems	Interactive Information System that assist managers in determining and evaluating alternative courses of action [4]
	Artificial Intelligence Systems	Computers that mimic human Intelligence [14]
	Business Intelligence Systems	Information System that collects, integrates, analyzes and presents historical, current and predicted future business information [16]
Functional Information Systems	Human Resources Information Systems	Information System that is used for data entry, data tracking and information requirements of an organization's Human Resource Management, Payroll and book keeping operations [17]
	Marketing Information Systems	Information System that analyzes and assess the marketing information gathered continuously from sources internal and external to the organization[18]
	Production & Operations Information Systems	Information System that provides information to plan and direct operations of an organization[19]
	Financial and Accounting Information Systems	Information System that accumulates and analyzes financial data used for financial planning and control [20]

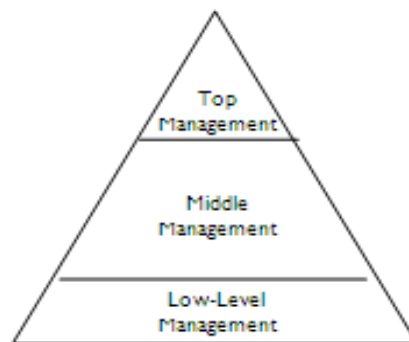
Category	Type of MIS	Definition
Enterprise-wide Information Systems and Inter-Organizational Systems	Enterprise Resource Planning Systems	Integrated Business Management Software build on unified database covering the entire organization's Information requirements [12]
	Supply Chain Management Systems	Cross-Functional Information System that links business processes of the organization and business partners like suppliers, distributors and customers [9]
	Customer Relationship Management Systems	Information System that captures and integrates customer data from all over the organization, consolidate and analyze the data, disseminate the results to various systems in the customer value chain [9]
	E-Commerce Systems	E-Commerce is buying and selling online [21]
Specialized Systems	Office Automation Systems	Information Systems that create, store, modify, display and communicate business correspondence in written, video or verbal format [4]
	Knowledge Management Systems	Knowledge based Information System that support the creation, organization and dissemination of business knowledge to employees and managers throughout the organization [5]
	Strategic Information Systems	Information System that applies Information Technology to firm's products, services or business processes to help it gain a strategic advantage over its competitors [6]

	End User Computing	Creative use of computers by non-IT Professionals to get information to accomplish their tasks successfully [7]
Modern MIS	e-business Systems	e-business systems enable organizations to perform business transactions over the Internet. e-business encompasses e-commerce systems [8]
	Geographical Information Systems	Computer-based tool that analyzes, stores, manipulates and visualizes geographic information, usually in a map [32]
	Cloud based MIS	Firms and Individuals can get computer processing, storage, software and other software services as a pool of virtualized resources over the network, primarily the Internet [8]
	Global Information Systems	An Information System that a multinational organization uses to manage the information requirement of its intended businesses[9]
	Internet of Things	An ecosystem of connected physical objects that are accessible through the internet [22]

#### SECTION 4: CONCEPTUAL WORKING MODELS OF MIS

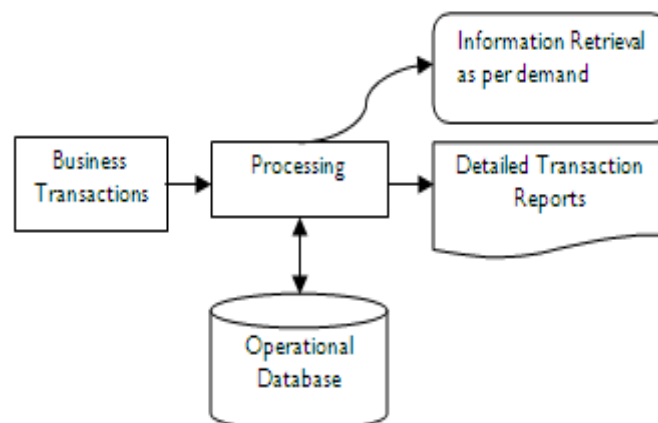
##### CATEGORY 1: MIS FOR MANAGERIAL CONTROL

**Management Pyramid** comprises of three levels of Management. Low-level management focuses on ensuring operational control and is short term focused; Middle Management ensures management control and is medium term focused; Top Management concentrates on strategic control and is long term focused. TPS, MIS and EIS help in performing these management functions and ensure managerial control.



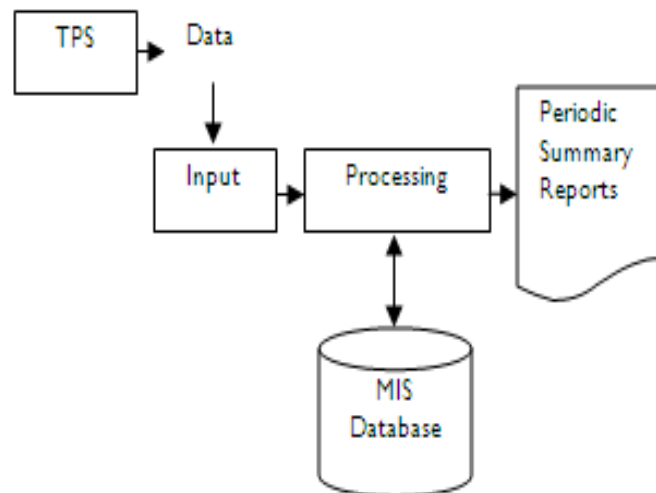
**Fig-3: Levels of Management**  
Source: MIS, Giridhar Joshi [9]

**Transaction Processing Systems (TPS)** takes business transactions data as Input, stores data, processes the transactions and provides detailed reports as Output [9]. It allows retrieving transaction details as per requirement. In general, TPS are standard, highly reliable and customer responsive systems. Failure of TPS may result in severe loss to regular business operations of the firm. Used by Clerks and Supervisors in the organization, TPS captures the grass root level information of firm.



**Fig-4: Transaction Processing Systems (TPS)**  
Source: Principles of IS, Ralph Stair [2]

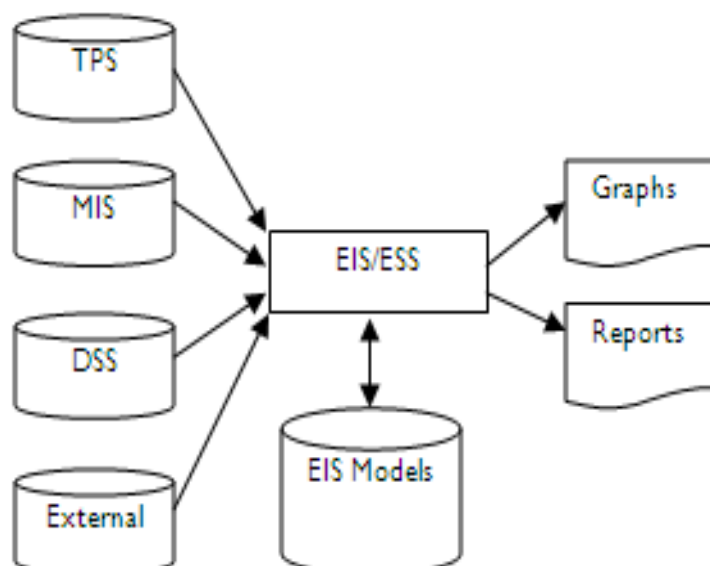
**Management Information Systems (MIS)** provide structured summarized report on regular and recurring basis to facilitate management decision making [3]. Some of the reports generated by MIS include Scheduled Reports, Demand Reports, Key-Indicator Reports, Drill-Down Reports and Exception Reports. Employed by Managers in organization, MIS facilitates comparing Planned Activities versus Actual and helps in management control at the middle level of management.



**Fig-5: Management Information Systems (MIS)**

Source: MIS, Goyal [3]

**Executive Information Systems or Executive Support Systems (EIS/ESS)** are information systems that provide reports to top management and senior executives of the organization. It is an Interactive System and can be considered as a special kind of Decision Support System. It can access external and internal information and can generate sophisticated graphs and reports in an easy to use User Interface. Quick view on the few vital parameters impacting performance of the firm is displayed.



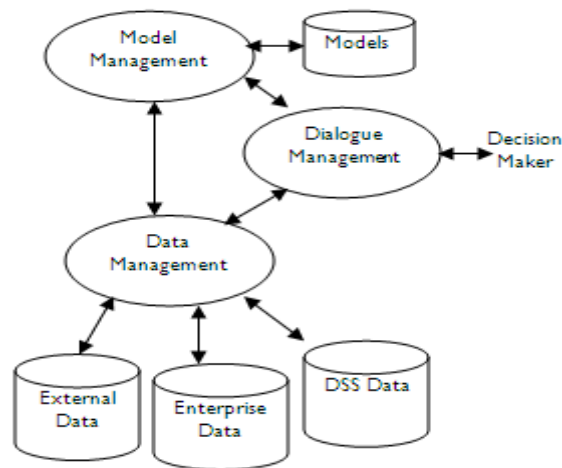
**Fig-6: Executive Information Systems (EIS)**

Source: MIS, CSV Murthy [4]

## CATEGORY 2: MANAGEMENT SUPPORT SYSTEMS

Management Support Systems are categories of Management Information Systems that assist and support management decision making. DSS, AIS and BIS are grouped under this category of MIS.

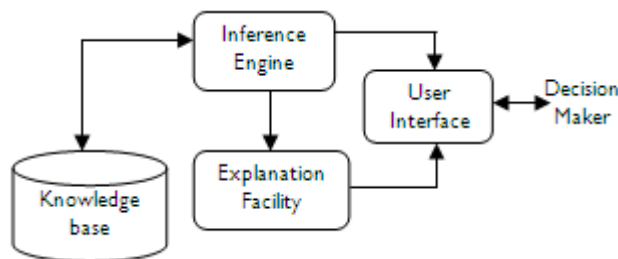
**Decision Support Systems (DSS)** are interactive Information Systems used in determining and evaluating alternative courses of action. DSS has access to both Internal and External Information. Generally, DSS employed by Middle Management is used for assisting semi-structured decisions. Special Capabilities of DSS include What-if analysis, Goal Seek Analysis, Sensitivity Analysis and Scenario Analysis. DSS has in-built models which simulates real time situations and facilitates decision maker in deciding the best course of action.



**Fig-7: Decision Support Systems (DSS)**

Source: MIS, CSV Murthy [4]

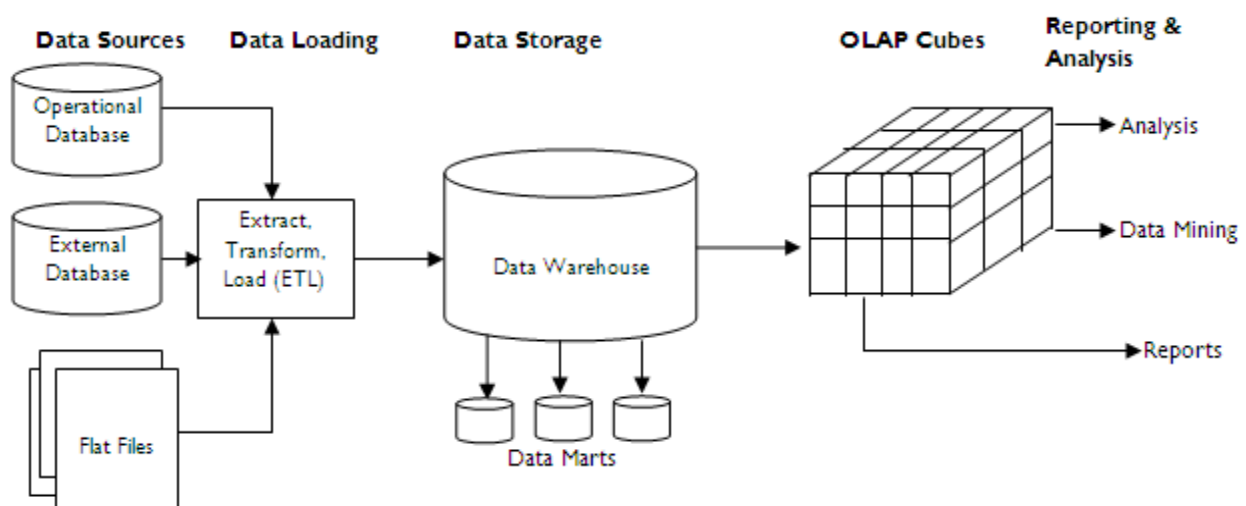
**Artificial Intelligence Systems (AIS)** are a category of Information Systems that can mimic human Intelligence. Expert Systems (shown in Fig 8), Robotics, Fuzzy Logic Systems, Speech Recognition Systems are some of the types of AIS in adoption today. An Expert System has the capabilities of several experts which are stored in the 'Knowledgebase' and decision maker will be provided with expert advice and suggestions to make decisions.



**Fig-8: Artificial Intelligence Systems (AIS) – Expert Systems; Source: MIS, Laudon & Laudon [9]**

**Business Intelligence Systems (BIS)** are Information Systems that collect, Integrate, Analyze and Present business information for management decision making. They provide historical, current and predictive business information. Fig 9 gives the architecture of a Business Intelligence Systems.

Typically, BIS includes a Data Warehouse which can store huge volumes of data. By Extracting data from different data sources, transforming all the extracted data into standard format required by the Data warehouse, all the data are loaded in the Data Warehouse. From the Data warehouse, specific categories of data are made into Data marts. Multidimensional OLAP Cubes are constructed from the data warehouse on which analysis, data mining can be done and reports generated as per need.

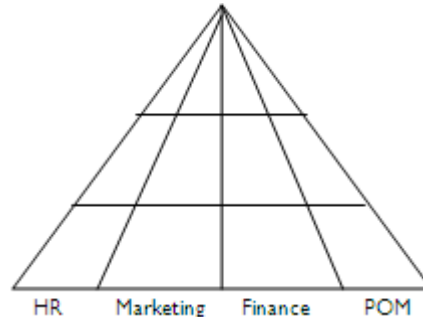


**Fig-9: Business Intelligence Systems (BIS); Source: MIS, Laudon & Laudon [9]**



### CATEGORY 3: FUNCTIONAL INFORMATION SYSTEMS

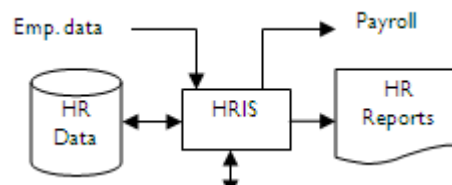
**Functional Information Systems** facilitate in managing a specific business function of organization effectively and efficiently [10]. This includes Human Resources Information Systems, Marketing Information Systems, Financial Information Systems, Production and Operations Information Systems. Each Functional Information Systems include several sub-systems that support performing low-level, middle and top level management activities of that specific business function.



**Fig-10: Business Functions of an organization**

Source: MIS, CSV Murthy [4]

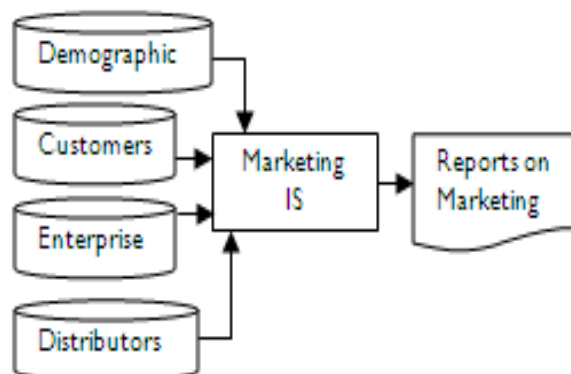
**Human Resources Information Systems (HRIS)** aid Human Resource Professionals in data entry, data tracking and providing all the information requirements for Human Resources, Payroll and Book keeping operations. HR Professionals can query the systems for any employee related records and reports at any time. This helps improve the efficiency of HR Function and help in managing HRD in a better way.



**Fig-11: Human Resource Information Systems**

Source: MIS, CSV Murthy [4]

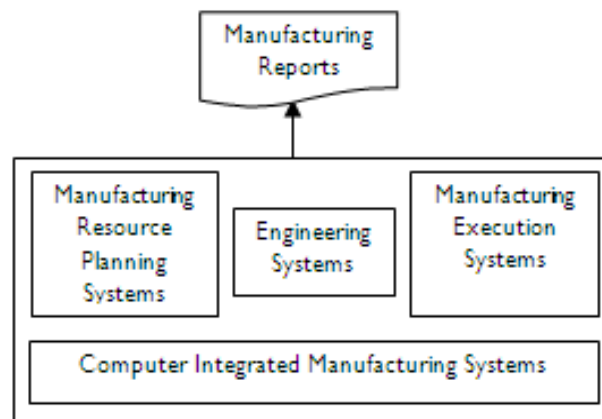
**Marketing Information Systems** analyzes and assess market information gathered continuously from various sources external and internal to the organization. Some of the information requirements for Marketing Information Systems include information on Demographic details, Customers, Distributors and also internal information related to sales, marketing team and so on. As like any other functional information systems, marketing information systems includes Marketing Intelligence subsystems for the top level, Advertising & Pricing system at the middle and Sales Management for the low level marketing management.



**Fig-12: Marketing Information Systems**

Source: IT, Dinesh Madan [14]

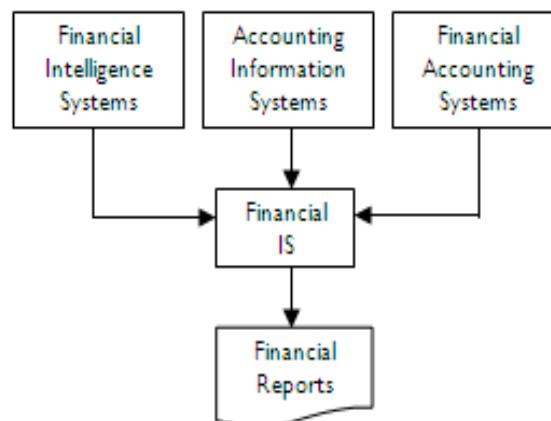
**Production and Operations Information Systems** helps to plan and control the operations of a business firm. Modern Manufacturing Systems are integrated with computers and all the Planning, Execution and Engineering Systems are tightly integrated with Computer Integrated Manufacturing Systems [CIM]. These are highly flexible to accommodate variety by employing Flexible Manufacturing Systems [FMS]. Periodic Reports on Manufacturing can be generated from these systems.



**Fig-13: Production and Operations Information Systems**

Source: MIS, CSV Murthy [4]

**Financial Information Systems** accumulate and analyze financial data to aid in financial planning and control. Financial Reports generated include reports on Investment Management, Cash Management, Capital Budgeting Reports, Financial Planning and Control. Accounting Information Systems, Sales Management System, Procurement System, Payroll, etc., are important Subsystems providing input to Financial Information Systems.



**Fig-14: Financial Information Systems [20]**

#### **CATEGORY 4: ENTERPRISE-WIDE IS AND INTER-ORGANIZATIONAL SYSTEMS**

Enterprise-wide Information Systems (EWIS) span the entire organization and Inter-organizational Systems (IOS) are used to connect two or more organizations. ERP, SCM, CRM and E-commerce Systems fall under this category of MIS.

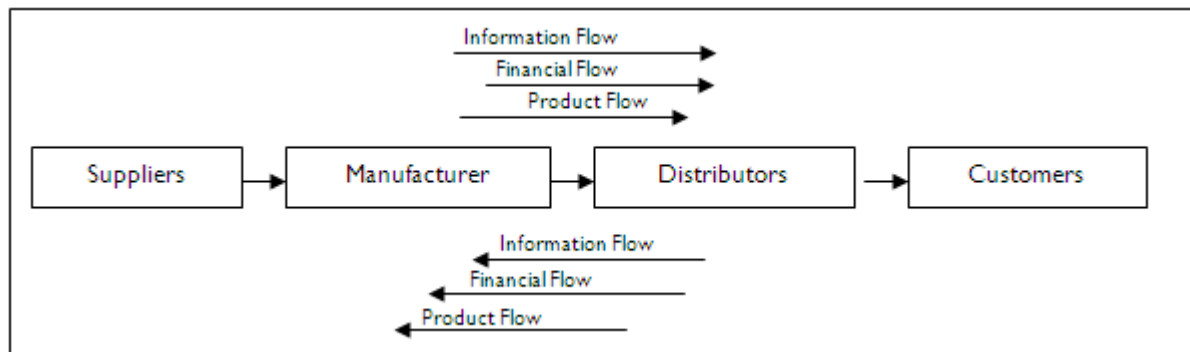
**Enterprise Resource Planning Systems** are categorized as Enterprise-wide Information Systems. It is an Integrated Business Management Software built on a unified database covering information requirements of the entire organization. It provides real time information for both planning and control [11]. It integrates all the business functions of the organization like HR, Marketing, Finance, Operations, etc., into a unified whole [12].



**Fig-15: Enterprise Resource Planning Systems**

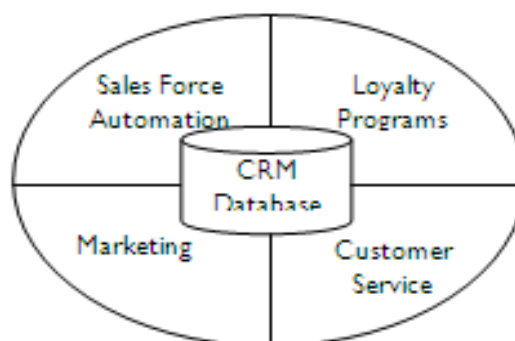
Source: ERP, Ashim Raj Singla [13]

**Supply Chain Management Systems** are cross-functional Inter-organizational Systems that link the business processes of the organization and business partners like suppliers, distributors and customers. The three flows in a supply chain include Information flow, financial flow, Product flow and SCM Systems help in ensuring a smooth supply chain is maintained.



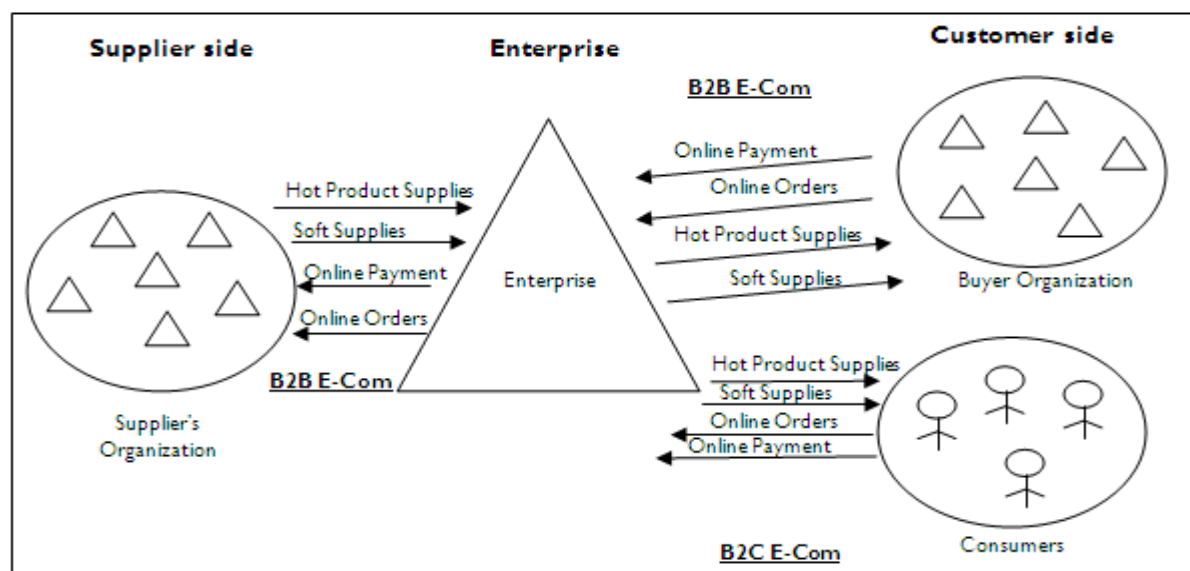
**Fig-16: Supply Chain Management Systems [6]**

**Customer Relationship Management Systems** capture and integrate customer's data from different parts of the organization, consolidate, analyze and disseminate the information about customers to various touch points in the customer's value chain. Right from marketing new products/services to customers, getting leads, selling the product to retaining the customers through loyalty till customer service, all the details of customers are managed through CRM Systems [13].



**Fig-17: Customer Relationship Management Systems [15]**

**Electronic Commerce Systems** is buying and selling online. E-Commerce variations [14] include Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C), Consumer to Business (C2B) and so on.,



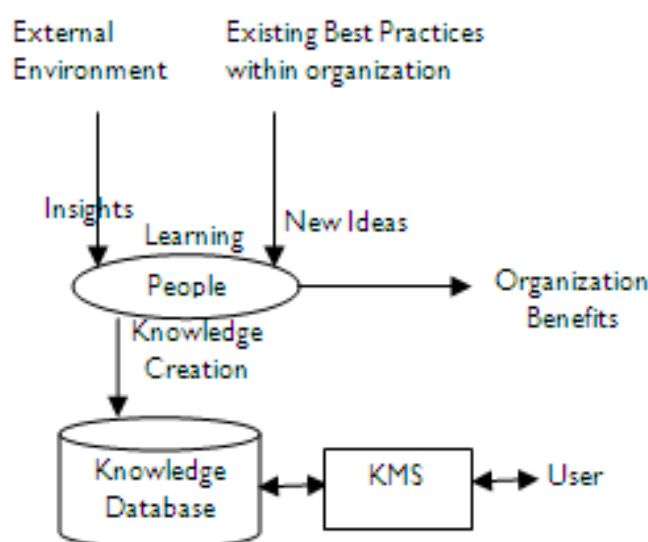
**Fig-18: E-Commerce Systems**

Source: Introduction to IS, Turban [6]

## CATEGORY 5: SPECIALIZED SYSTEMS

Some of the Management Information Systems which are employed to perform Specific functions in the organization are categorized as Specialized Systems. KMS, SIS, OAS and End User Computing are categorized under this.

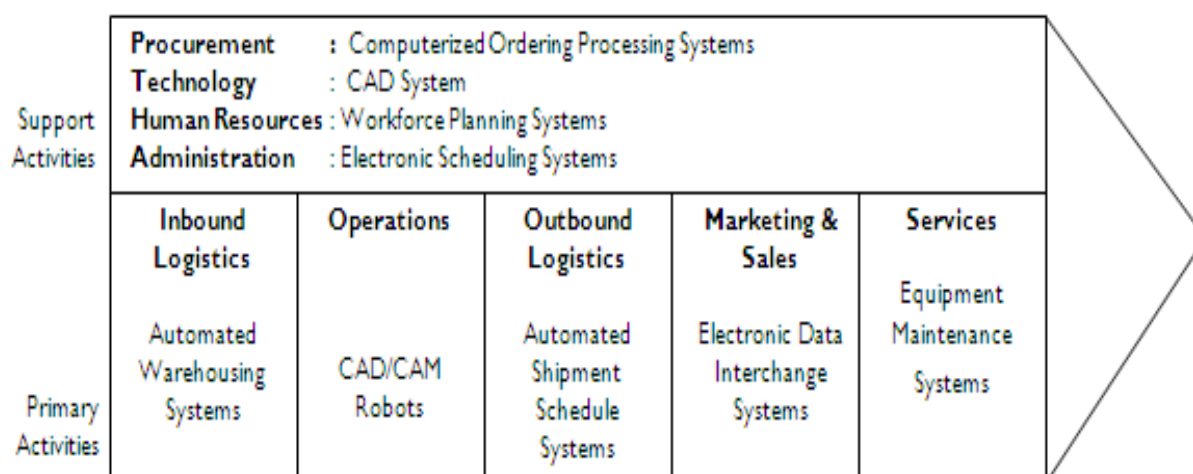
**Knowledge Management Systems (KMS)** are Systems that create, organize and disseminate knowledge to managers and employees within the organization [5]. The 'Knowledge Database' component is created by people by getting insight from external environment and learning from existing methods, processes within the organization. The new ideas of people are documented as learning and converted to get benefits to organization like introduction to new products, reengineering existing processes, improving the services, etc.,



**Fig-19: Knowledge Management Systems**

Source: KM, Awad [5]

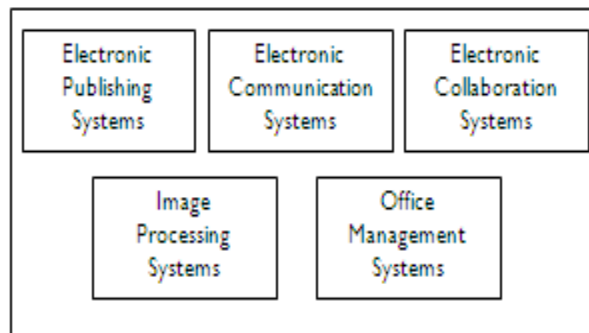
**Strategic Information Systems (SIS)** are Information Systems that help organizations to gain competitive advantage or reduce competitive disadvantage [3]. They apply Information technology to firm's product, services or business processes to gain competitive advantage over its competitors. Strategic Information Systems are different from Strategic Level Information Systems and can be used at all levels of organization. They can be employed across the value chain activities – both primary activities and second activities of the firm to gain competitive advantage.



**Fig-20: Strategic Information Systems**

Source: MIS, Laudon & Laudon [9]

**Office Automation Systems (OAS)** is a group of Information Systems that help to improve the efficiency and productivity of Office operations. They create, store, modify, display and communicate business correspondence in written, video or verbal format. Word Processing, Email, Data and Voice Communications are categorized as Office Automation Systems.



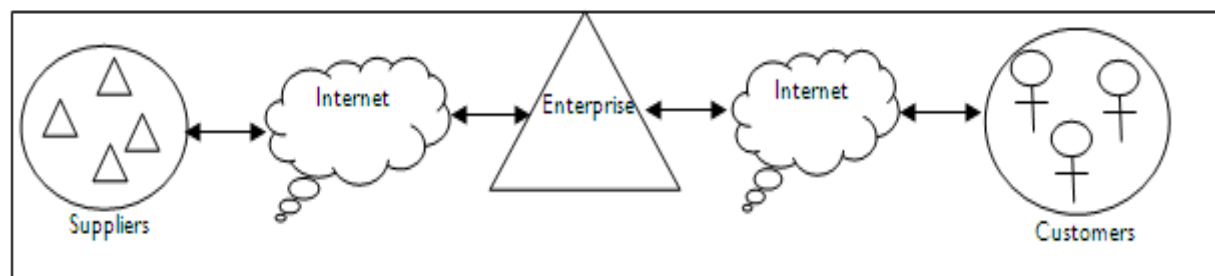
**Fig-21: Office Automation Systems**

Source: MIS, CSV Murthy [4]

**End User Computing (EUC)** refers to the creative use of computers by non-IT Professionals to get information to accomplish their tasks successfully. It encompasses a wide variety of user facing resources including desktop computers, mobile devices, smart phones and tablets, virtual desktops and applications. In EUC, IT department plays a ‘supportive role’ to help the information requirements of end users. Office Automation, Information Management and Retrieval, Decision Support and Application Development are the major components of EUC [4].

#### CATEGORY 6: MODERN MIS

Affordable and easy access of Internet has driven the emergence of systems that can be accessed through the internet. This include e-business systems, cloud based MIS and Internet of Things.



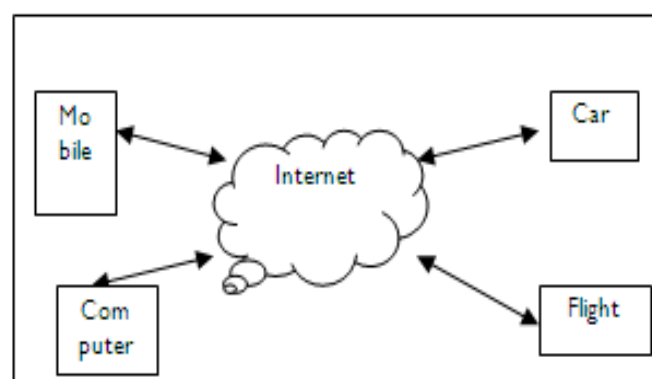
**Fig-22: e-business Systems**

**e-business Systems** enable firms to conduct business transactions over the internet. These Systems connects all the internal business processes of the firm using intranet [12]. Employing

Internet and Extranet, the firm gets connected to suppliers, business partners and customers such that seamless flow of information is made possible.

**Geographical Information Systems** is a computer system for capturing, storing, checking, and displaying data related to positions on Earth’s surface [33]. It provides insights on spatial data and helps businesses, governments, people and is cost efficient.

**Cloud based MIS** are a category of Management Information Systems which help access all the IT resources virtually with the help of Internet. This is the latest trend in MIS and has several advantages like reduced cost, increased storage, less maintenance personnel, remote connectivity, scalability, etc.,



**Fig-23: Internet of Things (IOT)**

**Global Information Systems** facilitate bringing in uniformity in business process across the world. Employed by multinational companies, Global Information Systems is developed and used in a global context [34]. It is a distributed system and is available in multi-languages based on the location of access.

**Internet of Things (IoT)** is the latest addition to the world of Computing and Management Information Systems. With IOT, devices can interact with each other remotely employing Internet and sharing of information is made quiet easier. Smart factories, Smart Machines are the advent of Internet of Things that are witnessed in today's modern era.

#### **SECTION 5: VENDORS OFFERING MIS PACKAGES & CURRENT TRENDS IN MIS**

As MIS has become a minimum requirement to run a business efficiently and is the one of the sources of accurate, timely and reliable information, Commercial-off-the-Shelf (COTS) vendors have started developing highly user-friendly MIS Software's.

Some of the popular MIS/EIS package vendors include IBM, Oracle [23] [24]. Decision Support Systems and Business Intelligence Systems aid managers to perform analysis and top vendors in this space include SAS, Teradata, Informatica, Netezza, Oracle Essbase etc.,[25]. Today, Artificial Intelligence Systems has become a de-facto requirement and sample vendors include Apple, Google, Amazon, IBM, SAS, Knime[26].

Some of the popular vendors offering ERP Packages include SAP, Oracle, Microsoft, IFS, etc., [27]. Vendors offering SCM Solutions include SAP, Oracle, JDA Software, Infor, etc., [28] and CRM Suite is offered by Salesforce, NetSuite, Oracle, SugarCRM, Nimble, etc., [29] Cloud Computing and Cloud based systems are highly adopted as it reduces cost, maintenance and improves Scalability. Amazon, Microsoft, Google, IBM, Salesforce, Oracle [30] are some of the leading Cloud Computing Service providers. The latest addition to the arena of Information Systems is Internet of Things (IoT). Companies involved in IoT include Intel, Cisco, Ericsson, Qualcomm, IBM, Microsoft, etc., [31]

As Internet is available 24\*7\*365 and is easily accessible through smart phones through wifi, Bluetooth and other wireless & wired medium at very low cost, the usage of web based applications has increased tremendously. Data accessibility and storage is made very easy with the help of Cloud based platforms and with the advent of Internet of things, connectivity and sharing of data among devices has steadily increased. Many companies are buying and selling through e-commerce and are currently moving towards e-business employing Cloud based platforms. Virtualization, Artificial Intelligence and Internet of Things are the current trends in MIS and many companies are investing heavily in performing research and implementation of these latest concepts in their organizations.

#### **CONCLUSION**

Today's Management Information Systems are very sophisticated and equipped with lot of analysis tools. They are highly user-friendly systems facilitating decision making providing variety of graphs and reports to different levels of management. As most of these Systems are web-based, they are highly vulnerable to cyber-attacks and companies are taking proactive measures to safeguard themselves. This era of Internet of things marks the pinnacle of information technological innovations and it is expected that Artificial Intelligence Systems will be the future of MIS. Companies like Google, Apple, Microsoft, etc., have already started adopting Artificial Intelligence into their products/services and their research initiatives are focused in the development of more sophisticated Artificial Intelligence Systems. It can be said that tomorrow's managers should not only manage people but also manage Intelligent Agents.

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**SERVICE QUALITY PERFORMANCE AND CONSUMER SATISFACTION IN HEALTH CARE SECTOR:  
COMPARATIVE STUDY OF PUBLIC AND PRIVATE HOSPITALS IN MORADABAD (U.P) REGION**

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**ABSTRACT**

*Objective of the present study was to analyze comparatively the service quality, its various dimensions and level of patient's satisfaction in selected public and private hospital in Moradabad city. Descriptive research design was used. The study was conducted from Feb – May 2017. Sample size was 100 custodians of the patients of each of the two study hospitals selected using systematic sampling method. Sampling frame constituted those patients who stayed at least one day in the hospital for the treatment on the days when the responses were taken from them. The Primary data was collected through questionnaire using 5 point Likert scale measured on continuous scale. Descriptive and inferential statistics was used for analyzing the data. The study result shows that there is significant difference between in service quality , its dimensions( tangibility, reliability, responsiveness, assurance and empathy) and customer satisfaction between public hospital and private hospital and in private hospital service quality , its dimensions and customer satisfaction is significantly higher than private hospital. Accordingly recommendations are forwarded.*

*Keywords: Service quality, Tangibility, Reliability, Responsiveness, Assurance, Empathy, Customer satisfaction*

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**CONCEPT OF HEALTH**

Health is not only a basic human right, but it is most desired. Good health is consistently ranked as the number one desire of men and women around the world. It is also a key precondition to economic development. Health is the level of functional and metabolic efficiency of a living organism. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "*a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.*" 'Health' is an elusive word. Most people who consider themselves healthy are not. Many people, who are suffering from some known disease, may be relatively healthy. Health is a concept which does not merely relate to the absence of disease, of healthy working of organs, or having good thoughts. Health is a holistic concept. It relates to a person as a whole. Not just the person we see, but also the person we 'feel'. Health is combination of three parts namely Emotional Health, Mental Health and Physical Health.

Health is central to wellbeing and a prerequisite for individual and national progress. In addition, to health has an intrinsic value in creating the human capital of the country. Health is a significant factor in the development of nation, as high levels of population health go hand in hand with national income. Health and socio-economic progress are very much inter-dependent and health has been accepted as one of the welfare component. Human health is not only freedom from diseases but a complete physical, mental and social wellbeing. It is necessary for leading a proper and safe life in order to do various activities. Health is the level of functional or metabolic efficiency of a living being. In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain .The World Health Organization (WHO) in 1946 defines health in its broader sense as "*a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.*" It also states that human development is a function of three critical dimensions: longevity (the ability to live long and healthy life); education (ability to read, write and acquire knowledge) and command over resources (the ability to enjoy a decent standard of living and have a meaningful life). Being healthy is clearly one of the most important objectives of human beings. Health also includes the ability to lead a socially and economically productive life. Dr. Halfdan T. Malher, Director General, WHO "*considered health in the broader context of its contribution to social development and expanded the definition of health to include the ability to lead a socially and economically productive life*".

**CONCEPT OF HOSPITALS (IN INDIA)**

The word hospital originally means "*place of hospitality*". The hospital is a health care institution providing patient treatment by specialized staff and equipment. Hospitals are usually funded by the public sector, by health organizations (for profit or nonprofit), health insurance companies, or charities, including direct charitable donations. According to the directory of hospitals in India, "*A hospital is an institution which is operated for the medical, surgical and / or obstetrical care of in- patients and which is treated as hospital by the Central / State Government /Local body or licensed by the appropriate authority.*" Historically, hospitals were support by the Ayurvedic system of medicine was developed in India after the Aryan invasion of the Indus

Valley. In primitive days, religion, art and medicine were combined. People looked to the priests to cure them from sin and disease. As evolution progressed these became more distinct. The sixth century B.C, during the time of the Buddha, there were a number of hospitals to look after the crippled and the poor. More such hospitals were started by Buddha's devotees.

Ashoka was responsible for spread of social medicine. The edit No II of Ashoka (B.C. 274-236) reads: everywhere in the kingdom of the King Piyadasi, beloved of the gods, and also of the nations who live on the frontiers such as the Cholas, the Pandyas, the realms of Styaputra and Keralaputra, as far as Tambapani, and in the kingdom of Antiochus, king of Greeks and of the kings who are his neighbors, everywhere the king Piyadasi, beloved of the gods, has provided hospitals of two sorts: hospitals for men and hospitals for animals.

Fa-hein (405-411 A.D.), who was a contemporary of Chandraguptha Vikramaditya, gives a description of the charitable dispensaries in Pataliputra. He states: the nobles and householders of this country have founded hospitals within the city to which the poor of all countries, the destitute, the cripple and the diseased, come. They receive every kind of help free and freely. Physicians inspect their diseases, according to their cases order them food, water, medicines and decoctions, everything in fact, that may contribute to their ease, when cured, they depart at their convenience.

Huien-Tsang (629-645 A.D.) who visited India during the reign of emperor Harshs stated: in all the highways of the towns and villages of India, he erected hospices (punya-shalas), provided with food and water, employed the physicians with medicines for travelers, and the poor to be given without any stintl. Such institutions, either regular hospitals for the poor and the needy, the clinics provided with stocks of medicines, were spread all over the empire. These were called punyasthanas, punyasalas, dharmashalas, viharas and mutts. They were the Indian equivalents of the western alm-houses, monasteries and infirmaries. Medical texts like those of the Charaka and the Sushruta recommended that people well-versed in singing, playing of musical instruments, panegyrics, verses, stories, legends, history and mythology can also take part in curing the sickly persons.

The institutions of hospitals Bimaristan or Maristan in the modern sense of the term, through initiated first at Jundi Shapur by Sassanian Persians, was given a positive shape by the Muslims. Today, hospitals are largely staffed by professional physicians, surgeons, and nurses, whereas in the past, this work was usually performed by the founding religious orders or by volunteers. Most of the health problems require intensive medical treatment and personal care which normally are not available at the patients' home or in the clinic of a doctor. The hospital, a major social institution, offers considerable advantage to both patient and society. Hospital is the place where a large number of professionally and technically skilled people apply their knowledge and skill with the help of world class expertise, advanced and sophisticated equipment and appliances. The first and foremost function of a hospital is to give proper care to the sick and injured without any social, economic or racial discrimination. In the past, the hospitals were set up as charity institutions, especially for poor and weaker sections of the society. The only function of those institutions was to care for the sick and poor. Of late, the hospitals are set up with a motto to serve all sections of the society. According to the directory of hospitals in India, 1988, "A hospital is an institution which is operated for the medical, surgical and / or obstetrical care of in patients and which is treated as hospital by the Central / State Government / Local body or licensed by the appropriate authority."In addition, some of them are also engaged in conducting and promoting medical education, training and research. The development of health care facilities is influenced not only by the opening of hospitals or health care centers but more so by their administration and management. The rapidly changing health care environment characterized by its high level of complexity, uncertainty and dynamic nature, is faced with increased pressures to improve internal efficiency by cutting cost. Where overcrowded medical and hospital buildings, shortages of medical staff and lack of funds are the reality of today's health care system, it is ultimately the patient who suffers the most.. A hospital may be a single building or a number of buildings on a campus. Many hospitals with pre-twentieth century origins began as one building and evolved into campuses. Some hospitals are affiliated with universities for medical research and the training of medical personnel such as physicians and nurses, often called teaching hospitals. Worldwide, most hospitals are run on a nonprofit basis by governments or charities. The World Health Organization defines modern hospitals thus: "*The modern hospital is an integral part of social and medical organization, the function of which is to provide for the population complete health care both curative and preventive and whose outpatient services reach out to the family in its home environment. The hospital is also a center for training of health workers and for bio-social research.*"

## STATEMENT OF PROBLEM

The objective of the business is not only to deliver product or services to the customers but also to do it with their satisfaction. Organisations with an in depth understanding of how to satisfy their customers are in better

position to increase their profitability than those that might be aware of customers' needs but are unable to deliver them to satisfactory level (Dominici & Palumbo, 2013). Condition of expected service quality in order to obtain high customer satisfaction is a vital issue as well as a challenge facing the contemporary service industry. Due to this reason, the issue has become of great importance for both academics and practitioners in the subject area of marketing (Ghasemi *et al.*, 2012). The basic success of companies is how the customers perceive the resulting service quality, as the perceived service quality is the key driver of perceived value (Collart, 2000).

The domain of the term Health is as large and complex as the entire scope of human activities. Healthcare may be viewed as the provision of a range of healthcare services by professional, technical, and supportive health workers, with in-patient, out-patient and home health facilities. The development of healthcare facilities is influenced not only by the opening of hospitals or healthcare centers, but more so by their proper administration and management. Health care has been defined by the WHO as "*a programme that should make available to the individual and thereby to the community, all facilities and allied sciences necessary to promote and maintain health of mind and body*". Health care remains one of the most important human endeavors to improve the quality of life. The main objective of any healthcare system is to facilitate the achievement of optimal level of health to the community through the delivery of services of appropriate quality and quantity. In Health care sector the customer satisfaction is also an important issue as in other service sectors (Shabbir *et.al.* 2010). A health care organization can achieve patient satisfaction by providing quality services; keeping in view patients' expectation and continuous improvement in the health care service (Zineldin, 2006). In developing countries, where quality is one of the major challenges to be met under the current health care reforms, the measurement of perceived quality is also justified by the powerful influence that these perceptions have on utilization of services. Several studies offer evidence on the growing interest in users' perception or satisfaction in developing countries. Surprisingly, little research has been done on patient perceptions of quality in India.

In view of above discussion, the present study was designed to compare the various dimensions of the perceived service quality and patient's satisfaction in one public hospital (Civil hospital) and one private hospital (Vivekanand hospital) with the objective to finding the grey areas in service quality of these hospitals from the patients' perspective. The selected two hospitals are the biggest hospitals of Moradabad.

### OBJECTIVES OF THE STUDY

The present study is a comparative study with the following objective:

1. To analyze comparatively the service quality and its various dimensions of selected public and private hospital.
2. To analyze comparatively the level of patient's satisfaction in selected public and private hospital.

### REVIEW OF LITERATURE

#### Service & Service Quality

In the words of Kotler, Armstrong, Saunders and Wong (2008), "*A service is any activity or benefit that one party can offer to another which is essentially intangible and does not result in the ownership of anything.*" Service is a patch up activity to fulfill some one's need in the market. Service is something which can be experienced but cannot be touched or seen. Services offered by service providers cannot be seen or touched, as they are intangible activities. Service user can specify about that particular service satisfaction only after availing of it for some period of time. According to C. Bhattacharjee (2009), "*Services are the production of essentially intangible benefits and experience, either alone or as part of a tangible product through some form of exchange, with the intention of satisfying the needs, wants and desires of the consumers.*" Service Quality is a comparison of expectation with performance. Quality is the keyword for survival of organization in the global economy. In today's competitive environment delivering high quality service is the key for a sustainable competitive advantage. Service quality is an approach to manage business processes in order to ensure full satisfaction of the customer which will help to increase competitive and effectiveness of the industry. Quality in service is very important especially for the growth and development of service sector business enterprises. It works as an antecedent of customer satisfaction. Health care service firms like other organizations are realizing the significance of customer-centered philosophies and are turning to quality management approaches to help managing their businesses. Parasuraman, *et. al* (1988) developed SERVQUAL, it is an optimum measuring device that can be modified to accomplish predicting customer perceptions against expectations and the casting of those perceptions and expectations against the service providers' perceptions of what it will require to satisfy the customers' service needs.

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**SERVICE QUALITY IN HOSPITALS AND ITS SIGNIFICANCE**

Service in hospitals means something different from quality. It is the hospitals that do a lot to make the experience of the patient good and satisfying. That can range from how the hospital staffs communicate with the patients and its custodian, how quickly they respond to our concern, the kind of amenities we find in our room. "Quality" in patient care means something very specific: it refers to clinical outcomes. The entire gambit of business performance in the last decade has faced a paradigm shift, with quality consistently being considered as one of management's top-most competitive priorities and prerequisite for sustenance and growth. Quality is proposed as the most potent tool for enhanced business performance. In today's world of fierce competition, rendering quality service is a key for subsistence and success in any organization, more so in a service organization like health care sector. In this background, the current research work aspires to compare the effectiveness of service quality parameters of selected hospitals in Moradabad region. Consumer satisfaction appears to be a major device in order to take critical decisions in the health care services. Therefore, service providers, as a matter of fact, take the satisfaction of customers into account as a main goal. There are many studies on measuring service quality in the health care sector that use satisfaction of consumers. Service quality studies are mainly based on the satisfaction of patients or their judgment about service quality. Most of the service sectors consider that works quality only. For a hospital customers are patients. For any customer service quality is the function of perceptions, expectations and performance. Early writing on the topic of service quality, defines service quality as a comparison of what patients feel a hospital as a service provider should offer (i.e. their expectations) with how the hospital as provider actually performs and service quality is a measure of how well the service level delivered matches patients' expectations. Delivering quality service means conforming to patients' expectations on a consistent basis. Service Quality as perceived by patients is defined as the degree and directions of discrepancy between patients' service perceptions and expectations. It is also defined as difference between:

- Technical quality means what is delivered in the form of treatment
- Functional quality means how it is delivered
- Process quality means judgment during the treatment process
- Output quality means judgment after the treatment

There is direct relationship between service quality and profitability, in defensive and offensive marketing i.e. patient repeat dependability and increase of assurance on the specific hospital is done, striking a balance between patients' perception and expectations, increasing visits on to the specific hospital, free promotion through word of mouth. Some of the problems are communication gap, service proliferation and complexity, improper selection and training of services staff like doctors, paramedical staff, nurses etc., short run view of the business. If a hospital gives a quality treatment service, they can survive and run over any kind of crunch situation. The concept of liberalization and globalization opened the market to intense competition throughout the world.

**SERVICE QUALITY AND CUSTOMER SATISFACTION**

Patient satisfaction is an important measure of service quality in health care systems. Patients' perceptions about health care systems seem to have been largely reckoned by health professionals in developing countries. Patients' voice is beginning to play a greater role in the design of health care service delivery processes in the developing countries. It should go without saying that customers are the lifeblood of all organizations. Satisfaction from service quality is usually evaluated in terms of technical quality and functional quality. Usually, customers do not have much information about the technical aspects of a service; therefore, functional quality becomes the major factor from which to form perceptions of service quality. Service quality as described is a form of attitude that results from the comparison of expectations with performance. In general, it consists of five distinct dimensions ((Parasuraman et al., 1985) :

1. Tangibility of service quality, which includes element of Physical facilities, equipment, and appearance of personnel.
2. Reliability of service quality, which includes ability to perform the promised service dependably and accurately.
3. Responsiveness of service quality, which includes willingness to help customer and provide prompt service.
4. Assurance of service quality, which includes knowledge and courtesy of employees and their ability to inspire trust and confidence.
5. Empathy of service quality, which includes caring, individualized attention the firm, provides its customer.

Orna Baron-Epel. (2001) found in their study that the degree to which expectations of the interaction were perceived as fulfilled were more strongly associated with the satisfaction especially attributes characterizing interactions and communication with the physician like “explanation and discussion”, “answering questions”, and “listening to problems”. When the patient’s expectations are met with respect to these characteristics, his/her satisfaction is greater. The perceived degree to which expectations with regards to other characteristics, such as “Medical Certificate Provision”, “referral to specialist” or “test referral” were fulfilled may be less critical in determining the patient satisfaction.

Krishna D. Rao et. al. (2006) found in their study that better staff and physician interpersonal skills, facility infrastructure, and availability of drugs have the largest effect in improving patient satisfaction at public health facilities. Also in their study they concluded that, in India and many developing countries, the excessive emphasis on service coverage and inputs in the provision of health services has ignored the needs of the very people for whom these health services exist. Incorporating patient views into quality assessment offers one way of making health services more responsive to people’s needs. It also gives users an opportunity to voice their opinion about their health services.

Rahmqvisti Mikael (2010) found in his study of two-dimensional outcome in the QSP model: “Importance” (to satisfaction) and “Quality” (grade of satisfaction) that younger patients in emergency were the least satisfied group and older patients with excellent health status were the most satisfied group. Patients with perceived better health status and those with less education were more satisfied than those with more education or poorer health status. The two dimensions most strongly associated with global satisfaction were “receiving the expected medical help” and “being treated well by the doctor”. To wait at the reception without getting attention and information amounts to negativity to patient’s satisfaction. But participation in the medical decision making is correlated with positivity.

Meenakshi Gautham *et. al.* (2011) in their study found that most rural persons seek first level of curative healthcare close to home, and pay for a composite convenient service of consulting –cum-dispensing of medicines. Non Degree Allopathic Practitioners (NDAPs) fill a huge demand for primary curative care which the public system does not satisfy and are de facto first level access in most cases.

Titaley C.R. *et. al.* (2010) found in their study that a comprehensive strategy to increase the availability, accessibility, and affordability of delivery care services should be considered and also, health education strategies are required to increase community awareness about the importance of health services along with the existing financing mechanisms for the poor communities.

Manju Rani *et. al.* (2008) showed through their study on differentials in the quality of antenatal care that poor quality of antenatal care is likely to reduce its utilization. Policy and program interventions to improve the quality of care of antenatal care, especially for the poor and other disadvantaged population groups.

### CONCEPTUAL FRAMEWORK

Based on the objectives of the study we can devise the following conceptual model (fig 1). The model is comparative where we compare the five dimensions of perceived service quality as well as overall service quality between two selected hospitals. The research also compares the level of patient’s satisfaction in a public hospital and a private hospital.

Tangibility dimension of service quality include up-to-date diagnostic and life saving equipments, physical facilities, well dressed employees, Hygienic condition at hospital, lab testing facility, and basic amenities like waiting place, Pharmacy, cafeteria, public telephone etc.

Reliability dimension of service quality include confidence of patients in doctors, accurate doctor’s diagnosis, delivery of service as promised, dependability of hospital, keeping the records.

Responsiveness dimension of service quality include promptly admitting the patients, promptly responding & helping to requests of patients, Timing of the services, doctors & nursing staff pay enough consideration to patient and explain the disease & treatment.

Assurance dimension of service quality include trust, politeness of hospital staff, confidence of patients in hospital, trust of billing procedure, treatment of patients by dignity and respect, giving attention to emergency patients.

Empathy dimension of service quality include doctors & employees giving personal attention to patients, know the needs of patients, comfort of patients, convenient operating hours, taking feedback from patients.



Customer satisfaction includes satisfaction & pleased with overall services delivered by the hospital, customers telling the group members about the services offered by this hospital, recommendation by custodians of patients to their friends and relatives, referring to others in case of emergency.

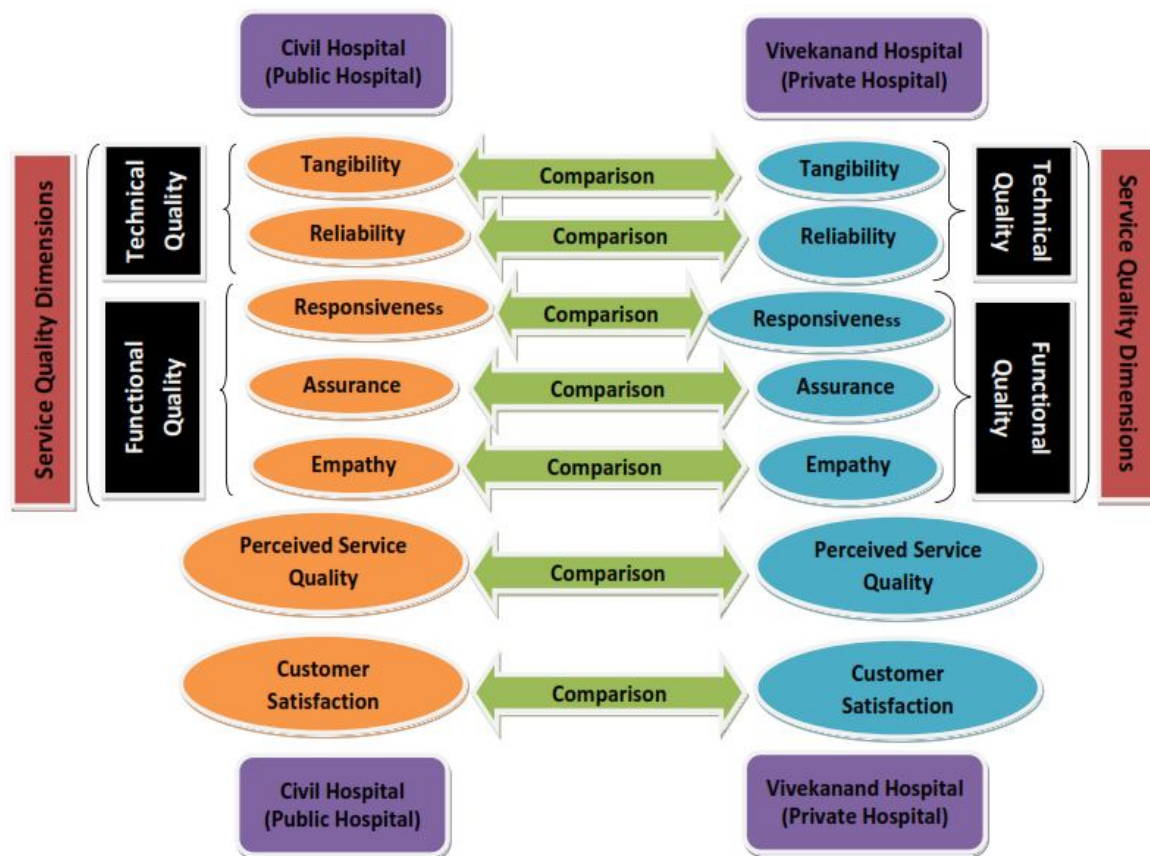


Fig 1: Conceptual model of study

## RESEARCH HYPOTHESIS

The answers to the research questions through the questionnaire design would be intended to test the research hypotheses and provide important guidelines for administrators of these hospitals about quality improvement efforts. Areas identified would be: the evaluation of general medical practices offered, the sequence of events in the delivery of care and the interactions between patients and medical staff, the physical facilities, equipment, staffing patterns, and qualifications of health personnel, the change in the patient's health status as a result of care, availability, accessibility, and overall effect on the community of the hospital. The study aims to test the following hypotheses in the application of statistical test:

**H<sub>1</sub>:** There is a significant difference in perceived tangibility between public and private selected hospitals.

**H<sub>2</sub>:** There is a significant difference in perceived reliability between public and private selected hospitals.

**H<sub>3</sub>:** There is a significant difference in perceived responsiveness between public and private selected hospitals.

**H<sub>4</sub>:** There is a significant difference in perceived assurance between public and private selected hospitals.

**H<sub>5</sub>:** There is a significant difference in perceived empathy between public and private selected hospitals.

**H<sub>6</sub>:** There is a significant difference in overall perceived service quality between public and private selected hospitals.

**H<sub>7</sub>:** There is a significant difference in level of customer satisfaction between public and private selected hospitals.

## RESEARCH METHODOLOGY

With the objective of analyzing comparatively the service quality and its various dimensions and the level of patient's satisfaction in selected public and private hospital, descriptive research design was used. The study area was Moradabad city of Uttar Pradesh, India, biggest state of the country population wise. The study was conducted from Feb – May 2017. Sample size was 100 custodians of the patients of each of the two study hospitals selected using systematic sampling method. Sampling frame constituted those patients who stayed at

least one day in the hospital for the treatment on the days when the responses were taken from them. The Primary data was collected through questionnaire using 5 point Likert scale ranging from Strongly Agree (SA) to Strongly Disagree (SD). Descriptive and inferential statistics was used for analyzing the data. Pilot study was conducted on 15 respondents for checking the reliability of questionnaire using cronbach alpha and the content validity was ensured by two management professionals and three doctors of the study hospitals. In the pilot study, reliability cronbach alpha range was 0.812 - 0.919 which ensured that questionnaire is highly reliable.

### DATA ANALYSIS AND INTERPRETATION

As the research is a comparative study, we used independent sample T test for comparing the two means of service quality and its dimensions as well as customer satisfaction with the help of SPSS 20.

Table - 1: Descriptive Statistics of service quality determinants and customer satisfaction

	N	Mean (Civil Hospital)	Std. Deviation	Mean (Vivekanand Hospital)	Std. Deviation
Tangibility	100	3.9680	.94910	4.1933	.44287
Reliability	100	3.2800	.81749	3.8800	.41982
Responsiveness	100	3.3600	.72317	3.7143	.40812
Assurance	100	3.3143	.75647	3.8229	.33061
Empathy	100	3.2640	.65989	3.8080	.31899
Service Quality	100	3.4373	.67343	3.8837	.30070
Customer Satisfaction	100	2.7040	.67777	4.1200	1.13137

Table 1 of Descriptive statistics of service quality, its dimensions and customer satisfaction. The table shows that the Vivekanand hospital is evaluated more in terms of service quality and its dimensions. The mean table shows that there is a wide gap between the satisfaction level of patient's custodians of civil hospital and Vivekanand hospital. The patients' custodians were more satisfied in Vivekanand hospital (private) than Civil hospital.

Table 2 compares the tangibility dimension of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different ( $.000 = \text{Sig} < .05$ ). t test of equality of means shows the significant difference between the perceived tangibility between two hospitals ( $.029 = \text{Sig} < .05$ ). The mean difference ( $-.22533$ ) shows that Civil hospital (Public hospital) has significantly less Tangible attributes than Vivekanand hospital (Private hospital).

Table 3 compares the Reliability dimension of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different ( $.000 = \text{Sig} < .05$ ). t test of equality of means shows the significant difference between the perceived Reliability between two hospitals ( $.000 = \text{Sig} < .05$ ). The mean difference ( $-.60000$ ) shows that Civil hospital (Public hospital) has significantly less Reliable attributes than Vivekanand hospital (Private hospital).

Table - 2: Tangibility comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Tangibility	Equal variances assumed	78.898	.000	-2.213	198	.028	-.22533
	Equal variances not assumed			-2.213	128.270	.029	-.22533

Table - 3: Reliability comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Relia	Equal variances assumed	58.431	.000	-6.529	198	.000	-.60000

	Equal variances not assumed			-6.529	147.824	.000	-.60000
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Table 4 compares the Responsiveness dimension of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different (.000 = Sig < .05). t test of equality of means shows the significant difference between the perceived Responsiveness between two hospitals ( .000 = Sig < .05). The mean difference (-.35429) shows that Civil hospital (Public hospital) has significantly less Responsive attributes than Vivekanand hospital (Private hospital).

Table - 4: Responsiveness comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Responsiveness	Equal variances assumed	67.163	.000	-4.267	198	.000	-.35429
	Equal variances not assumed			-4.267	156.254	.000	-.35429

Table 5 compares the Assurance dimension of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different (.000 = Sig < .05). t test of equality of means shows the significant difference between the perceived Assurance between two hospitals ( .000 = Sig < .05). The mean difference (-.50857) shows that Civil hospital (Public hospital) has significantly less Assurance attributes than Vivekanand hospital (Private hospital).

Table - 5: Assurance comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Assurance	Equal variances assumed	69.373	.000	-6.160	198	.000	-.50857
	Equal variances not assumed			-6.160	135.488	.000	-.50857

Table - 6: Empathy comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Empathy	Equal variances assumed	50.699	.000	-7.422	198	.000	-.54400
	Equal variances not assumed			-7.422	142.871	.000	-.54400

Table 6 compares the Empathy dimension of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different (.000 = Sig < .05). t test of equality of means shows the significant difference between the perceived Empathy between two hospitals ( .000 = Sig < .05). The mean difference (-.54400) shows that Civil hospital (Public hospital) has significantly less Empathy attributes than Vivekanand hospital (Private hospital).

Table 7 compares the overall Service Quality of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different (.000 = Sig < .05). t test of equality of means shows the significant difference between the perceived Service Quality between two hospitals (.000 = Sig < .05). The mean difference (-.44644) shows that Civil hospital (Public hospital) has significantly less perceived Service Quality than Vivekanand hospital (Private hospital).

Table -7: Service Quality comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Service Quality	Equal variances assumed	106.032	.000	-6.053	198	.000	-.44644
	Equal variances not assumed			-6.053	136.969	.000	-.44644

Table - 8: Customer Satisfaction comparison (Independent Samples Test)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Customer Satisfaction	Equal variances assumed	5.133	.025	-10.737	198	.000	-1.41600
	Equal variances not assumed			-10.737	161.952	.000	-1.41600

Table 8 compares the level of Customer Satisfaction of Civil hospital and Vivekanand hospital. Levene tests shows that the variances between the two hospitals' observations are significantly different (.000 = Sig < .05). t test of equality of means shows the significant difference between the level of Customer Satisfaction between two hospitals (.025 = Sig < .05). The mean difference (-1.41600) shows that Civil hospital (Public hospital) has significantly less level of Customer Satisfaction than Vivekanand hospital (Private hospital).

## HYPOTHESIS TESTING

**H<sub>1</sub>:** There is a significant difference in perceived tangibility between public and private selected hospitals. The hypothesis is accepted. (Table 2 ).

**H<sub>2</sub>:** There is a significant difference in perceived reliability between public and private selected hospitals. The hypothesis is accepted. (Table 3).

**H<sub>3</sub>:** There is a significant difference in perceived responsiveness between public and private selected hospitals. The hypothesis is accepted. (Table 4)

**H<sub>4</sub>:** There is a significant difference in perceived assurance between public and private selected hospitals. The hypothesis is accepted. (Table 5)

**H<sub>5</sub>:** There is a significant difference in perceived empathy between public and private selected hospitals. The hypothesis is accepted. (Table 6)

**H<sub>6</sub>:** There is a significant difference in overall perceived service quality between public and private selected hospitals. The hypothesis is accepted. (Table 7)

**H<sub>7</sub>:** There is a significant difference in level of customer satisfaction between public and private selected hospitals. The hypothesis is accepted. (Table 8)

## CONCLUSION

The research concludes that both the hospitals have low service quality especially reliability, responsiveness, assurance and empathy as well as customer satisfaction. The research indicated that there is significant difference in service quality, its dimensions (tangibility, reliability, responsiveness, assurance and empathy) and

customer satisfaction between public hospital and private hospital and in private hospital service quality, its dimensions and customer satisfaction is significantly higher than private hospital.

## RECOMMENDATION

Based on the conclusion of the result it is recommended that there is a lot of scope for improvement of service quality especially for service delivery which includes functional quality service (responsiveness, assurance and empathy) in both the hospitals so that they can improve customer satisfaction. As it was found that there is significant difference in service quality, its dimensions (tangibility, reliability, responsiveness, assurance and empathy) and customer satisfaction between public hospital and private hospital and in private hospital service quality, its dimensions and customer satisfaction is significantly higher than private hospital, public hospitals are required to look into these dimensions. The civil hospital need to deliver a high level of service to their patients by enhancing not only the tangibility dimensions, but also improving the knowledge, skills and courtesy of their staff. This is especially important because the ability of the staff to inspire confidence and trust in relating to customers has been found to be an important dimension of service quality, which has a positive impact on patients satisfaction. Both public and private hospital must attempt to improve their service quality to fulfill the needs of the patients on responsiveness factor because quick response, doctor consideration, explanation of treatment and disease play a vital role in benevolent satisfaction to the patients. This could lead to that civil hospital improves all the dimensions of service quality whereas the Vivekananda need to pay attention on responsiveness dimension.

## DIRECTION FOR FUTURE RESEARCH

This research also opens the way for future research. The future researches can be conducted taking other hospitals in the other big cities to validate the findings. Further same studies can be applied to other sectors like telecom, retail banking, insurance etc.

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## COUNTERPRODUCTIVE WORK BEHAVIOUR AS A SUCCESSOR TO WORKPLACE INCIVILITY

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### ABSTRACT

*Humans are emotional beings, they are sensitive towards the behaviour displayed towards them. Once aggravated with rudeness, disrespect or any other forms of workplace incivility, employees no longer feel obliged towards giving their best to the organisation; they don't associate themselves to the company's goals. This usually leads to activities such as sexual harassment, bullying, theft, absenteeism etc. Counterproductive work behaviour (CWB) can be usually curbed with performance of certain pre-employment tests, yet incivility pushes an employee to work against the company rather than for it. Even without knowing, employees tend to make their treatment at the workplace as a base for their future performance. In either case, the damage is to the company in terms of lower performance and negative reputation.*

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### 1. INTRODUCTION

Andersson and Pearson define workplace incivility as “low intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others” (1999: 457).

Organizational members engage in counterproductive (Spector & Fox, 2005a,b) or dysfunctional (Robinson, 2008) behavior when they willfully commit acts that have the intention of harming organizations or people within them (Spector & Fox, 2005a,b). This broad definition subsumes behaviors such as theft (e.g., Greenberg, 1990), sabotage (e.g., Ambrose, Seabright, & Schminke, 2002), workplace violence and aggression (e.g., Barling, Dupré, & Kelloway, 2009; Kelloway, Barling, & Hurrell, 2006), incivility (Andersson & Pearson, 1999), revenge (Bies & Tripp, 2005) and service sabotage (e.g., Harris & Ogbonna, 2002; Mullen & Kelloway, submitted for publication). Research on such topics has proliferated in recent years in recognition of the staggering financial (Robinson, 2008), personal (e.g., Schat & Kelloway, 2005) and organizational (e.g., Rogers & Kelloway, 1997) costs associated with counterproductive behavior.

Recently, there has been a growing interest in understanding incivility and its economic and behavioral consequences (Bai, Lin & Wang, 2016; Porath & Pearson, 2013a). Incivility bears economic and behavioural costs (Porath & Pearson, 2013a), especially when it converts into counterproductive work behavior (CWB) (Fine, 2012). That is why several researchers have steadily focused on the work– family conflict and its consequences, but such research has been slow-paced during the last decade (Glaveli, Karassavidou, & Zafiroopoulos, 2013; Lim & Tai, 2014; Lu, Tjosvold, Shi, & Wang, 2012). A few researchers investigated the relationship between family and workplace outcomes, which helped provide insights into the practical and theoretical implications for addressing the familial and work place conflict. (Bai, Lin, & Wang, 2016; Lim & Tai, 2014)

### 2. OBJECTIVES

**This study has been conducted to fulfil the following objectives**

- [1] To provide an understanding of workplace incivility and counterproductive work behaviour (CWB)
- [2] To study various forms of CWB
- [3] To study the relationship between concept of workplace incivility and counterproductive work behaviour
- [4] To review the Affective Events Theory (AET)

### 3. METHODOLOGY

The research paper is an attempt of Descriptive Research, based on the secondary data sourced from various newspaper articles, journals, magazines, press releases and media reports.

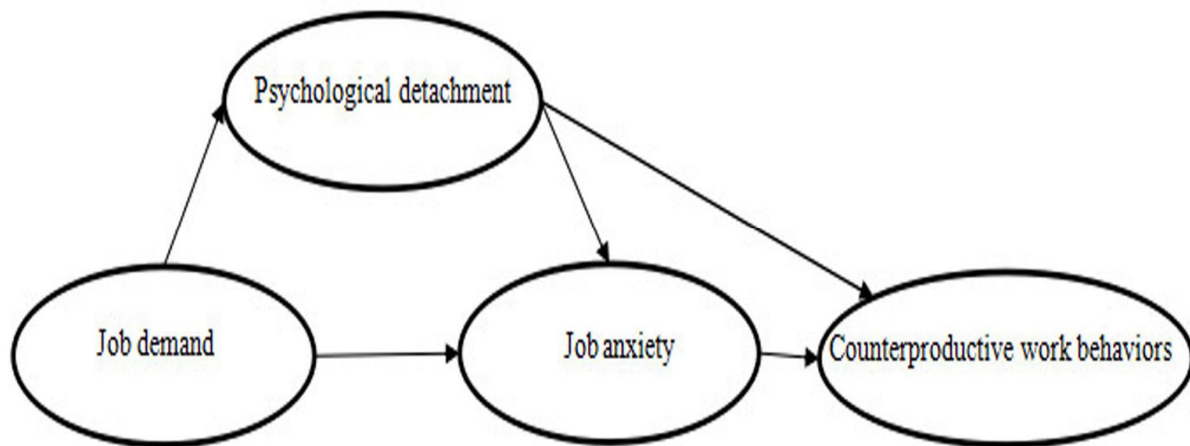
### 4. CONCEPT

Typically, incivility (unlike explicit violence and physical aggression) is a lesser level of mistreatment that still harms organizations significantly (Baron & Neuman, 1996). Such low-intensity deviant behaviour that harms employees and organizations is known as work place incivility (Andersson & Pearson, 1999).

Work place incivility is perceived by employees when other co-workers are doing/ showing incivility. Incivility also exacerbates the low productive behaviour because demeaning language issued, and fellow workers are ignored or disregarded (Pearson, Andersson, & Wagner, 2001). Recently, Sguera, Bagozzi, Huy, Boss, and Boss

(2016) concluded that work place incivility silently damages organizations and their workers. It is, therefore, worth understanding the relationship of incivility (both in the family and at work) and CWB in its entirety

Counterproductive work behaviors (CWBs) refer to employee voluntary behaviors that harm the interests of an organization (Robinson & Bennett, 1995). Previous incivility studies showed that the frequency of incivility incidents relate positively to employee CWBs including theft, work withdrawal, and production deviance (Penney & Spector, 2005). Traditionally, occupational health scholars have recognized employee emotion as a key ingredient to understanding CWBs. Lazarus and Folkman (1984), recognizing that emotions represent the immediate response to situations that are perceived as stressful, suggested that behavioral strains may reflect individuals' attempt to reduce aroused emotional states. When an employee attempts to eliminate negative emotion, s/he may engage in actions designed to eliminate that negative emotion (i.e., emotionfocused coping), some of which may be harmful to the organization (Lazarus, 1995).



Source: [www.frontiersin.org](http://www.frontiersin.org)

Counterproductive Work Behavior can be defined as employees' conduct, activities, actions and deeds that negatively affect not just the organization/employer but also other staff members. It includes activities like theft, lies or fraud to employer, personal use/consumption of organizational resources, wastage and exploitation of organizational resources, denial of work and new assignments, rude behaviour with customers/clients, cheap politics such as blame on others for mistakes, gossiping with other staff members, insulting co-employees and destroying organizational property etc.

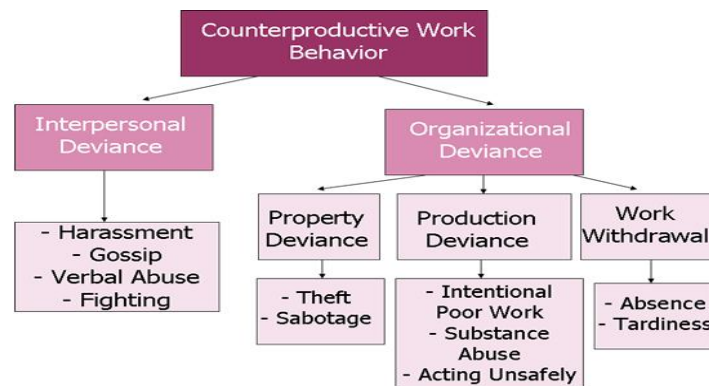
Counterproductive Work Behavior can range in minor offences to severity either at interpersonal level or at an organizational level (Benett, R.J. and Robinson, S.L. 2000). At interpersonal level Counterproductive Work Behavior affects the staff members or employees with-in the organization and at organizational level Counterproductive Work Behavior will affect the interest of organization or employer. The research of Rishipal (2012) revealed that there was significant relationship between the tendency of Counterproductive Work Behavior and managerial effectiveness among different level of managers.

## 5. FORMS OF COUNTERPRODUCTIVE WORK BEHAVIOUR

CWB can be seen without actually classifying them, on a daily basis. Almost all organisations and their employees have witnessed this. CWB is a part of typical employee behaviour knowing or unknowingly, activities such as theft, gossip etc are the most common forms.

CWB is basically a voluntary or intentional behavior that could harm the interest of the organization either directly or indirectly by hurting the employees which resultantly reduces their effectiveness (McShane & Glinow, 2005). Spector et al. (2006) has categorized CWB into five facets: (a) abuse; behaviors that can be harmful physically or psychologically. It may include making nasty comments about coworker or reduce the effectiveness of coworker; (b) sabotage; affects the physical property of the organization (i.e. undermining the physical workplace of the organization); (c) production deviance; behaviors that destroy the work process; (d) theft; results from economic need, job dissatisfaction or injustice and can be regarded a form of aggression against the organization (Mustaine & Tewksbury; Neuman & Baron, 1997) and; (e) withdrawal; behaviors that reduce the amount of time one works to less than what the organization requires. Sabotage and production deviance has a direct impact while the withdrawal behavior of employees has an indirect impact on the functioning of the organization (Fox, Spector, & Miles, 2001). Some employees may engage in CWB as emotional reaction or retaliation while others may opt it as a well planned behavior (Fox & Spector, 2010).

CWB can be classified in the following forms of deviance from normal employee behaviour:



Source: Google

## 6. RELATIONSHIP BETWEEN WORKPLACE INCIVILITY & COUNTERPRODUCTIVE WORK BEHAVIOUR

There are some studies that have focused on the link between incivility and counterproductive work behaviors (CWB; Penney & Spector, 2005; Roberts, 2012)

Workplace incivility is closely tied to CWB, reason being that employees tend to take their treatment at the workplace for their future performance. No satisfied employee will indulge into any form of CWB unless aggravated by displeasing events such as ill treatment, rude behaviour, rampant workplace exploitation and the like. It may not be assumed that WI is the only root cause for CWB, but it is definitely one of the major reasons of a fallout of a harmonious organisational climate.

Thus, interpersonal mistreatments can be antecedents to negative emotional responses in individuals (Feshbach, 1986). Workplace incivility from colleagues, such as being treated in rude or condescending manners, is damaging to the targeted individuals' emotions (Pearson Andersson, & Wegner, 2001).

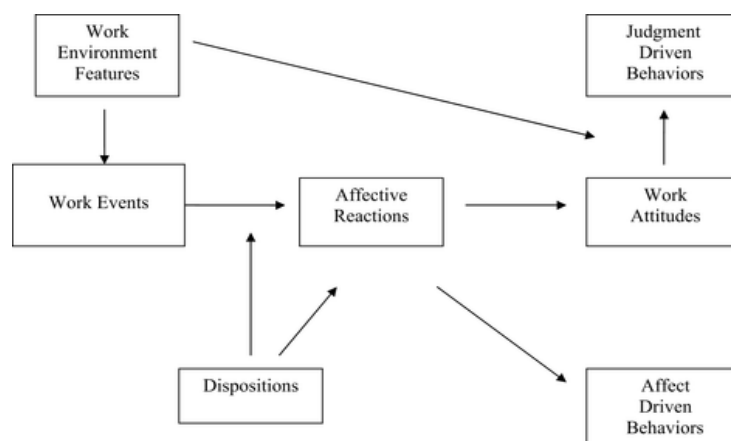
## 7. AFFECTIVE EVENTS THEORY

*People are emotionally responsive to events at the workplace.*

-AET (Weiss & Cropanzano, 1996)

Research in occupational health has shown that negative emotions created by mistreatments at the workplace may bring about adaptive responses, though not necessarily for the organization, such as work withdrawal behaviors. (Van Yperen, Hagedoorn, Zweers, & Postma, 2000)

According to affective events theory (AET; Weiss & Cropanzano, 1996), events that occur in the workplace and one's affective disposition influence affects experienced at the work, which in turn influence work behaviours. In particular, events that elicit negative affect, such as conflict with one's supervisor or colleagues, are posited to increase the propensity with which employees engage in inefficient work behaviors. Past research has established that people experience negative affect as a result of interpersonal conflict at the workplace (Bowling & Beehr, 2006). Affects are thought to influence the way in which a person reacts because affect not only influence one's thought processes but also facilitate behaviors that are intended to reduce negative affect (Rusting & DeHart, 2000)



Source: Affective Events Theory (Weiss & Cropanzano, 1996). Copyright Elsevier.

AET (Weiss & Cropanzano, 1996) postulates that significant affective events are able to influence employee behaviors because these events impact people's emotions.

Indeed, positive events at the workplace influence positive emotions, whereas negative events influence negative emotions (Miner, Glomb, & Hulin, 2005). Positive emotions, in turn, promotes a socially expansive, approach motivation (Cunningham, Steinberg, & Grev, 1980), and these motives may also bring about employee willingness to engaging in such motivation-laden behaviors as organization-directed and colleague-directed citizenship behaviors (Dalal et al., 2009). On the other hand, negative emotion tends to increase individuals' propensity to disengage from their job duties (Nolen-Hoeksema, 1991; Van Yperen et al., 2000). From a motivation perspective, negatively aroused affective states hinder individuals' energy or attentional resource expenditures because a person's attention is focused on the issues underlining the negative event(s) and these emotions use up time and attentional resources that could otherwise be directed toward the focal task (Weiss & Cropanzano, 1996)

## 8. CONCLUSION

As much as organisations may hate, incivility persists and its domino effect can be seen in form of CWB. This leads to an overall lower morales of the employees, negative work environment and hence declining performances of the company and its employees. As suggested by the AET, negative emotions have long lasted impacts on an individual leading to aggression, retaliation and frustration in work in contrast to motivation provided by positive work oriented emotions.

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**ECO- FRIENDLY STEWARDSHIP PRACTICES OF ASIAN COMPANIES: AN EMPIRICAL STUDY**

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**ABSTRACT**

*In the modern time rapid increase in accountability pressures have seen, particularly multinational companies. The increased call for transparency comes from two different angles, which show some (potential) convergence in terms of topics and audiences: accountability requirements in the context of corporate governance. This study examines the nature and extent of green reporting practices in the GRI approved companies of Asia continent. 41 sample companies using GRI framework were analyzed those which were using Green Accounting practices. Further the primary data of the financial personnel's including 50 CA, Finance managers and accountants were also analyzed to understand perception regarding the Green practices and its impact over profitability. The results of the paper revealed that incomplete reporting is being done by the selected companies in relation to Environment Performance. Further, good performance in relation to environment performance indication is done by Bharat petroleum followed by Kirloskar Group Company, Abu Dhabi Polymers Company (Borouge), Korean Air and Carlsberg Companies.*

*Keywords: Green Accounting, Green Reporting, Corporate Sustainability, Environmental Disclosure and Relationship.*

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**1.1. INTRODUCTION**

**“The heart and soul of the company is Creativity and Innovation” Creativity is thinking up new things Innovation is doing new things**

Modern accounting system for a new Creation & Innovation of Corporate Sustainability is need of the current era. Corporate Sustainability and green business is an enterprise that has minimum negative impact on the global or local environment, community, society and economy. Green Business strives to meet the triple bottom line. Triple bottom line is an accounting framework with three parts: social, environmental (or ecological) and financial. Environment or green accounting is an expanding field focused on factors like resource management and environment impact in addition to a company's revenue and expenditure.

Green accounting is also known as environmental accounting& Eco-System Accounting. Green accounting seeks to measure better sustainability by expanding gross measures of national welfare (product, investment, etc.) to include non-market values, in particular ones associated with environmental goods and services.

Green accounting is using as a management tools to conduct in various purposes for example, improving environment performance, controlling costs, investing in cleaner technologies, developing greener processes, and performing related to product mix, product retention and product pricing.

**1.1.1. GREEN REPORTING**

Environmental Accounting (EA) also called as Green Accounting (GA) refers to accounting practices incorporating the environmental costs, impacts and consequences. It is about aggregation of data that links the environment to the financials of the company, that have a long-run impact on both economic and environmental policy of the organization. It is something more than merely undertaking social cost benefit analysis of various projects or activities of the company or valuation of environmental goods and services produced. It is an effort to identify and portray the exhausted resources and cost rendered by organizations in return, to the environment. GA is all about bringing transparency in accounts as to environmental costs. It even tries to quantify – both in money terms as well as in physical units; the costs and benefits enjoyed by an organization because of its contribution towards environment related activities. Generally green accounting involves the identification, measurement and allocation of environmental costs, integration of these costs into business, identifying environmental liabilities, and communication the results to the stakeholders of the company as part of financial statements (Pramanik, 2002).

EA is often presented in annual report which is a report by the directors of a company that attempt to quantify the costs and benefits of that company's operations in relation to the environment. Environmental reporting refers to systematic and holistic statements of environmental burden and environmental efforts in organizations objectives, programs and their outcomes, organizational structures and systems for the environmental activities, in accordance with general reporting principles of environmental reporting, and those are published and

reported periodically to the general public. Sustainability reporting has broadened from environment only to social and financial issues, and a GRI guideline provides assurance regarding green activities. This paper seeks to measure the extent to which current assurance practice enhances transparency and accountability to organizational stakeholders and provide the growth to the firm as its impact over profit. Further it also analyses the views of the financial personnel's regarding the GA practices.

## 2.1. REVIEW OF LITERATURE

Muralikrishna & Manickam (2017) defined EA or green accounting, as to modification of the System of National Accounts to incorporate the use or depletion of natural resources. EA is a vital tool to assist in the management of environmental and operational costs of natural resources. Their work helped readers to be able to carry out natural resource accounting for important sectors like forests, water, and ecosystem services.

Khajehpour, Saboohi & Tsatsaronis (2017), have imposed new restrictions in the planning and management of energy systems. Comparison of the results shows that the responsibilities are higher than the emission reduction limits for service consuming units, while they are less for service providing units. The differences between the responsibilities and permits could represent the non-internalized external damage costs

Deegan (2017) revealed that Critical Perspectives of Accounting (CPA) has been a major vehicle for disseminating social and environmental accounting (SEA) research with the published research coming from a variety of 'critical', 'middle-of-the-road', and 'managerial' perspectives. Important issues associated with SEA researchers' role with engagement (both in terms of how they are undertaking their research, as well as where they are disseminating their results), in challenging existing practice, and in fostering a more enlightened and balanced form of education are also addressed.

Lehman & Kuruppu (2017) explores recent trends in social and environmental accounting research (SEAR). We offer a basic SEAR typology to examine the limitations and possibilities within the current discourse. SEAR has taken a corporate approach in liberal democratic social space. Our typology examines the opportunities for SEAR to interpret and create change in social practice.

Pedro L. Lomas, & Mario Giampietro (2017),proposes an approach to environmental accounting useful for studying the feasibility of socio-economic systems in relation to the external constraints posed by ecological compatibility. Their approach represented an integrated multi-scale tool for the analysis of nature conservation scenarios and strategies.

Arena, Conte & Melacini (2015) revealed that so far EA has given limited attention to the problem of linking environmental accounting instruments to corporate reward systems. Based on the case analysis, the paper concludes with some guidelines concerning the key aspects that should be taken into consideration for this prospect use: alignment with the company's strategy, definition of quantitative and common objectives, integration with other human resource practices, and possible connection to monetary rewards. Then, for each aspect, the paper discusses the rise of potential trade-offs between completeness and controllability of the included items, environmental and economic performance, cost and precision of the system itself.

Evangelinos, Nikolaou and Leal Filho (2015) proposes a normative framework to explain the influence of climate change policy on corporate environmental strategies, and at the same time describes how these strategies could be translated into an integrated environmental accounting model based on formal accounting statements. In particular, it aims to demonstrate a new approach of climate change accounting in order to overcome some important weaknesses of previous environmental accounting methods, such as accuracy and reliability. Currently, the majority of existing accounting methods record information on climate change on a voluntary basis. Even though they may assist businesses in designing essential environmental strategies and help public policy entities improve their knowledge on the results of such strategies, the informal nature of the accounting standards and the variable type of financial and non-financial information make the use of such models untrustworthy and complicated. Finally, an empirical example of this framework is also presented.

Mala and Chand (2015), the discipline of accounting and auditing has increasingly recognized judgment and decision making (JDM) as highly important attributes in the profession because individuals such as managers, auditors, financial analysts, accountants, and standard setters make pivotal judgments and decisions. Many studies undertaken in this domain of research also substantiate the significance of JDM in accounting and auditing. This study evaluates all the papers published in 10 accounting journals among the leading ones from 1980 to 2010 that fall within the domain of JDM research. The categorization of the studies reviewed in this paper is based on Bonner's (1999) three major determinants of JDM: *Person*, *Task*, and *Environment* variables. The review highlights the progress in the literature over the past three decades and also identifies the



methodological limitations of previous research. The identified limitations will be useful for improving the research method of future JDM studies in accounting and auditing. The review also draws inferences on how JDM research in auditing, which is well established, could usefully guide future JDM research in financial accounting.

Cormier, D., and Magnan, M. (2015) *revealed that* in determining its environmental disclosure strategy, a firm's management faces a tension between responding to the information needs of financial markets and maintaining its legitimacy within the community. In this paper, relying on information economics and legitimacy theory, we explore how firms resolve this tension. Results show that a firm's environmental disclosure enhances the quality of analysts' information context, which ultimately allows them to make better forecasts. Moreover, financial analysts seem to be able to decipher environmental information, discounting discourses that are inconsistent with a firm's underlying environmental performance. We find also that a firm's environmental disclosure serves another purpose, as it influences how its other stakeholders (beyond financial ones) perceive its legitimacy. Such enhanced legitimacy reduces the information uncertainty faced by financial analysts. Their results suggest also that both economic-based environmental disclosure and sustainable development and environmental disclosure are useful to analysts in making their forecasts and enhance a firm's legitimacy

Nasir Zameer Qureshi et.al.(2012) describes the environmental component of the business strategy, producing the required performance reports and recognizing the multiple skills required to measure, compile and analyze the requisite data. Special emphasis of the research is on generation of reports and their standards, for the range of business and regulatory purposes. They also identified the major obstacles for environmental accounting and reporting and concluded that for sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must. Unless common people of India are not made aware about environmental damages and safety, development of accounting in this regard is really becomes difficult.

Andrew & Cortese (2011) investigated the accounting for climate change and the self-regulation of carbon disclosure. They examined carbon related data produced by Australian mining companies in compliance with the information request sent to them by the CDP over a three year period. They resulted that CDP information was not comparable since the companies used a combination of methods for their disclosures and thus limited in its usefulness.

Joshi, and Gao (2009) studied the multinational corporate social and environmental disclosures on websites. They selected 49 multinational companies for the study. For the environmental disclosure they study web pages of 49 multinational companies and they found that those companies which have a strong equity base and have a good financial condition are voluntarily disclose more environmental information than other companies.

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Tagesson, Blank, Broberg and Collin (2009) examined the extent and context of social and environmental reporting in Swedish Listed Corporation. They study 267 Swedish Listed Companies websites for environmental disclosures and they found a positive relationship between environmental disclosures and size and profitability with government companies disclosing more environmental information than private companies.

Allam and Lymer (2009) examined in their article "Benchmarking financial reporting online" that social & environmental disclosures and other disclosures on websites of 50 companies from five industries (USA, UK, Canada, Australia and Hong Kong). They found that 44% of US companies, 86% of UK companies, 42% of Canadian, 48% of Australian and 24.5% of Hong Kong companies disclosed social and environmental information on their websites.

Malarvizhi (2008) tried to establish the approach and scope of environmental accounting and reporting, as it exists today. The study was based on a sample of 24 documents comprising annual reports, environmental or sustainability reports and other relevant reports of past years. Initially companies in the sample were classified as manufacturing and nonmanufacturing sectors. Since some companies operate in both sectors analyzed, the assignment to a specific one was determined on the basis of main activity carried out by the company. He found the key environmental indicator areas, as identified by the World Business Council for Sustainable Development and by the Global Reporting Initiative. The most relevant types of environmental information, as identified by them are: Environmental policy; Environmental impacts; Environmental management systems; Environmental targets and Environmental performance disclosure.

Mitchell, Percy & McKinlay (2006) examined Voluntary Environmental Reporting Practices and they found that a successful EPA prosecution between 1994 and 1998. They studied environmental disclosures of 20 Australian firms by using content analysis technique. Their findings of the study were positive in nature i.e. the disclosures made by their sample firms to be predominantly positive in nature.

Cowan and Gadenne (2005) studied an Australian Corporate Environmental Reporting. They studied a comparative analysis of disclosure practices between voluntary and mandatory disclosure system. They studied Australian firms as sample companies with the help of content analysis technique. They found a tendency by their sample Australian firms to disclose higher levels of positive environmental news.

Chauhan (2005), explains the various forms of environmental accounting, its scope, limitations and legal framework in Indian context. He came out with a suggested framework for implementing green accounting practices in India and concluded that It is the call of the time that corporate prepare a firm environmental policy, take steps for pollution control, comply with the related rules and regulations, mention adequate details of environmental aspects in the annual statements. For sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must.

Green accounting methodology for India and its States, a project done by Haripriya Gundimeda et.al (2005) revealed that Green Accounting for India is desirable, feasible, realistic and practicable and that a start can be made with available primary data already being collected by various official sources of the Government of India. They also pointed out that there is a dearth of focused sustainability analysis and information provided to policy makers at the National and State levels in India. As a result, the processes of public debate, government planning, budgetary allocation, and the measurement of economic results are in effect being conducted without a sustainability framework. High GDP growth usually accompanies investment in physical infrastructure, which places mounting pressure on the country's environment and natural resources. However, there is an asymmetry between manmade and natural capital in that depreciation in the former reflects in GDP accounts but the latter does not. Recognizing that GDP growth is too narrow a measure of economic growth and not a measure of national wealth, they propose a "Green Accounting" framework for India and its States and Union Territories.

Hecht (1997) explains environmental accounting, its importance, how it is done who is working on it and how to get started. It talks about the System of National Accounts (SNA) which is the set of accounts which national governments compile routinely to track the activity of their economies. SNA data are used to calculate major economic indicators including gross domestic product (GDP), gross national product (GNP), savings rates, and trade balance figures. The data underlying these aggregate indicators are also used for a wide range of less publicized but equally valuable policy analysis and economic monitoring purposes

### **3.1 RESEARCH GAP**

From company point of view; investment made by the corporate sector for minimization of losses to environment must be always questioned and they always from internal part need to correlate it with their return or profit. They also like to check that their investment made results into the environment saving equipment/devices increases their return or not? All types of Environmental losses are indirectly due to business operation/activities including the Degradation and destruction like soil erosion, loss of bio-diversity, air pollution, water pollution, sound pollution, problem of solid waste, coastal & marine pollution.

The accounting for Environment impact is not easy, as losses to environment cannot be measured exactly in monetary value. Further, it is very hard to decide that how much loss was occurred to the environment due to a particular industry. For this purpose approx idea can be given by the accounting personnel's, so measuring their views regarding it must be measured.

#### **3.1.1. OBJECTIVE OF THE STUDY**

1. To measure the accounting disclosure of green practices in sample units.
2. To analyze the Green Performance Indicator and Green Reporting.
3. To assess the relationship between Green Performance Indicator & Financial Performance Indicator.
4. To suggest the improvement in the current practices of green accounting.

#### **3.1.2. HYPOTHESIS**

**H1:** There is no significant relationship between Environment Performance Indicator and Financial Performance.

**H2:** Insignificant difference exists between disclosures practices of the selected Asian Companies.

#### **3.1.3. SCOPE OF THE STUDY**

The Study is limited scope to 41 Companies for five years i.e. 2012 to 2016.

### 3.1.4. RESEARCH DESIGN

**Sampling Technique:** In this study we used Judgmental Sampling Technique. With the help of this technique we have selected 41 large/MNE Asian Companies by the GRI web portal. Self-declared (level 3/3.1) companies were selected as a sample. Sample & Sample Profile represented as a tabular form are as follows:

**Sample characteristics**

Name of Company	Operating Field	Establish year	Head-quarter	MNC/Do mestic	EPS	Country name
Aboitiz Equity Ventures	Conglomerates	1989	Taguig	large	2.062	Philippines
Abu Dhabi Commercial Bank (ADCB)	Real state	1975	Abu Dhabi, United Arab Emirates	MNE	0.356	United Arab Emirates
Abu Dhabi Gas Liquefaction Company	Energy	1973	Abu Dhabi United Arab Emirates	large	0	United Arab Emirates
Abu Dhabi National Energy Company (TAQA)	Energy Utilities	2005	Abu Dhabi, United Arab Emirates	large	-0.222	United Arab Emirates
Abu Dhabi Polymers Company (Borouge)	Chemicals	1998	Abu Dhabi, UAE	MNE	0	United Arab Emirates
Abu Dhabi Water & Electricity Authority	Energy Utilities	1998	Abu Dhabi, UAE	large	0	United Arab Emirates
ADAC	Aviation	1903	Germany	large	0	United Arab Emirates
ADNOC Distribution	Energy	1973	Abu Dhabi, United Arab Emirates	large	0	United Arab Emirates
Airports of Thailand PLC	Aviation	2002	Bangkok.	large	0	Thailand
A-REIT	Real Estate	1947	New York City	MNE	17.839	Singapore
Attock Refinery Limited	Energy	1913	Punjab	large	7.094	Pakistan
Askey Corporation	Computers	1989	Taipei, Taiwan	MNE	0	Taiwan
Bank of the Philippine Islands (BPI)	Financial Services	1851	Makati City, Philippines	large	3.082	Phillippines
Bharat Petroleum	Energy	1952	Mumbai	large	4.964	India
Binani Group	Construction Materials	1872	Mumbai	large	60.416	India
Carlsberg	Food and Beverage Products	1847	Valby, Copenhagen	MNE	0	Malaysia
Cebu Holdings	Real Estate	1860	Switzerland	MNE	0.154	Philippines
Cement Industries of Malaysia	Construction Materials	1966	Kuala Lumpur Malaysia	MNE	19.08	Malaysia
Chambal fertilizer	Chemicals	1985	New Delhi	large	5.664	India
Ch-karnchang	construction	1972	Bangkok	large	1.74	Thailand
Daum Company	Other	2014	Jeju city	large	0	Korea
Doha Bank	Financial Services	1978	Qatar	large	4.84	Qatar
Dubai Aluminium (DUBAL)	Metals Products	1979	Dubai Abu Dhabi	large	0	United Arab Emirates
Engro Polymer	Chemicals	1967	Karachi	large	-0.074	Pakistan
Equate	Chemicals	1995	Kuwait	large	17.9	Kuwait
Essar Shipping Ltd	Conglomerates	1992	Mumbai	large	-4.122	India
Fatima Fertilizer	Chemicals	1936	Lahore	large	4.032	Pakistan
GASCO	Energy	1978	Abu Dhabi UAE	large	0	United Arab Emirates
Gazit globe	Real Estate	1992	Israel	MNE	3.756	Israel
Golden agri	Agriculture	1996	Singapore	MNE	1.964	Singapore
GS Caltex	Energy	1967	Seoul, South Korea	MNE	0	Korea
Havells	Other	1983	Noida	large	24.156	India
Hindalco Industries	Mining	1958	Mumbai	large	7.016	India
Indocement	Construction	1975	Jakarta 12910 Indonesia	large	0	Indonesia
Indus tower	Telecommunications	2007	Haryana	large	0	India
Jumeirah Group	Tourism/Leisure	1997	Dubai UAE	large	0	United Arab Emirates
Kirloskar Group Company	Equipment	1888	Pune	large	3.594	India

Korea agri	Public Agency	1967	South korea	large	0	Korea
Korea Agro-Fisheries & Food Trade	Public Agency	1967	South korea	large	0	Korea
Korea East-West Power Corporation	Energy	1898	Ulsan, South Korea	large	2852.8	Korea
Korean Air	Aviation	1969	Seoul, South Korea	large	0	Korea

#### 4.1 DATA COLLECTION

In this study data were collected by both the method primary as well as secondary method. Questionnaire method was used to collect primary data and Sustainability & Annual Reports were used to collect Secondary data. All the Reports are collected by Company Website.

#### Technique of Data Analysis

As per the first objective of the study by using the reports with Content Analysis Technique to analyze the data following hypothesis were developed:

**H1:** There is no significant relationship between Environment Performance Indicator and Financial Performance.

To analyze the above hypothesis the statistical method of correlation is being used. Further the correlation is calculated between the environmental performance and the financial measures like Earning per share (EPS), Market Capitalization (MCAP) and Earnings before interest and taxes (EBIT). To analyze the data with the environmental performance the data with the huge figures were converted into normal data by using the logarithm method. The results of the pearson correlation is shown below:

Correlations					
		Environment Performance Score	log10_EPS	log10_MCAP	log10_EBIT
Environment Performance Score	Pearson Correlation	1	-.018	.061	.880**
	Sig. (2-tailed)		.910	.703	.000
	N	41	41	41	41
log10_EPS	Pearson Correlation	-.018	1	.031	-.095
	Sig. (2-tailed)	.910		.849	.554
	N	41	41	41	41
log10_MCAP	Pearson Correlation	.061	.031	1	.051
	Sig. (2-tailed)	.703	.849		.750
	N	41	41	41	41
log10_EBIT	Pearson Correlation	.880**	-.095	.051	1
	Sig. (2-tailed)	.000	.554	.750	
	N	41	41	41	41

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The above table clearly indicated that the above hypothesis is rejected as Environment Performance Score has a significant ( $p < 0.05$ ) and positive correlation with the EBIT ( $r = 0.880$ ) in the selected companies, which means that the profit and environmental Performance Score both goes simultaneously and result as the increase in profitability.

Further to identify the above mentioned result, and to measure that the secondary data the following hypothesis were made:

**H1:** The attributes configuring environment performance score has no relation with the financial performances of the companies.

To check the above hypothesis and to measure the Environment Performance Score the statistical tool multiple regression is used and the results were displayed as under:

#### Multiple regression analysis

Descriptive Statistics			
	Mean	Std. Deviation	N
Environment Performance Score	17.5610	12.63932	41
log10_EPS	.9036	.60485	41
log10_MCAP	1.7204	1.59668	41
log10_EBIT	1.1330	.38485	41

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.880 <sup>a</sup>	.775	.769	6.07242	.775	134.294	1	39	.000
a. Predictors: (Constant), log10_EBIT									
ANOVA <sup>b</sup>									
Model		Sum of Squares		df	Mean Square		F	Sig.	
1	Regression		4952.002	1	4952.002		134.294	.000 <sup>a</sup>	
	Residual		1438.095	39	36.874				
	Total		6390.098	40					
a. Predictors: (Constant), log10_EBIT									
b. Dependent Variable: Environment Performance Score									

Coefficients <sup>a</sup>											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-15.196	2.982		-5.097	.000					
	log10_EBIT	28.912	2.495	.880	11.589	.000	.880	.880	.880	1.000	1.000
a. Dependent Variable: Environment Performance Score											
Excluded Variables <sup>b</sup>											
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics			Minimum Tolerance		
						Tolerance	VIF				
1	log10_EPS	.066 <sup>a</sup>	.864	.393	.139	.991	1.009			.991	
	log10_MCAP	.016 <sup>a</sup>	.210	.835	.034	.997	1.003			.997	
a. Predictors in the Model: (Constant), log10_EBIT											
b. Dependent Variable: Environment Performance Score											

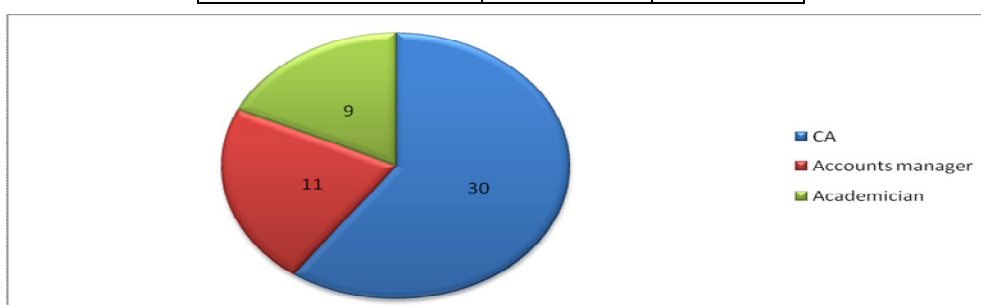
As per the above table Part Model Summary the value of Adjusted R Square is 0.769 revealed that the selected variable log10\_EBIT has a significant impact over the Environment Performance Score of the selected companies. Further the ANOVA model is also fit as per the ANOVA part revealing that the F value 134.294 is significant and we can accept the selected independent variable for the purpose of the measuring independent variable. And finally it concludes that the EBIT is the variable that has significant impact over the Environment Performance Score.

## PRIMARY DATA ANALYSIS

To measure the above results the responses from the financial personnel's were also gathered. First the descriptive statistics were measured and presented as under:

### Distribution of respondents as per their Designation

Respondents	Frequency	Percent
CA	30	60
Accounts manager	11	22
Academician	9	18
<b>Total</b>	<b>50</b>	<b>100</b>

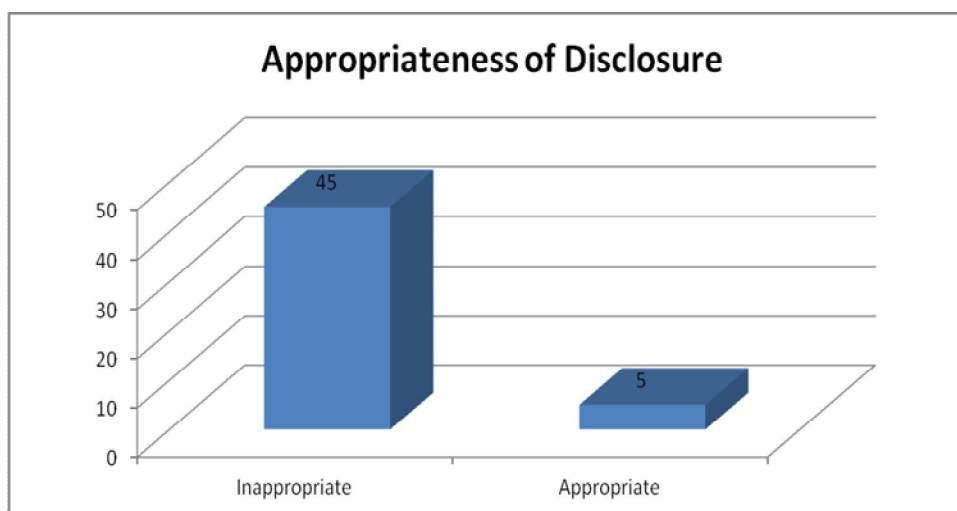


The above table and diagram suggests that there are 60 percent CA's views were gathered including 22 Percent accounts managers and 18 percent Academician.

**Appropriateness of Disclosure:** the views regarding the Appropriateness of Disclosure were also measured and it revealed the following information:

**Appropriateness of Disclosure**

Appropriateness	Frequency	Percent
Inappropriate	45	90.0
Appropriate	5	10.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

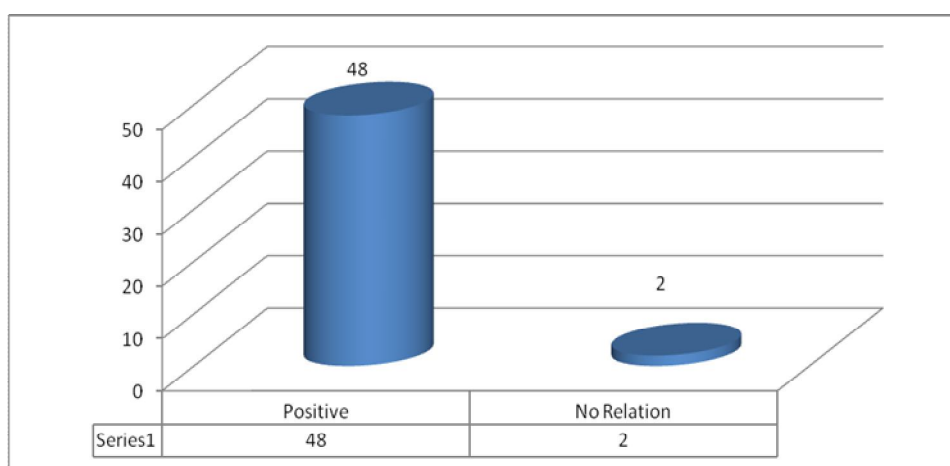


The above table and diagram revealed that the maximum respondents 90 Percents were in favor that the current disclosure is inappropriate and companies must improve upon the current practices.

**Relation between profitability and green accounting and reporting practices:** to measure relation between the profitability and green accounting practices the question is being asked to the respondents and the results were tabulated as under:

**Relation between profitability and green practices**

Relation	Frequency	Percent
Positive	48	96.0
No Relation	2	4.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

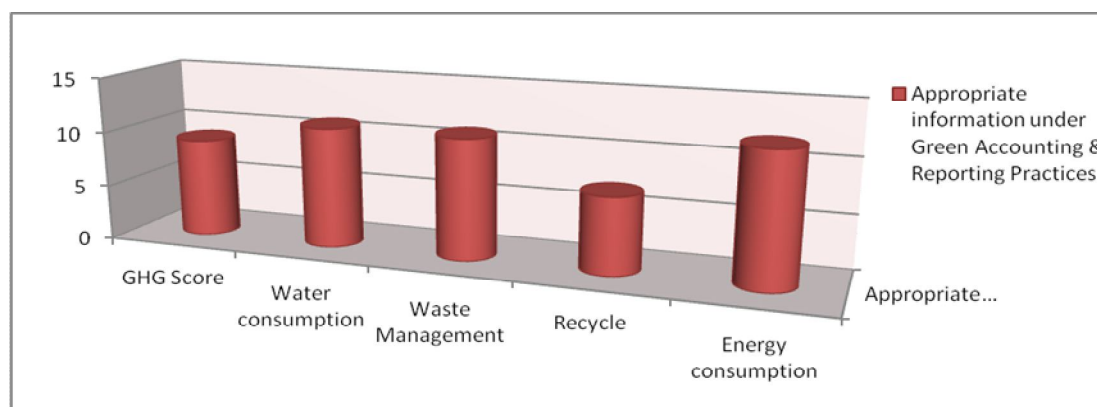


From the above table it is clear that there is relation between profitability and green accounting and reporting practices is positive as per the 90% of the respondents.

#### **Appropriate information under Green Accounting & Reporting Practices for Corporate Sustainability**

The information related to green accounting and reporting practices are appropriate or not is measured in terms of various variables and gathered from the respondents. The results revealed the following:

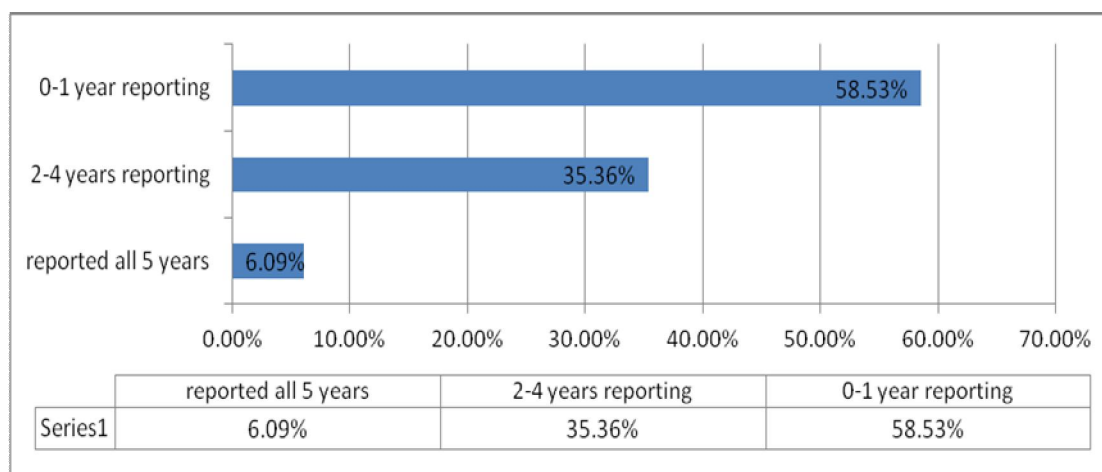
Sustainability factors	Frequency	Percent
GHG Emission Score	9	18.0
Water consumption	11	22.0
Waste Management	11	22.0
Recycle	7	14.0
Energy consumption	12	24.0
<b>Total</b>	<b>50</b>	<b>100.0</b>



The result of the information related to green accounting and reporting practices revealed that the Energy consumption followed by the water and waste management has significant impact on the information under Green Accounting & Reporting Practices for Corporate Sustainability.

Further the reporting periods were measured for the purpose of providing disclosure of the Environment Performance, the results were as under:

Reporting period	Percentage of Companies
Reported all 5 years	6.09%
2-4 years reporting	35.36%
0-1 year reporting	58.53%



The above table revealed that the maximum companies were reported the Environment Performance for the period of one year followed by 2-4 years of reporting. This means that the incomplete reporting is being done by the selected companies.

On the ground of 10 variables of environmental performances i.e., GHG emission Score, Nox emission Score, Sox emission score, Water score, Waste score, Material Score, Energy & Electricity score, Recycle Score, Environment Cost score, Environment Saving Score were measure by the following hypothesis between the companies:

**H2:** Insignificant difference exists between disclosures practices of the selected Asian Companies.

The result revealed that the hypothesis were accepted and we can conclude that there is a huge difference between the score of the companies out of 60 points and the best 5 companies with their total reporting score is as under:



Rank	Company Name	GHG emission Score	Nox emission Score	Sox emission score	Water Score	Waste score	Material Score	Energy & Electricity score	Recycle Score	Environment cost score	Environment saving score	Total score
1	Bharat petroleum	5	5	5	5	5	0	5	5	8	0	43
2	Kirloskar Group Company	5	2	4	5	5	5	5	4	5	0	40
3	Abu Dhabi Polymers Company (Borouge)	4	4	4	4	4	4	4	0	8	0	36
4	Korean Air	4	4	4	4	4	0	4	4	7	0	35
5	Carlsberg	5	5	5	5	5	0	3	5	0	0	33

Out of all the above analysis as per the views of the selected financial Personnel the best environment performance indication score practiced by the top 5 companies includes in the above table. This revealed that the highest performances were done by Bharat petroleum followed by Kirloskar Group Company, Abu Dhabi Polymers Company (Borouge), Korean Air and Carlsberg Company.

#### Reasons for failure to incorporate environmental cost and issues in annual reports

S. No.	Reasons	Rank
1	Lack of Accounting Standards	III
2	Voluntary Nature of Environmental Accounting	IV
3	Lack of clear cut policy	II
4	Difficulty in measurement of Environmental Cost & Benefits	I
5	Environmental Audit	VI
6	Lack of Public awareness	V

#### SUGGESTIONS

- Public awareness was created by Media. Media supports for promoting environment awareness through Mass Media & Institutional Media. Mass media i.e. Radio, Television, Newspapers & Magazines and Institutional Media are School, College and Govt. Institutes.
- Implement Environmental Costing System to measure the Environment Costs & Benefits.
- To adopt the clear cut policy regarding Green Accounting & Reporting.
- Regulatory bodies should develop a standard for the improvement of Green Accounting & Reporting.
- It should be mandatory for the Organizations.
- Green Accounting research and studies should be encouraged.
- For the evaluation of Environment Accounting & Reporting a management tool is needed i.e. Environmental Auditing

#### CONCLUSION

The results of the paper revealed that the EBIT is the variable that has significant impact over the Environment Performance Score. Further the variable log10\_EBIT has a significant impact over the Environment Performance Score of the selected companies. The primary data analysis revealed that maximum respondents 90 percents were in favor that the disclosure is appropriate, the relation between profitability and green accounting and reporting practices is positive as per the 90% of the respondents; Energy consumption followed by the water and waste management has significant impact on the information under Green Accounting & Reporting Practices for Corporate Sustainability. Environment Performance for the period of one year followed by 2-4 years of reporting means that the incomplete reporting is being done by the selected companies. Further the results also revealed that the Indian companies are having highest performances on environment indication as given by Bharat petroleum followed by Kirloskar Group Company, Abu Dhabi Polymers Company (Borouge), Korean Air and Carlsberg Company.

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## **ECONOMIC ASSESSMENT OF SOLID WASTE MANAGEMENT THROUGH COMPOSTING**

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### **ABSTRACT**

*The generation and accumulation of solid waste creates many problems to the living beings and environment. Composting and vermicomposting are the advantageous methods for recycling of these solid wastes. The excess use of chemical fertilizers in agriculture is harmful for soil fertility and also expensive. Hence there is a need to adapt biological methods for improving soil fertility through composting and vermicomposting technologies for their environment friendly nature and cost effectiveness. The present study states the development of compost and vermicompost from different organic waste (vegetable waste, municipal solid waste, food waste and farm yard manure) in different proportion. The experiment was carried out in mud pots for waste conversion at small scale for production of organic manure in urban conditions. The fertilizer quality of prepared compost was analysed by different physicochemical parameters and found to be suitable to be used as organic manure.*

**Keywords :** Solid Waste, economical method, sustainable development, agriculture.

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### **INTRODUCTION**

Solid waste could be defined as non-liquid and nongaseous products of human activities, regarded as being useless (BabaYemi and Dauda, 2009). According to the Municipal Solid Waste (MSW) Rules 2000, MSW includes commercial and residential waste generated in a municipal or notified area, in either solid or semisolid form, excluding industrial hazardous wastes, but including treated bio-medical wastes (Toolkit for Solid Waste Management, 2012). Management of such solid waste is one of the major environmental issues as urban population growth and economic development lead to increasing generation of MSW (Waste Composition Study, 2009). The per capita waste generation rate in India has increased from 0.44 kg/day in 2001 to 0.5 kg/day in 2011, fuelled by changing lifestyles and increased purchasing power of urban Indians. There are 53 cities in India with a million plus population, which together generate 86,000 TPD (31.5 million tons per year) of MSW at a per capita waste generation rate of 500 grams/day (Annepu, 2012). Solid Waste Management involves activities associated with generation, storage and collection, transfer and transport, treatment and disposal of solid waste. Poor collection and inadequate transportation causes the accumulation of MSW at every nook and corner. The management of MSW is going through a critical phase, due to the unavailability of suitable facilities to treat and dispose of the larger amounts of MSW generated daily in metropolitan cities (Kaushalet al., 2012). In view of the sensitivity of the topic, the study makes a systematic inquiry into the existing waste management practices in the city of Gandhinagar covering both the demand as well as the supply perspective. Gandhinagar, the capital city of Gujarat, is divided into 30 sectors constituting residential areas and commercial complexes. Waste collection and management in all the 30 sectors is the sole responsibility of GMC. There are many small villages in and around Gandhinagar. The outskirts of Gandhinagar fall under the Town Planning (TP) scheme, in which Gandhinagar urban development authority (GUDA) is actively engaged in waste collection and disposal. The local body of every city or village adopts a distinctive waste management practice. GMC and GUDA provide respective illustration of waste management practices adopted in Gandhinagar and the outskirts of Gandhinagar. In the outskirts of Gandhinagar, there are various areas which have not tied up with GUDA for waste management.

Vermicomposting is a low-technology, environmentally-friendly process used to treat organic waste. The resulting vermicompost has been shown to have several positive impacts on plant growth and health. This organic fertilizer is therefore increasingly considered in agriculture and horticulture as a promising alternative to inorganic fertilizers and/or peat in greenhouse potting media. However, the effects of vermicompost on plant-soil systems are not yet fully understood (Lazcano and Domínguez, 2011).

In the present era of global climate change agriculture land is getting reduced and use of chemical fertilisers and associated plant protection chemicals are increasing. This is expensive leading to adverse effect on environment and affects the long term productivity. So there is a need to look back into the indigenous technologies that could be utilised to improve the soil quality and bring about sustainable development in agriculture. The present study was carried out with an objective to develop a low cost technology by utilising the locally available materials for organic manure production. This activity helps in entrepreneur development through production of manure and its marketing and utilisation in crop production. Further the technology help in solid waste management. The degradable wastes can be collected and manure can be prepared that can be used to produce quality crops that can give more yield. Organic products fetch more global market price compared to the

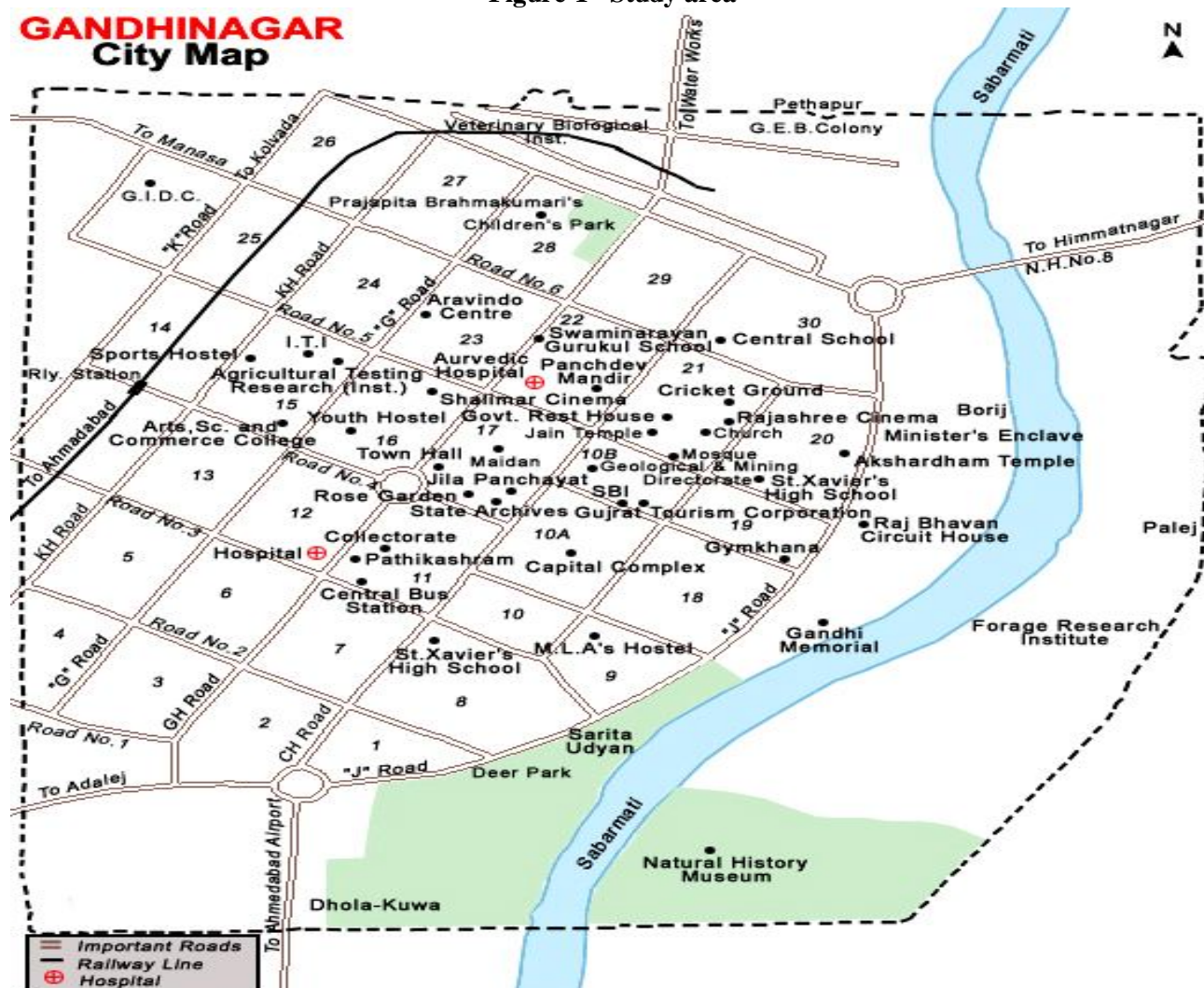
conventional products. So the study helps to develop aneco friendly technology for sustainable development in agriculture.

## METHODOLOGY

### Study area

Gandhinagar district of Gujarat state lies between 72.3' – 73.7' east (longitude) to 23.0' - 23.6' north(latitude) with a geographical area of 2,163.48 sq.km.

Figure-1 Study area



## COMPOSTING SYSTEM

The study was conducted with organic waste materials in different ratios (Table 1). The degradable solid wastes that are generated everyday by human activity can be utilised for the production of compost. The vegetable wastes from local vegetable and fruit market used in this experiment contained onion peel, discarded brinjal, green chillies, coriander, cabbage, tomato and drumstick. The food waste from university cafeteria had cooked rice and wheat, vegetables, legumes and spices that are dumped from the used plates. The Municipal Solid Waste (MSW) from residential area included different domestic wastes like paper clippings, cloth, hard boards, leaves and sticks, disposable cups etc. These wastes were purposely selected for the study as these are produced by every household on daily basis and dumped into the municipal waste bin which is transported to the landfill site. This is the routine of every part of world. Even though there are many researches carried out in this the practical application will be possible by community participation.

The collected materials were shredded and weighed in specific ratios and transferred to mud pots of 10kg capacity. They were layered and allowed to remain in anaerobic condition for 30 days as there will be unpleasant odour from the decomposing material. Further they were subjected to semi aerobic condition by covering with jute bags. The moisture content was adjusted by regular water sprinkling. The complete process was carried out for 75 days. On 75<sup>th</sup> day of composting the material was collected and analysed for its manure value.



Table-1: Design of treatments

Biodegradation Treatment codes	Description
BT <sub>1</sub>	Vegetable waste & Fruit waste+ Farm yard manure
BT <sub>2</sub>	Vegetable waste & Fruit waste + Farm yard manure + Food waste
BT <sub>3</sub>	Vegetable waste & Fruit waste + Farm yard manure + Biodegradable municipal solid waste
BT <sub>4</sub>	Vegetable waste & Fruit waste + Farm yard manure + Food waste + Biodegradable municipal solid waste
BT <sub>5</sub>	Vegetable waste & Fruit waste + Farm yard manure + Food waste + Biodegradable municipal solid waste + Earthworms

## RESULTS AND DISCUSSION

The present work is applicable for both rural and urban sectors. In urban sectors due to lack of more area this technology can be carried out in mud pots in small scale. The prepared compost and vermicompost can be used in kitchen garden and terrace garden that can give healthy fresh vegetables and greens. In present days, it is being practiced across the world to get organic products considering the health consequences due to pollution and chemically grown food crops. The wastes that are accumulated in local markets can be collected and compost can be produced by the local people. And the daily wastes from household can be converted into biomass energy. It does not require additional time and helps to create a pollution free environment.

In rural areas, this technology can be carried out in large scale because the material which are required for this technology to apply at large scale are easily available. The compost units can be developed with locally available materials. The prepared compost and vermicompost can be used in the crop field at a large scale and it helps in improving rural living conditions. This can help to develop entrepreneurship in these areas and utilisation of the organic manure help to improve the soil quality and crop production.

## ECONOMICS OF VERMICOMPOST PRODUCTION

The different materials used in production of vermicompost and their cost estimation is given the following table 2. In urban area for the applying this technology at a small scale, there is requirement for the materials like mud pots (10 kg), different kinds of solid waste, earthworms, gunny bags, polythene bags, gloves, masks, and a person for handling. The rate and quantity of different materials which are required and available in local area are given in the following table.

Besides this in rural area for applying this technology at a large scale there is need of some local materials like wood, preparation of thatch, nails, polythene sheets, Sieve, earthworms, and a local person which act as a carpenter for the construction of permanent shed. The cost and amount of different materials which are required for the preparation of a permanent shed are given in the following table 3. Composting of kitchen waste composting is an effective method for reducing its dumping to landfill and conserve the environment. Effective composting process of processed or unprocessed food that forms major part of kitchen waste involves the use of bulking materials, waste load size and presence of and presence of microbes. (Fang et al., 2001; Ishii and Takii, 2003; Cekmecelioglu et al., 2005; Stabnikova et al., 2005; Cavuela et al., 2006; Chang and Hsu, 2008).

Table-2: Expenses for the vermicompost production in pots

S. No.	Item	Measurements	Amount	Unit cost (Rs)	Total cost (Rs)
1.	Mud Pots (10 Kg capacity)	No	05	140	700
2.	Transportation charges for pots	/km	20/km	04 x 20	80
3.	Transportation for vegetable waste sampling	/km	20/km	03 x 20	60
4.	Transportation for MSW	/km	20/km	03 x 20	60
5.	Transportation for FYM	/km	20/km	05 x 20	100
6.	Earthworms (1 Kg)	Kg	720	½ x 720	360
7.	Gunny bags	No	20	5 x 20	100
8.	Polythene bags (20 kg capacity)	No	10	5 x 10	50
9.	Gloves	No	7.5	6 x 7.5	45
10.	Mask	No	10	6 x 10	60
11.	Handling and processing charges person	Mandays	300	2 x 300	600
	<b>Grand Total</b>				<b>2215</b>

**Table-3: Estimated costs for large scale production(3x 6 x 3ft) using permanent shed**

S. No.	Item	Measurements	Amount	Unit cost (Rs)	Total cost (Rs)
1.	Wood	No	20	50	1000
2.	Thatch	Bundle	4	100	400
3.	Nails	Kg	1	40	40
4.	Polythene sheet	M	16	20	320
5.	Sieve	M	2	35	70
6.	Earthworm	Kg	2	720	1440
7.	Carpenter(for construction)	Man days	3	200	600
	<b>Total</b>				<b>3870</b>

Shiva Kumaret al. (2008) have documented that the total cost of production of vermicompost per ton was Rs.1337. The total marketing costs amounted to Rs.200 per ton in channel-I and Rs. 150 per ton in channel-II. The net returns per ton of vermicompost were Rs. 1215 in channel-I compared to Rs.1145 in channel-II. The net present value for the vermicompost production was Rs. 99827, the benefit cost ratio at 12 per cent discount rate was 3.44, internal rate of return was 38 per cent and payback period was 1.71 years.

#### MARKET RATE COMPARISON OF VERMICOMPOST WITH DIFFERENT CHEMICAL FERTILIZERS

When we compare the market rate of vermicompost with different chemical fertilizer, it is found that the vermicompost is very cost effective as compare to any other chemical fertilizer (Table 4). Beside this vermicomposting is also a cost effective ecofriendly waste management technique.

**Table-4: Market rate comparison of vermicompost with different chemical fertilizers**

S.No.	Fertilizers	Market rate (Rs/100 kg)
1	Vermicompost	360
2	Nitrogen (Urea)	636
3	Phosphorous (DAP)	2170
4	Potassium (Potash)	1154
5	NPK (12:32:12)	2170
6	NPK (20:10:10)	1300
7	Super danadar	780

#### CONCLUSION

Finally it is concluded that this technology of composting and vermicomposting is very beneficial, cost effective, environment friendly and a best method of solid waste management and it is also applicable in different sectors of society like urban and rural sectors. Different crop products yielded through this technology are more nutritious and healthy for living beings and gives better return in global market.

#### ACKNOWLEDGEMENT

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**EMERGENCE AND EVOLUTION OF RESIDENTIAL TYPOLOGIES IN THE UNAUTHORISED COLONIES**

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**ABSTRACT**

*The unauthorised colonies are illegal or unplanned settlements that started to emerge in Delhi, soon after the independence of the country in 1947. Considered as the bye-product of modern urban planning the emergence and spread of the unauthorised colonies was collateral to the successive Master Plans in the city. Despite the efforts of the concerned agencies to undertake planned development the unauthorised colonies in Delhi have grown and transformed into mass affordable housings. At present in there are about 2000 of these colonies with 4 to 7 million population as per various estimates.*

*The expansion of the unauthorised colonies in past decades has resulted in the emergence and evolution of different types of residential typologies. Initially, the settlement were characterised by the sparse built-up of single storied semi-permanent tenements, which have now evolved into high density of multi-storeyed apartments. While, the unauthorised colonies are considered as a problem in the domain of urban planning, however they are a manifestation of aspirations of the people and exhibit the capacity of people to generate mass housing by themselves. These colonies are exhibiting potential to act as the resource for meeting the housing demand which DDA has failed to provide.*

*This is an original paper based on the primary architectural surveys conducted by the author as part of his Ph.D. on the Informal Housing Stock Generation and studies the emergence and evolution of various residential typologies and its socio-economic relationships in the unauthorised colonies of Delhi with the objective to identify a reference to generate informal mass housings.*

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**1. INTRODUCTION: UNAUTHORISED COLONIES OF DELHI**

The megacity of Delhi has about 1797 unauthorised colonies with estimated population of 3 to 4 million people out of the total population of 17 million. (GNCTD; Unauthorised Colonies Cell, Department of Urban Development, GNCTD 2015) The unauthorised colonies are unplanned settlements which are built by the people in contravention of the Master Plans of Delhi (MPD). The unauthorised colonies are one of the eight types of residential settlements as per the Economic Survey of Delhi which include, slums, JJ clusters, Resettlement colonies and planned colonies. (Planning Department, Government of NCT of Delhi; Government of NCT of Delhi 2015) These colonies are categorised as 'unauthorised' because they are either built on land notified for acquisition or in contravention to the proposed landuse. Unofficial estimates put their number at 2000 with a population of about 6 millions, which is possible due to substantial floating and migratory population. (Shahana, S. S., Banda 2014) The population size of these colonies make them larger than many cites like Lucknow, Jaipur, Bhopal etc in terms of population. (Census 2011)

Unauthorised Colonies started to emerge soon after the independence and continued to grow both in numbers and density. The reasons for the emergence of the unauthorised colonies are multiple, among them the shortage of planned housing being the most common. These colonies fall under two categories, regularised and unregularised. (Tejendra Khanna 2006) Regularised colonies are recognised by the government of Delhi which makes them entitled for basic infrastructure like water supply, sewerage, roads etc. while unregularised are considered illegal, thus do not receive these services. (Khan, Nisar 2015) The number of regularised colonies is 1200 till the last phase of regularisation in 2012. (Nisar Khan; Prof. S.M. Akhtar 2017)

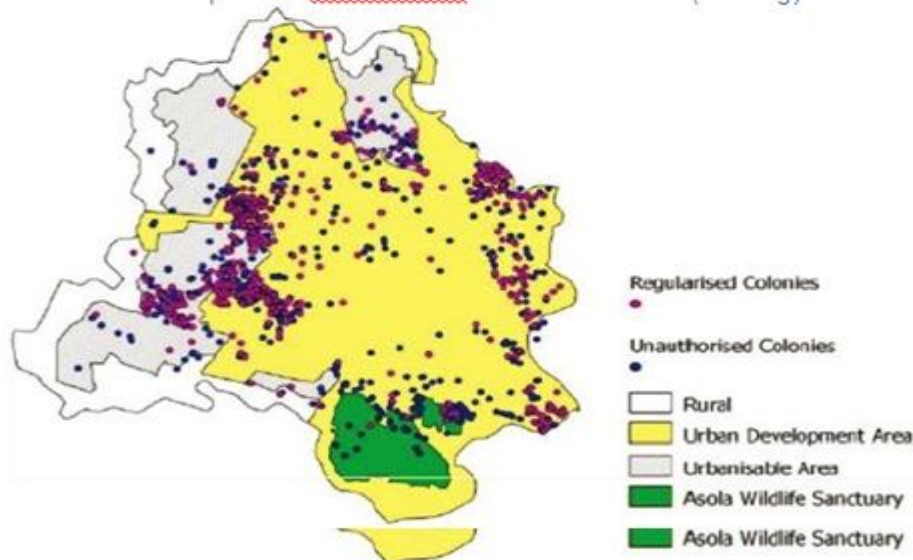
Initially, these colonies started as low rise, semi-pucca, sparsely dense settlement on subdivided agricultural land. Over the period of five decades these colonies underwent series of transformations to become dense settlement comprising of multi-storeyed builder apartments. At present, the unauthorised colonies are characterised by the high density of buildings on irregular plots divided by irregular street pattern. The buildings are majorly 5 storied apartments with residential flats on the upper stories while parking and commercial spaces on the ground and lower ground floors. Ventilation of the flats is through front side facing the street while shafts are provided for ventilation of interior spaces and plumbing work. (Khan, Nisar 2015)

Apart from the morphological transformations, these colonies have exhibited socio-economic changes which result in the creation of vibrant and self-sufficient society. The socio-economic attributes of these colonies are heterogenous mix of people, with the majority belonging to young middle class section working in private organisations in the city and surrounding satellite towns of National Capital Region. A considerable size of

population belongs to the lower middle class section engaged in various self employment activities like carpentry, welding, tailoring, mechanic and running shops and eateries.(Khan, Nisar 2015)

Commercial activities of various type and scale take place within the residential settlement providing the accessibility of the services and goods within the walking distance. The wide range of socio-economic diversity exhibited in these colonies engages the people in a symbiotic relationship. In the following sections, the transformation of the unauthorised colonies is studied.

1. Map of the Unauthorised Colonies in Delhi. (dda.org)



## 2. EMERGENCE AND EVOLUTION OF RESIDENTIAL TYPOLOGIES

The present form of architecture of the unauthorised colonies as discussed in the preceding section is a result of emergence and evolution in the built typology that has taken place over past decades. The residential buildings have evolved from small tenements to full fledged apartments in this period. The sequence of transformation has been typical for all the unauthorised colonies of Delhi and perhaps for all the cities of the country.

This section studies the architectural and socio-economic transformation of the unauthorised colonies by taking the case of Shaheen Bagh. Though Shaheen Bagh is comparatively newer unauthorised colony, it represents the typical conversion of an agricultural tract of land into informal housing, thus making it a prototypical case study. The objective of this study is to determine the architectural built typology of the future for these colonies, so as to propose appropriate intervention.

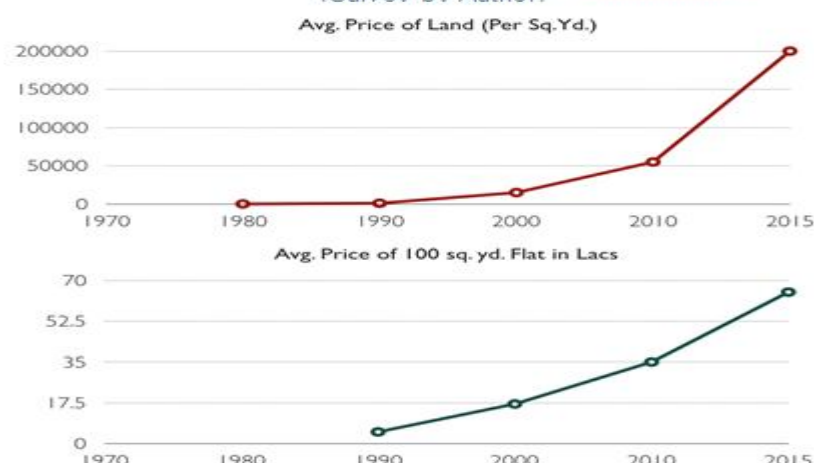


2. Typical Morphology of Unauthorised Colonies (Author 2014)

### 2.1 Phase 1: Semi-Permanent Detached Tenements

Initially, the unauthorised colonies emerged as the semi-permanent tenements scattered in the agricultural fields.(U.S. Jolly 2010) This stage depicts the first layer of conversion of agricultural land into residential plots. The cost of the land was low and varied from Rs. 100 to 300 per sq.yd. (See Graph 3) which suited largely to the section of migratory population to settle down here.(Ansarullah Shariq; Nisar Khan 2015)

3. Increase in the Price of Land and Flats in the unauthorised colonies.  
(Survey by Author)



The cost of the land was less than the cost of the construction, resulting in the inexpensive structures. The buildings were modest single storey houses with couple of rooms and tin sheds, while the open space in the front used for planting trees and kitchen garden. (See Pic 4) Most of the houses were not plastered or finished. The hand pump was the source of the water supply and sewage was discharged in the septic tank. Electricity supply was not available to all the houses. The roads were majorly *kachcha*. (Beyaz Hashmi; Nisar Khan 2015)

## 2.2 Phase 2: Densification of Built and Emergence of Upgraded Houses

In a span of another decade (1990's in the case of Shaheen Bagh) the built density increased to almost 50% with a continuous increase in the incoming settlers. (Ather Farouqui 2009) With the rising flux of the incoming settlers, Developers emerged, who subdivided the plots and sold them at a higher price. Simultaneously, a gradual upgradation of the quality of the construction occurred. The houses were now becoming bigger and double storey in some cases. (See Pic 5) They were finished with plaster and paint. The upgradations were carried out by both the initial residents and also by the new settlers.

At this stage, the character of the settlement shifted from agricultural to predominantly residential. The cost of the land was increased to Rs. 1000 per sq.yd. (See Graph 3) and more. (Ansarullah Shariq; Nisar Khan 2015) The price of the land and the cost of the construction must have become same at this stage. The electricity supply has become available. The sources of the water supply were hand pump and electric pump in some cases. The roads were surfaced with bricks. (Beyaz Hashmi; Nisar Khan 2015)



4. An example of early houses in the unauthorised colonies (Author 2014)

## 2.3 Phase 3: Emergence of Apartments

After the year 2000 the built-up density became more than 70% and the price of the land increased to Rs. 10000 to Rs. 20000 per sq.yd. (See Graph 3) With limited supply and steep rise in the price of the land emergence of the apartments occurred to meet the rising demand of housing. Local Builders saw the scope and started constructing apartments on the vacant plots after buying them. These apartments were 3 to 4 storey high and were constructed with inferior material and structure. The size of these apartments was under 300 sq.yd. These flats were devoid of lifts and only a few were provided with parking. The cost of such a typical 100 sq.yd. flat was about Rs. 10 lacs.





6. Emergence of Apartment typology (Author 2014)

#### **2.4 Phase 4: Increase in the size of Apartments Buildings**

Another phase of transformation started after the year 2010. The demand for housing became so high that even the existing houses were demolished to construct apartments. The price of the land was increased to more than Rs. 50000 per sq.yd. while the price of a typical 100 sq.yd. flat became Rs. 25 to 40 lacs. (See Graph 3) The rise in the price resulted in the upgradation of the construction qualities and amenities in the apartments. The apartments became 5 storey high with parking, lifts, better finishes and better structure.(See Pic 6) As per the socio-economic survey conducted by the author, in the present situation, the 70% of the dwelling units are flats while 30% are the house type.

The size of the projects also became significantly large and apartments with a plot area of 400 to 800 sq.yd. were built. Such apartments comprise of 20 to 40 flats in one building. These apartments are economical for the builder as they share common spaces and amenities with more numbers of the flats. Builders started hiring architects and engineers to design the projects. The Collaboration model emerged due to the higher prices of the land.(Azeem Rahman; Nisar Khan 2014) These apartments are largely inhabited by the middle income group.



5. Category of Improved houses (Author 2014)

#### **2.5 Phase 5: Augmentation of Quality and Vertical Expansion**

After the year 2015, the apartments became the predominant typology of housing in the unauthorised colonies with more and more independent houses demolished to construct apartments. Simultaneously, the price of the land has increased to more than Rs. 1,00,000 per sq.yd. while the cost of a typical 100 sq.yd. flat has become Rs. 50 lacs to 100 lacs. (See Graph 3)

Another significant change is in the height of the buildings. The apartments are now constructed 6 storey high while additions of the 6th storey is seen in the existing ones as well. (See Pic 7) Some instances of unification of smaller plots to construct large apartments are also seen. With the increase in the prices of the flats, the quality of construction and amenities have upgraded to the premium category. (See Pic 8) Moreover, the new flats have become unaffordable for the EWS category and middle class dominates the social structure of these colonies.



7. Addition of Sixth Floor (Author 2016)

3 SOCIO-ECONOMIC TRANSFORMATIONS

The physical transformation in the unauthorised colonies manifest into the socio-economic heterogeneity. The initial settlers of the unauthorised colonies are mostly people belonging to the lower income group, except for the few cases like Sainik Farms. These initial dwellers do small jobs like auto-rickshaw, hawkers, painter, carpenter, mechanic etc. Gradually, lower middle class (belonging to the service class) starts settling down mixing with the original low income settlers. This mixing of two socio-economic group lead to large scale gentrification, where apartments are largely inhabited by the middle income group, which eventually becomes the predominant social group, while houses are still owned by the initial lower income group. Despite the gentrification the socio-economic characteristics remain diverse with people belonging to low income to middle income living together, unlike any planned colony. (See Pie Chart 9)

9. Monthly Income  
(Socio-Economic Survey by Author)

Monthly Income



Less than 10000	14	9.2%
10000 to 25000	30	19.6%
25000 to 50000	58	37.9%
above 50000	36	23.5%

The mixing of the socio-economic groups results in the commercial relationship where low income group provides various services like maids, drivers, carpenter, mechanic etc to the middle income group. The shops providing grocery, vegetable and fruits, electrical goods, cloth and apparel and other goods are run by the residents. These commercial activities act as a source of livelihood to a section of the residents.

In recent years branded showrooms, multi cuisine restaurants and small institutes have also opened in the unauthorised colonies foreseeing the demand of the middle class residents. (See Pic 10) The supply of goods and services results in a symbiotic relationship between diverse socio-economic groups. The unauthorised colonies are a representative of self-reliant settlements w.r.t. to the socio-economic activities.





8. Improvement of finishes and structure  
(Author 2016)

#### 4. CONCLUSIONS

The unauthorised colonies have transformed into vibrant mass housings for the middle and lower income group in Delhi. These colonies are in a state of continuous transformation where architecture and socio-economic pattern undergoes significant evolution in a span of ten years. As seen in the recent years the quality of construction as well as size and heights of the buildings have increased significantly it seems possible that these colonies can be used as a resource for acting as affordable mass housing if the in-situ redevelopment can be initiated by regulating these transformations. Such redevelopment will be carried out by the people themselves with the professional involvement of the architects and engineers, while the agencies will act as the regulator only.



10. Intense Commercial Activity (Author 2015)

While, the unauthorised colonies are considered as anomaly in the parlance of modern urban planning their emergence as well as spread of the unauthorised colonies has been a continuous phenomenon, in Delhi and even the rest of the country. On the other hand it seems possible to meet the demand of affordable housing by regulating the growth and transformation of these colonies.

India being a developing country can not act as the provider of housing to the enormously huge population, rather a strategy to utilise the inherent potential of the unauthorised colonies should be explored.



Matrix Depicting the Emergence and Evolution of Residential Typologies in the the Unauthorised Colonies of Delhi (Author)

TRANSFORMATION	1970'S	1980'S	1990'S	2000'S	2010'S	2015
Morphology/ Form	Agricultural Land	Residential Plotting & Few Tenements	House & Vacant Plots	Densification, Subdivision of Plots and Emergence of Flats	Houses recycled for Flats. Physical and Social Gentrification. Better Construction and Amenities	6 storey Construction (Both New and Expansion). Instances of Unification of Plots
Land Price/Sq.Yd.		Rs. 100	Rs. 1000	Rs. 10000 to 20000	Rs. 50000 to 60000	Rs. 100000 to 300000
Flat Price (/100 Sq Yd)				Rs. 10 to 25 Lacs	Rs. 25 to Rs. 40 Lacs	Rs. 50 Lacs to Rs. 100 Lacs
Land-Construction (of Flats) cost dynamics		0.5:1	1:1	1.5:1	2:1	4:1
Architectural Aspects		Semi Permanent Tenements	Double storied prosperous houses	Flats 3 to 4 Storeyed. No Lifts. Cheap Construction.	Flats 5 Storeyed. Lifts and Stilt Parkings.	Flats 6 Storeys. Good Construction and Finish. Large Sizes.
Socio-Economic Aspects	Agrarian Community and Economy	First layer of migrant population settling down.	Emergence of Developers	Housing Demand Soars due to MNC jobs. Emergence of Builders. Social gentrification Begins.	Mixed-socio economic society. Middle Class dominates.	Unaffordable for EWS. Bigger Commercial Establishments.
Inference				When price of Land becomes more than construction of house, flats emerge.	Recycling indicates at higher land value and will be a continous process.	Larger and Better construction indicates another phase of recycling in future.

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## HEALTH AND WELLBEING AMONG THE SCHEDULED CASTE POPULATION OF ASSAM, INDIA

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### ABSTRACT

*Health studies during recent years are witnessing an abundance of research, bringing both social scientists and medical scientists to suggest possible solutions to the health related issues. The role of social science in studying health issues is mainly confined to the nature of the occurrence of a specific type of disease in specific areas, socio-economic factors related to health hazard like drug abuse, lifestyle etc. The present study aims at studying the health status of scheduled caste population living in Kamrup district of Assam with special reference to occurrence of cancer among the inhabitants. About 2002 numbers of households belonging to SC community have been enumerated to reach the objective of the research problem. GPS points of all hospitals, sub centers, PHC, CHCS, colleges and schools are taken to delineate a buffer zone of service areas and unserved areas of the study area. The study reveals certain facts like high rate of cancer patient among the inhabitants and also high rate of Infant Mortality (75.65%) among the surveyed population, which is much higher than that of the national average (i.e. 57.0%).*

*Keywords: Scheduled Caste, Health Status, Buffer Zones, Infant Mortality Rate*

### INTRODUCTION

Status of health for a certain group of population or a community is multi-dimensional in approach and complex to measure accurately. It can be studied through a particular series of indicators such as awareness, mortality, illness, status of nutrition or calorie intake, and life expectancy at birth. Among these indicators, mortality and life expectancy at birth are widely used to measure the health status of a population, as they are easily observed, objective and less prone to measurement errors. "An important consideration for addressing health care quality is the scope for clinical condition areas that should be included in the measure set" (Kelly et. al 2006)

The access to public health services and benefits from the public health system has been very uneven between the better endowed and the more vulnerable sections of society. Keeping this uneven access of health services in view, the "National Health Policy-2002" evolved a policy structure, which reduces these inequities and allows the disadvantaged section of society a fair access to public health services by various measures including separate schemes and increasing sectoral outlays in the primary health sector.

### OBJECTIVES

**The main objectives of the study are:**

- 1 to study the health conditions and awareness of the people to some common diseases residing in Kamrup district,
- 2 to suggest measures to make all round sustainable livelihood of the Scheduled Caste population.

### DATA AND METHODS

Relevant data were collected with the help of household schedule, village schedule and schedule for resource persons (doctors and medical officers). Household schedule tries to capture different dimensions of health status and. The village schedule attempts to bring together authentic data regarding the village under investigation.

The use of secondary data is a common research approach in health sectors as epidemiology, health services research, and public health research, and includes analysis of patterns of occurrences, determinants, and natural history of disease; evaluation of health care interventions and services; drug safety surveillance; and some genetic and social studies (Lowrance, 2002; Lowrance and Collins, 2007).

### LOCATION OF THE STUDY AREA

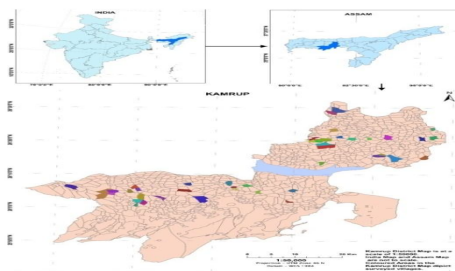


Figure-1: Location of the study area

**STATUS OF HEALTH AMONG THE SCHEDULED CASTE POPULATION**

Health Studies during recent years are witnessing an abundance of research, bringing both social scientists and medical scientists to suggest possible solutions to the health related issues. The role of Social science in studying health issues are mainly confined to the nature of occurrence of a specific type of disease in specific areas, socio-economic factors related to health hazard like drug abuse, sex, lifestyle, etc. In this regard a multidisciplinary approach may provide an organized and efficient structure to streamline the definition and analysis of factors like socio-economic, political and geo-environmental etc. influencing human health.

Out of total 2002 numbers household, enumerated 8.67 percent people are suffering from Diarrhea indicating the picture of poor health conditions in the study area. Moreover, 8.3 percent of the enumerated households have no access to public hospital within 5 kilometer range

Beside household surveys to know the status of health among the Scheduled Caste population in Kamrup district, interviews of expert doctors working in the or near the Scheduled Caste inhabited areas have been conducted to extract a meaningful conclusion of the study.

The health situation of the SCs on the basis of various health indicators has been reflected in the following Table.

**Table-1: Status of key health indicators among the Scheduled Caste population in India, 2009-10 and survey villages 2014**

Sl. No	Health indicators	Total (%)	Scheduled Caste (%)	Scheduled tribes (%)	Surveyed (2014)
1	Infant Mortality	57.0	66.4	62.1	75.65
2	Neo-natal Mortality	39.0	46.3	39.9	25.21
3	Child Mortality	18.4	23.2	35.8	-
4	Peri-Natal Mortality	48.5	55.0	40.6	-
5	Post-Natal Mortality	18.0	20.1	22.3	-
6	Under five Mortality	74.3	88.1	95.7	-
7	Anti-Natal Care Check-up	77.2	74.1	70.6	-
8	Institutional Deliveries	38.6	33.0	17.7	92.63
9	Childhood vaccination (full immunization)	43.5	39.7	31.3	61.13

Source: National Family Health Survey - III (NFHS) India 2009-10, Vol.-1

Infant mortality is very high in the surveyed villages of Kamrup district with 75.65, which is more than that of the national average of 66.4. This resulted in consciousness the Scheduled Caste population of the surveyed areas and increase in the percentage of institutional delivery is recorded to be 92.63 percent. In regards to the anti-natal care checkup and institutionalized deliveries among the women are concerned, the figure in the table reveals that only 74.1 percent of Scheduled Caste women and 70.6 percent of scheduled tribe women preferred anti-natal care checkup during their pregnancies as against the total anti-natal care checkup of 77.2 percent. The total percentage of women who use public/private health services for delivering their babies is reported as 38.6 percent. In case of institutional deliveries among the Scheduled Caste and scheduled tribe women the data show that nearly 77 percent of SC women and more than 82 percent of ST women gave birth to their children at home. So the above analyses reflect that although there is improvement in the health status of Scheduled Caste and scheduled tribes, there still exists a substantial gap in the various dimensions of key health indicators relating to morbidity and mortality of the children and women.

**STATUS OF HEALTH AMONG THE SURVEYED POPULATION**

The term 'Good health' is often used in day to day life; however, its indicators are still a vague concept as different resource persons have alternative ideas regarding the term Good health. In present study the status of good health is quantified in numerical numbers based on the scoring of primary health indicators which are taken from health indexes and verified by doctors interviewed during survey. Based on the response from the doctors and other sources like literature related to health and internet, sixteen numbers of indicators of good health are selected.

Study of the health status among the Scheduled Caste population of forty-four surveyed villages of Kamrup district is tabulated in table 4. all the surveyed households are enumerated and based on scoring of health five numbers of class is formed namely poor health, adjustable health, average health, good health and healthy.

From the table number 5.3 it is clearly observed that Tulshibari village have the lowest percent of people with poor health (9.49 percent) and Ambari village have the highest proportion of respondents in this category. Highest number of people in adjustable health is found in Bichennala village 31.71 percent and lowest percent share is in Singimari Habi village (14.13 percent). In the next category of health status, i.e. average health, Debok no. 1 village have 30.34 percent of total surveyed population, which is highest in this category and the lowest is Simalubari village with 19.67 percent. In the good health section highest number of people with good health is found in Tulshibari village (31.39) and lowest in the Simila village with 14.29 percent. The last group is of healthy people in which Balisatra village have the highest proportion of healthy people among the surveyed population with 21.18 percent and Dari village is at the bottom of this group with 8.65 percent population.

Spatial pattern of variation in the status of health shows a very uneven distribution among the people of the surveyed villages.

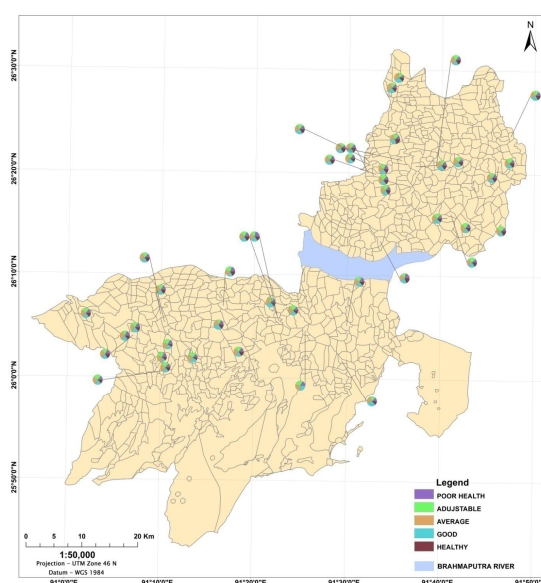


Figure-1: Health status of the surveyed villages, 2014

Table-2: People suffering from diseases in the surveyed villages, 2014 (in percent)

Name	Cancer	AIDS	Hepatitis	Diarrhea	Malaria	Dengue	Chronic dysentery	Skin disease	Bronchial problem
Chanmaguri	0.00	0	7.69	13.85	3.08	0.00	7.692	13.85	1.538
Debok No.1	0.69	0	4.14	7.59	2.07	0.00	6.207	8.966	1.379
Tulsibari	1.46	0	2.92	7.30	1.46	0.49	7.299	10.22	1.46
Bichennala	0.49	0	3.90	5.85	0.98	1.92	9.268	4.878	1.463
Dari	0.00	0	0.00	3.85	0.96	1.43	6.731	4.808	0.962
Simila	0.00	0	0.00	17.14	2.86	0.00	4.286	5.714	1.429
Narenga	0.84	0	1.67	13.39	1.67	3.85	6.276	8.787	1.674
Jalukbari	0.00	0	0.00	3.85	0.00	0.00	5.769	15.38	3.846
Soneswar	0.00	0	3.85	1.28	1.28	0.24	6.41	10.26	1.282
Baihata	0.73	0	3.41	1.71	0.24	3.85	5.366	8.293	0.976
Haldha	0.00	0	7.69	1.92	0.00	0.00	7.692	11.54	3.846
Khehenipara	0.52	0	5.21	1.56	0.52	0.99	5.729	17.19	1.563
Dakshin Singra	0.00	0	3.96	2.97	0.00	0.17	5.941	14.85	2.97
Dihina	0.51	0	2.03	6.94	0.51	0.45	1.354	5.753	0.846
No.1 Bagta	0.30	0	1.66	1.36	0.15	0.68	1.815	6.354	0.908
No.2 Bagta	0.00	0	1.37	4.11	0.68	0.14	2.74	9.589	1.37
Kukur Mara	0.28	0	1.66	7.34	0.69	0.66	1.662	7.064	0.97
Choudhuri Para	0.33	0	6.64	0.66	0.00	5.26	2.99	7.973	0.997
Makeli	0.00	0	7.02	5.26	1.75	2.08	7.018	12.28	3.509
Akchalia F.V.	0.00	0	4.17	4.17	0.00	0.36	6.25	14.58	2.083
Singimari Habi	1.09	0	5.07	18.48	1.45	0.83	3.261	14.13	1.449
TariGaon	0.83	0	3.31	14.05	1.65	0.51	4.132	16.94	2.066
Ambari	0.00	0	2.04	18.88	2.04	4.92	0.51	5.612	2.041
Simalu Bari	1.64	0	3.28	3.28	0.00	0.25	4.918	13.11	3.279

Salmara	0.25	0	1.97	8.87	0.74	1.32	5.172	10.34	1.478
Howli Tari	0.38	0	1.13	9.64	0.95	1.20	3.403	9.641	1.323
Puthi Mari	0.40	0	1.59	10.76	1.20	1.32	5.578	9.96	1.594
Neul Dova	0.44	0	0.00	3.08	0.44	1.73	6.608	10.13	2.203
Mandira Pathar	1.16	0	3.47	6.94	0.58	0.29	7.514	10.4	1.156
Pujupara	0.29	0	1.45	9.13	0.87	0.58	5.507	8.406	1.159
Nichalamari	0.58	0	0.00	11.82	1.15	0.14	6.052	1.729	1.441
Malibari Satra	0.28	0	1.68	9.24	0.84	1.28	4.762	9.944	1.261
Kandulimari	0.64	0	2.56	17.31	1.92	4.24	7.051	9.615	1.282
Jarabari Gaon	1.69	0	0.00	9.32	0.85	25.00	11.02	10.17	1.695
Gatuwa	0.00	0	6.25	12.50	0.00	0.00	6.25	12.5	0
Chayani Rangamati	0.61	0	4.85	11.52	1.82	1.30	4.242	6.667	1.212
Dakhin Lenga	0.00	0	0.00	14.29	1.30	0.00	5.195	6.494	1.299
Dhopatari	0.00	0	1.50	12.73	1.12	1.10	6.367	7.865	0.749
Silbharal	0.37	0	1.10	9.89	1.10	2.63	6.96	6.96	0.733
Numalijalah	0.00	0	6.58	12.50	1.32	3.51	7.237	5.921	0.658
Purna khumdum	0.00	0	7.02	7.02	0.00	1.52	7.018	7.018	0
Garpot	1.52	0	3.03	9.09	1.52	0.00	7.576	7.576	0
Souramuri	0.00	0	3.74	11.56	1.02	2.35	3.061	7.143	0.68
Balisatra	0.00	0	4.71	17.65	1.18	0.02	9.412	7.059	0
Average	0.42	0	3.08	8.67	1.00	1.79	5.62	9.402	1.451

Source: Primary Survey, 2014

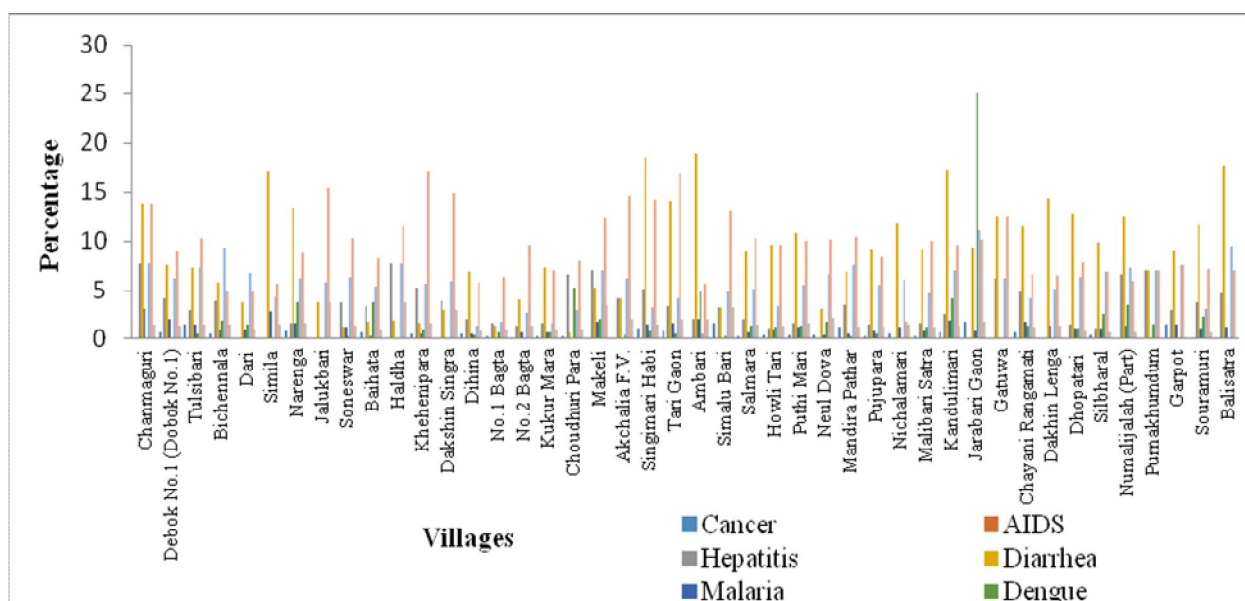


Figure-2: People suffering from diseases in the surveyed villages, 2014

About 8.6 percent of the surveyed villages suffer from Diarrheal diseases and 9.4 percent of people suffered from skin problem during the surveyed period. Surprisingly 3.08 percent of people have suffered from hepatitis in past, and the most concerning fact is there is a significant number of cancer patient in the study area amounting to 0.4 percent of the total surveyed population. According to doctors the main causes of prevailing of this particular fatal disease are too many including, habit of consuming tobacco, alcohol, and other narcotics, few cases of genetic origin, contaminated water, and high rate of pollution etc. A huge campaign drive about the awareness about cancer is very essential at this time so that people may be aware of its severity and get proper treatment in the early state.

#### CRUDE BIRTH RATE (CBR) AND CRUDE DEATH RATE (CDR)

Crude Birth Rate (CBR) is more oftenly used as a standard tool for calculation of fertility as it is more available than the refined measures like TFR etc. (E. Barbara, 1981). In the year 2011 CBR for India as a whole is recorded as 21.8, the same in rural India is 23.3 and Urban India is 17.6. Similarly, in the same year CBR for Assam as is recorded as 22.8, the same for rural Assam is 24.0 and Urban Assam is 15.5. The survey villages have a midyear population of 10,214 and 119 babies were born last year in that area, thereby resulting



Crude Birth Rate is 11.65 per 1000 which is lower than the state and nation's average, the formula used for calculation of CBR is:

$$\frac{\text{Number of live births during the year}}{\text{Mid-year population}} \times 1000$$

Crude Birth Rate is 11.65 in the surveyed villages, which is lower than that of the state average of 22.8.

The CBR is termed as "crude" as it does not take into account age or sex differences among the population. CBR accounting more than 30 per 1000 persons are considered high and those of less than 18 per 1000 person are considered low. According to reports the global Crude Birth Rate in 2005 was 20.15 per 1000.

Crude Death Rate is the ratio of numbers of death in a year to the midyear population of the particular area in that year.

$$\text{CDR} = 88/10214 \times 1000 = 8.62$$

### INFANT MORTALITY RATE

Infant Mortality Rate is the ratio number of infant deaths during the year divided by number of live birth during the year x 1000. As the number of live birth are 119 therefore

$$\text{IMR (Infant Mortality Rate)} = 119/9 \times 1000 = 75.63$$

The result is very unfortunate that IMR is very high among the surveyed population which is indicating towards poor child and maternal health conditions. The main causes behind this are deficiency of iron among the mothers during pregnancy period, ignorance towards health care facilities during the pregnancy period, etc. according to NRHM, Assam Government IMR in the same year is 54 in Assam and 40 in India

Child death is recorded in No. 1 and No.2 Bagta, Tari Gaon, Ambari, Salmara, Howlitari, Pujupara, Malibari and Narega villages all of which are located in the south bank of the Brahmaputra river except the Dihina village.

### GENERAL FERTILITY RATE

General fertility rate is the total number of live births per 1000 women of the childbearing age group (15-49) during the survey year total 119 live births were recorded during the survey and total women population in the reproductive age group are 2934 and the general fertility rate is Calculated at 40.56.

### AGE SPECIFIC FERTILITY RATE (ASFR)

Age Specific Fertility Rates (ASFR) is done in 5-year age groups for women between the ages 15 – 49(or 18 – 49), depending on the available data and population. The formula for the Age Specific Fertility Rate is:

$$\text{Age Specific Fertility Rate (ASFR)} = (\text{Number of births to women in the age group } i / \text{Number of women in age group } i) \times 1000$$

**Table-3: Age Specific Fertility Rate (ASFR) 2014**

Sl. No.	Age Group	Total Number of Women	Live births in this category	Birth per 1000 women (Column 3 by column 2 x 1000)	Projected resulting birth during age interval (5 x column 4)
	1	2	3	4	5
1	15-20	441	2	4.53515	22.6757
2	21-25	421	17	40.38	201.9
3	26-30	501	38	75.8483	379.242
4	31-35	394	29	73.6041	368.02
5	36-40	433	22	50.8083	254.042
6	41-45	357	11	30.8123	154.062
7	46-49	387	0	0	0
Total	15-49	2934	119		1378.94

Source: Primary survey, 2014

### TOTAL FERTILITY RATE (TFR)

Total Fertility Rate is a very good index of fertility than the Crude Birth Rate. After calculating all of the Age Specific Fertility Rates for the population, researcher can move on to calculate the Total Fertility Rate. The formula for the Total Fertility Rate is:

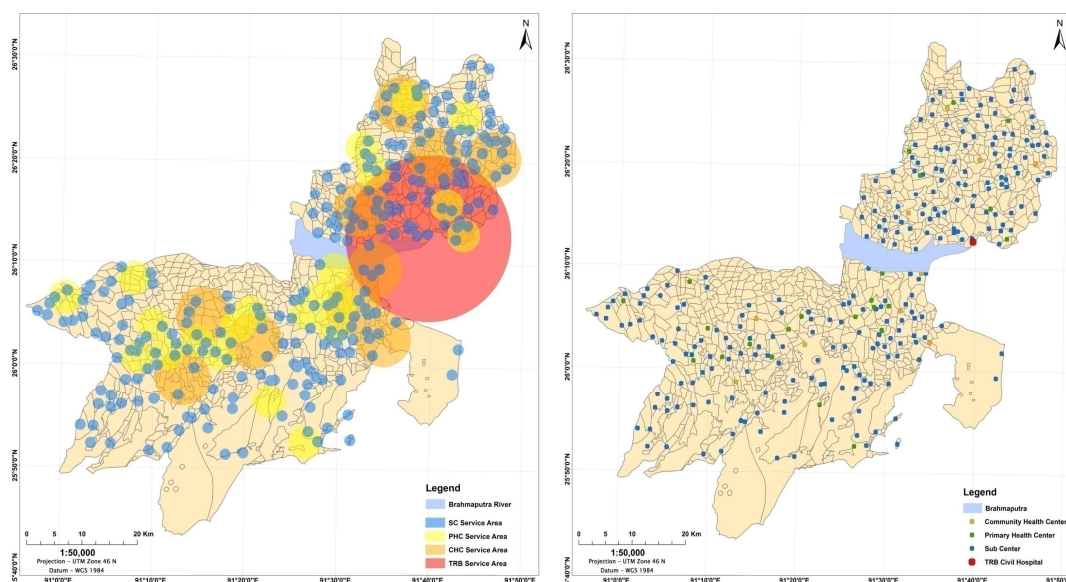
Total Fertility Rate (TFR) = (The sum of the Age Specific Fertility Rate The number of years in each age group) / 1000

The TFR in the present study is calculated is  $1378.94 \times 5 / 1000 = 6.89$  which is very high. Total Fertility rate of Assam in the year 2013-2014 is 2.4 which is again 2.4 in India on the same year (NRHM, Government of Assam)

#### Location of Health Facilities in the Study area

From the spatial distribution of the different categories of health centers it is evident that the periphery areas of the district are deprived of their health care facilities due to non-availability of Government health care services in the said areas. The south Kamrup part of Goroimari, Nagarbera and Chamaria sub district which are visibly deprive of the health care facilities are mostly located in the chor and chapori areas making them more inaccessible.

Moreover, the buffer zone of TRB civil hospital in figure 5.3 shows some areas of south bank of Kamrup district, but the people from south bank mostly prefer to go to hospitals of Guwahati city instead of going to the TRB district civil hospital.



**Figure-3: Location and service area of hospitals in Kamrup district, 2014**

**Figure-4: Locations of SC, PHC, CHC and TRB civil hospital**

Source: GPS points collected from the field, 2014-2015

#### HEALTH AWARENESS AMONG THE SURVEYED POPULATION

Knowledge about the diseases helps to adopt preventive measures to get rid of it. Diseases like HIV- AIDS, flu, malnutrition, water borne diseases etc. can be prevented by taking precautionary measures.

To study the health awareness among the people of the study area, a list of ten common as well as fatal diseases has been prepared and three basic questions regarding the same is being asked, i.e. Features, causes, and precautions. The ten mentioned diseases are AIDS, Cancer, Hepatitis, Malaria, Dengue, Diabetes, CAD, TB, Diarrhea, and Japanese Encephalitis. It is observed that most of the people have a very vague idea about these diseases. The tables and figures below will give a clearer picture about the scenario about the level of awareness about the common diseases. It is observed that people have a sound awareness about cancer, i.e. about 75.70 percent of the surveyed population have awareness about cancer. Awareness level is lowest in case of CAD (Coronary Artery Disease) or Heart related diseases, and Bronchial problems in almost all the villages. Awareness about heart diseases are low as most of the heart disease symptoms are difficult to identify till a severe state is not reached, moreover, low educational attainment level is also associated with the awareness of health. Few of the present disease are taken from pioneer health care organizations like OECD. OECD Reviews of Health Systems are in-depth studies of the health system of member countries, with a particular focus on economic issues. (OECD, 2003).

HIV/AIDS awareness is recorded highest at Simila village with 92.86 percent of aware population about the disease. Souramuri village of Koya sub district have the lowest number of people having awareness about



AIDS. Cancer awareness is highest in Jalukbari village (96.15 percent), and lowest in Dhopatari village (51.31 percent). Awareness about hepatitis is highest at Simila village (85.71 percent) and lowest at Akchalia FV (54.17 percent). Japanese Encephalitis is a very serious disease which needs very much awareness to get rid of it, Female population of Gatuwa village have 100 awareness about Japanese Encephalitis., whereas, 77.78 percent of surveyed male population have awareness about Japanese Encephalitis. Awareness about Dengue is highest at Kukurmara village with 84.13 percent of surveyed population and lowest at Gatuwa village (31.25 percent), Khehenipara village tops the list about awareness of Malaria with 92.18 percent aware people.

VILLAGE	AIDS	CANCER	HEPATITIS	DENGUE	MALERIA	TB	HEART (CAD)	DIABETES	DIARRHEA	JAPANESE ENCEPHALITIS
Chanmaguri	89.23	80	70.769	67.692	84.615	83.077	40	75.385	64.706	75.385
Debok No.1	90.35	93.793	82.069	84.138	88.966	87.586	26.897	89.655	70.667	78.621
Tulsibari	92.7	92.701	70.073	68.613	89.781	89.781	40.146	90.511	71.831	75.912
Bichennala	89.27	84.39	69.268	60.976	87.317	85.366	22.439	81.951	73.585	73.659
Dari	89.42	77.885	84.615	64.423	85.577	86.538	41.346	85.577	81.818	72.115
Simila	92.86	78.571	85.714	70.00	87.143	82.857	44.286	82.857	76.923	68.571
Narenga	84.1	84.519	77.82	73.222	83.264	83.264	40.167	84.1	74.59	66.946
Jalukbari	92.31	96.154	78.85	67.308	82.692	88.462	48.077	88.462	72.414	75.00
Soneswar	83.33	82.051	75.64	61.538	78.21	85.897	65.385	82.051	70.732	71.79
Baihata	87.81	73.902	71.22	67.073	86.83	82.195	42.927	79.268	77.114	67.07
Haldha	86.54	76.923	76.923	63.462	80.77	84.615	59.61	80.769	68.966	67.31
Khehenipara	92.71	88.021	76.563	67.708	92.19	87.5	40.62	86.979	79.798	74.48
Dakshin Smgra	84.16	84.158	79.21	70.297	87.129	86.139	65.347	86.139	75.472	67.33
Dihma	67.51	60.914	77.157	65.482	57.53	53.469	20.98	67.174	62.626	52.79
No.1 Bagta	88.96	87.292	78.517	71.71	90.32	81.24	30.56	88.502	77.778	70.04
No.2 Bagta	83.56	84.932	79.452	65.068	82.192	77.397	33.56	85.616	73.333	69.86
Kukur Mara	86.84	84.072	85.042	72.715	86.57	77.839	30.748	83.657	79.178	80.19
Choudhuri Para	82.72	80.40	79.402	66.113	81.395	78.738	31.229	79.07	78.71	68.106
Makeli	80.7	78.95	63.158	56.14	73.684	82.456	50.877	82.456	76.667	73.68
Akchalia F.V.	72.92	62.50	54.167	47.917	75	60.417	43.7	64.583	65.385	62.5
SingimariHabi	62.68	61.96	60.51	57.61	65.94	68.841	20.65	63.043	54.68	52.54
TariGaon	71.9	71.488	68.182	66.942	70.248	79.752	24.38	73.14	63.415	61.983
Ambari	69.39	68.367	65.816	63.265	68.878	70.918	18.367	69.898	65.657	64.286
Simulu Bari	80.33	73.771	72.131	60.656	72.131	80.328	57.377	77.049	56.25	60.656
Salmara	87.93	83.99	78.079	75.616	86.7	85.961	46.798	81.281	72.549	77.34
Howli Tari	78.83	80.34	75.236	72.023	78.261	79.395	41.21	78.45	76.981	77.316
Puthi Mari	68.92	70.518	66.932	63.347	67.331	77.689	55.378	70.916	64.286	64.94
Neul Doya	67.401	64.758	65.198	59.471	63.877	66.079	61.233	65.639	62.609	61.674
Mandira Pathar	63.584	53.757	56.069	50.289	73.41	58.382	55.491	61.272	68.539	58.382
Pujupara	78.841	81.739	73.913	73.478	77.681	76.377	47.826	80.435	74.64	75.362
Nichalamari	76.945	77.522	75.216	72.911	75.793	74.928	50.72	78.098	71.429	66.282
Mahibari Satra	80.112	82.353	74.23	71.429	78.992	76.331	28.291	82.633	69.624	70.588
Kandulimari	82.692	78.205	66.667	64.744	80.128	77.564	39.744	79.487	76.543	76.923
Jarabari Gaon	83.898	85.593	79.661	73.729	81.356	79.661	36.441	87.288	66.129	70.339
Gatuwa	87.5	87.5	56.25	31.25	75	75	31.25	81.25	77.778	87.5
Chayan	74.545	75.758	71.515	67.273	72.121	75.758	26.667	76.97	71.765	71.515
Rangamati										
Dakshin Lenga	77.922	74.026	71.429	62.338	74.026	74.026	41.558	76.623	70.732	70.13
Dhopatari	62.921	51.311	61.049	55.056	71.91	58.801	23.596	59.551	57.037	56.18
Silbharal	61.905	60.44	60.073	57.143	60.44	61.905	25.275	64.103	56.429	56.41
Numaljalal	69.737	57.895	66.447	61.842	69.079	65.132	39.474	65.789	74.684	75
Purna Khumdum	77.193	68.421	68.421	56.14	71.93	68.421	42.105	70.175	66.667	73.684
Garpot	72.727	60.606	62.121	54.545	83.333	68.182	45.455	72.727	62.857	72.727
Souramuri	59.184	54.422	57.143	55.102	65.306	61.565	54.422	65.306	53.642	54.762
Balisatra	74.118	74.118	70.588	48.235	80	75.294	57.647	68.235	64.444	49.412
AVERAGE	79.3	75.704	71.33	63.682	77.842	76.389	40.689	77.139	69.81	68.575

Table 4: Health awareness among the surveyed population about common diseases, 2014 (in percent)

## MATERNAL AND CHILD HEALTH

Mother's health is one of the most important areas of concern while addressing the health issues of a certain group of people. In the present study the female population of the forty-four surveyed villages is 5000. Out of which only 217 women agreed to discuss about maternal health and 189 (87.09 percent) of them have a positive response towards taking medical help during the pregnancy and delivery period. 201 (92.63 percent) women had delivery in government and private medical supervision under registered physician out of which 154 (70.97 percent) delivery were cesarean and 63 (29.03 percent) were normal delivery. Among all the live births 2 children died within a week, and 1 child died within one month. Moreover, it is observed that majority of female do not prefer to take the iron supplement tablet provided by the government during pregnancy period.

## FINDINGS

In case of health status, the Kamrup districts have alarmingly high number of people suffering from cancer both in case of general and Scheduled Caste population. The list of people at village level, suffering from various diseases reveals that maximum number of people are suffering from skin problems, Diarrhea, Chronic dysentery, hepatitis, which are result of personal hygiene practices, food, hand washing practices etc.

In case of Infant Mortality Rate, it is very unfortunate that IMR is very high among the surveyed population which is indicating towards poor child and maternal health conditions. The main causes behind this are deficiency of iron among the mothers during pregnancy period, ignorance towards health care facilities during the pregnancy period, etc.

Child death is recorded in No. 1 and No.2 Bagta, Tari Gaon, Ambari, Salmara, Howlitari, Pujupara, Malibari and Narega villages all of which are located in the south bank of the Brahmaputra River except the Dihina village.

In case of maternal health, out of 217 women 87.09 percent have a positive responds towards taking medical help during the pregnancy and delivery period. 92.63 percent women had delivery in Government and private medical supervision under registered physician. Total 70.97 percent deliveries were cesarean and 29.03 were normal delivery. Among all the live births 2 children died within a week, and 1 child died within one month. It is found that majority of female hesitate to take the iron supplement tablet provided by the government during pregnancy period.

It is important to mention that Kamrup district has one of the highest proportions of cancer patients in Assam, though the root cause is not known doctors identified some of them to be the causes of the disease like genetic causes, consumption of adulterated food, excessive use of chemical fertilizers in food products, low fiber food is some of them. The total number of cancer patient in Kamrup district alone registered 4416 number of cancer patient during 2011 (NCRP) of which 2508 were male and 1908 were female.

### **CONCLUSION**

Study of status of health among a specific group of people by an investigator of non-medical background is a herculean task. Health status is calculated based on certain parameters with due consultation from resource persons including doctors and Medical officers.

It may be mentioned that health conditioned is not directly proportional to the level of education in the surveyed area. The main causes behind it are, literacy is higher in the sub urban areas and relatively lower in the rural and interior areas, but health condition of people hailing from rural areas are better due to several factors other than literacy, mainly, unadulterated dietary habit, hard work, sustainable lifestyle, better environmental condition etc.

Awareness is calculated for the most common diseases and also fatal diseases which are taking lots of lives in recent years. Ten such diseases are taken into consideration; they are AIDS, Cancer, Hepatitis, Malaria, Dengue, diabetes, CBD, TB, diarrhea, and Japanese Encephalitis. The surveyed people have a sound awareness about cancer (75.70 percent), Hepatitis 71.33 percent and that of HIV, AIDS is 75.70 percent.

From the analysis of the data provided by the census of India and the surveyed data about the forty four villages of the Kamrup district it is found that in most of the villages the literacy and occupation pattern is similar to that of the general literacy of the village, which proves that in the study area scheduled castes population cannot be termed as backward class community in terms of literacy and occupation, the same about health cannot be considered as the health awareness table is not provided by the census of India.

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**LIFE SKILL APTITUDE AND LIFE SKILL ORIENTED TEACHING AMONG TEACHER EDUCATORS**

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**ABSTRACT**

*Children learn Life skills by observing their Parents, Teachers and others. Life skills also can be taught by elders. Human beings always possess life skill aptitude and it can also be enhanced throughout their life. To meet out the today's challenges of life, we need to use specific life skills effectively in miscellaneous situation. The prime objectives of this study are to find out the level of life skill aptitude among Teacher Educators and to analyze whether they are teaching the same to their Teacher Trainees while teaching subjects. To accomplish these objectives, 65 Teacher Educators from various colleges of Education located in Tamil Nadu were subjected to fill out the questionnaires. Two questionnaires were prepared by the investigator. The first one comprising 24 statements to verify their life skill aptitude and the second one comprising 28 statements to confirm about their life skill oriented Teaching. The Result of this study shows that the Female Teacher Educators have better life skill aptitude and also teaching maximum life skills to their students than the Male Teacher Educators.*

*Keywords: Life Skill, Aptitude, Teaching, Teacher Educator, Teacher Trainees, Parents and Teachers.*

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**INTRODUCTION**

Life skills are the ability to cope with tension, anxiety and nervousness and to develop skills in literacy, communication, planning, executing, decision making and problem solving etc.

Life skills have been defined as “the abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life” (WHO-1997). ‘**Adaptive**’ means that a person is flexible in approach and is able to adjust indifferent circumstances. ‘**Positive behavior**’ implies that a person is forward looking and even in difficult situations, can find a ray of hope and opportunities to find solutions.

Children facing problems in everyday life are examination, peer group, inter-relationship, economic problem, emotions, hormonal influences, religious belief, exposure to media, internet etc

To live with oneself, he/she should know him/herself and they need self awareness, self-esteem and need to control their emotions etc.

To live with others, they should have effective communication skill, understanding and adjusting with others, friendly approach, assertiveness and resistance with peer pressure etc.

The abilities such as problem solving and decision making are also play a vital role in every one's life.

Parents are the first teachers and Teachers are the second parents. A teacher must play a multiple role in their life such as daughter/son, sister/brother, wife/husband mother/father, neighbor, friend and a good teacher etc. To play all these roles successfully they need some life skills. To inculcate the necessary life skills among B.Ed trainees, the teacher educators should pay greater attention while teaching. Hence the investigator has decided to assess the Teacher Educators regarding their role in shaping the B.Ed trainees with life skills.

**The Ten core Life Skills as laid down by WHO are:**

1. Self-awareness
2. Empathy
3. Critical thinking
4. Creative thinking
5. Decision making
6. Problem Solving
7. Effective communication
8. Interpersonal relationship
9. Coping with stress
10. Coping with emotion

**METHODS, MATERIALS AND SAMPLE**

Survey method was adopted to collect the relevant information regarding the research work. Two different questionnaires were prepared and standardized by the investigator. The first one was encompassing with 24 statements were related to measure the possession of life skill; the second one comprising 28 statements were related to teaching life skills in the classroom. Sixty five Teacher educators from the colleges of education in Tamil Nadu were selected as sample by convenient random sampling procedure.

**SCORING PROCEDURE**

The responses were collected in three point scale such as always, most of the times and sometimes and the scores were given as 3, 2 and 1 respectively for positive statements and the scores were reversed as 1, 2 and 3 for negative statements respectively. Maximum score for the questionnaire life skill aptitude is 72. The scores above 48 were considered as high, between 25 and 48 were considered as average and 24 and below were considered as low level of life skill aptitude. Maximum score for the questionnaire life skill oriented Teaching is 84. The scores above 56 were considered as Maximum, between 29 and 56 were considered as feasible and 28 and below were considered as minimum extent of teaching life skill for their students.

**OBJECTIVES**

- To identify the level of life skill aptitude among Teacher Educators.
- To find out the altitude of life skill oriented Teaching of Teacher Educators.
- To find out the difference in life skill aptitude of Teacher Educator based on Gender.
- To find out the difference in life skill oriented Teaching of Teacher Educator based on Gender.

**HYPOTHESES**

- The level of life skill aptitude among Teacher Educators is high.
- The altitude of life skill oriented Teaching of Teacher Educators is at Maximum.
- There is no significant difference in the life skill aptitude of Teacher Educators with respect to Gender.
- There is no significant difference in the life skill oriented Teaching of Teacher Educators with respect to Gender.

**DATA ANALYSIS****Table-1 Level of life skill aptitude among Teacher Educators**

Category	Score Ranged Between	Numbers	Percentage
High	49 - 72	18	28.00 %
Average	25 - 48	34	52.00 %
Low	24 and blow	13	20.00 %
Total		65	100.00 %

**Table-2 Magnitude of Life skill oriented Teaching in the class room**

Category	Score Ranged between	Numbers	Percentage
Maximum	57 - 84	14	22.00 %
Feasible	29 - 56	28	43.00 %
Minimum	28 and blow	23	35.00 %
Total		65	100.00 %

**Table-3 Difference in life skill aptitude with respect to Gender**

Gender	Number	Mean Value	SD	't' value	Remarks at 5% level
Male	23	32.30	5.4	11.34	S
Female	42	46.70	3.8		

**Table-4 Difference in life skill oriented Teaching with respect to Gender**

Gender	Number	Mean Value	SD	't' value	Remarks at 5% level
Male	23	36.42	6.5	13.01	S
Female	42	56.42	4.7		

**RESULTS**

- Only 28% of the Teacher Educators have high level of life skill aptitude, 52% of Teacher Educators have only average level of life skills and the remaining 20% of them have only low level life skills.

- Only 22% of the Teacher Educators are teaching life skills along with subjects at maximum in their teaching, 43% of Teacher Educators are teaching life skill fairly and the remaining 35% of them are teaching life skills occasionally.
- Female Teacher Educators possess higher level of life skill aptitude than the Male Teacher Educators
- And also Life skill oriented Teaching was followed better by Female Teachers than Male Teacher Educators.

### **RECOMMENDATIONS**

Teachers should teach the children not only the subject but also Life skills. Suicide and murdering the teachers are becoming common among school children. Teachers and Teacher Educators who are preparing Teachers should follow the suggestions given below:

- A minimum of 10 minutes can be allocated in each class to discuss with the students about their problems.
- Teachers should get trained in identifying the hidden potentialities of the students to guide them accordingly for their future.
- To create a healthy relationship among students group discussion method of instruction can be followed and the group members have to be changed periodically.
- Problem solving abilities among students has to be developed.
- Group projects for students to recognize their individual responsibilities in a group.
- Developing creativity among students may build up self confidence and self respect.
- Great personalities can be invited to interact with students about their success and techniques to balance the failures.
- Techniques of handling emotions to be taught among students are an indispensable one.
- Positive attitude towards life to be created among students by telling inspirational stories and life history of succeeded personalities.
- Exposure to media to be controlled.
- Make the students involved in NCC and NSS activities.
- Develop among themselves a sense of social and civic responsibility.
- Teachers should act as a role model for their students to compose every one as a good citizen.

### **CONCLUSION**

To lead a healthy life, one must have a positive attitude and optimistic thinking from earlier stages of their life. If we look at the bright side of life, our whole life becomes filled with light. Life is becoming mechanical for most of the people. As parents, they are unable to teach their wards about the life skills. However they can play as a role model for their children. But most of the parents themselves never have life skill aptitude and never follow in their life activities. Hence, it is the responsibility of teachers to give importance for life skills in their teaching. For that the teacher educators must prepare the B.Ed trainees accordingly. From this study of investigation most of the teacher educators are not acquiring enough life skills. And this study also shows that, even if they have life skills, they are not inculcating the same in teaching. Whether it is included in curriculum or not, the life skill oriented teaching is essential.

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## RETHINKING BUSINESS MANAGEMENT IN THE ERA OF GLOBALIZATION AND TECHNOLOGY TRANSFORMATION

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### ABSTRACT

*Regionalism and globalization encourage economies located between market and the state. The supporting institutions, activities and mindsets should also be located so. The present paper focuses on one such support, namely business schools, management discourses and management mindset and attempts to construct a management education in the context of globalization and technology transformation. Development economics emerged as a branch of economics to meet the challenges of the time. Similarly management education for globalization and technology transformation must emerge as a distinct branch of management studies. The ultimate objective in learning to obtain an academic qualification in Business Administration should be improving the conditions of the people and saving the planet. Increasing income inequalities, near stagnation in real wages of workers and the danger of another global recession appear to be serious enough reasons to revamp our understanding of the prevailing inadequacies of management education and discourses. Digital technologies have huge positive and negative impacts on the economies all over the world. The need to revamp management discourses is particularly acute and urgent in the context of globalization and technology transformation.*

*Keywords: Business Management, Development economics, Globalization, Digital technology.*

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Globalization is a process and regionalism is a policy. This distinction is important in discussions on regionalism and globalization contestations. In the globalization process the national state is on the retreat. In regionalism as a policy the national state plays an increasingly active role. Digital technologies lead to increase in productivity and GDP growth, and these progressive technologies also encourage negative trends like unemployment and stagnation of worker's incomes. Both globalization and regionalism encourage national economies to get strategically positioned between the market and the state. The supporting institutions, activities and mindsets should also be located so. The present paper focus on one such support, namely, business schools, management discourses and management mindsets and attempts to construct a framework of a management education in the context of globalization. Globalization as a process and a discourse is discussed in part one and dimensions of regionalism are discussed in the second part of the paper. The huge positive and negative impacts of progress in digital technologies are briefly reviewed in the third part. In the fourth and final part management discourses in the context of globalization and technology transformation are discussed.

### 1. GLOBALIZATION AS A PROCESS AND A DISCOURSE

Globalization as a historical process has been going on for centuries and in a way it may be viewed as a reflection of progress in material comforts of life and intellectual horizons of mind. Historians, especially economic historians generally identify two distinct stages in the development of globalization as a process in recent centuries<sup>1</sup>. In the first phase, there was political and economic hegemony of Great Britain and in the second phase, there is economic and political hegemony of United States of America. Deepak Nayyar (2008 and 2013) points out that there are major differences in objectives, processes and outcomes during the two phases of globalization<sup>2</sup>. In the first phase there was inter-sectoral trade between the colonies and Great Britain, the imperial nation. For example, raw cotton was exported from India to Britain and cotton textiles were imported in India from Britain. There was trade between Indian agricultural sector and British manufacturing sector. British capital came to India in search of long-term investment and profit. For example, Indian Railway system was built and operated by British private capital. When the railway companies could get huge returns on investment, India could get transport facility for the movement of goods and people. Finally, labour went to capital during phase I of the globalization process. There was relatively free flow of migrants between colonies all over the world as well as between colonies and Britain. People migrated from one country to another in search of income and opportunities with relatively less restrictions from the governments.

In the second phase of globalization there is a different scenario. There is intra-industry trade as well as intra-firm trade. Transnational corporations (TNCs) and international banks play a big role. Nation-state is no longer the leading economic player at the global level and that role is increasingly taken over by TNCs. The enormous size of TNC's relative to national states has been finding special space in debates on globalization during recent times. For example, if the two largest of them, the USA-based Wal-Mart and EXXON Mobil, were independent countries, then they would be called the 22<sup>nd</sup> and 23<sup>rd</sup> largest economies in the world, respectively. It means that



these corporates have annual sales larger than the GDP of countries like Norway, Saudi Arabia, Denmark, South Africa, Ireland, Argentina, Portugal and Malaysia<sup>3</sup>. In other words, the sales of both the US corporates put together will be more than 75 per cent of India's GDP. According to one study corporate profits account for about 14.5 per cent of the national income of USA. About a third of US corporate profits are made abroad.<sup>4</sup> Financial sector holds a disproportionately huge share of economic power in the US economy. A study points out that finance represents about 7 per cent of US economy and takes about 25 per cent of corporate profits but employs only 4 per cent of labour force.<sup>5</sup> This is just one aspect of the second phase of globalization process.

Foreign investment during the first phase of globalization went to colonies in search of sustainable profit from long-term investment in developing plantations, tea estates, coffee estates, railways, etc. However, in the second phase of globalization, capital goes in search of short-term capital gains in speculative activities in capital markets around the world. The Glass Steagall Act of 1933 which was a landmark law to create a firewall between commercial banking and investment banking was repealed in 1999. Collateralized Mortgage Obligations (CMO's), Collateralized Debt Obligations (CDO's) and several other mortgage-backed and asset-backed securities with exotic names and acronyms flooded the global capital markets. The size of financial derivatives in various forms like swaps, options and futures is anybody's guess. Long before the financial crisis of 2007-09, Warren Buffett called derivatives, "financial weapons of mass destruction".

The third feature of the second phase of globalization is that capital goes to labour, instead of the other way round. During British imperialism several countries in Asia and Africa were made as colonies and the colonial subjects could move from one colony to another and elsewhere in search of livelihood. There were not many restrictions in the form of passport and visa. Labour went to capital. In the second phase of globalization, there is American hegemony and capital goes to labour with the help of improvements in information and communication technology. Business process outsourcing happens on a large scale through internet. American clients would get the work of 10 talented Indian engineers at less than the cost of hiring one American engineer. But the Indian engineer cannot go to the USA due to visa restrictions. These restrictions have increased after Donald Trump became the President of America. Restriction on immigrants has become a bone of contention in recent times in the context of exodus of refugees from countries caught in civil wars, especially in Middle East region.

The present paper supports the view of economists and other observers who consider that globalization brings benefits mostly to the rich people of rich countries and the rich people of poor countries and not to the poor people of rich countries and the poor people of poor countries and that globalization has to be reformed in order to serve the people and save the planet. Globalization process is a product of expansion of international capitalism. Capitalism has been undergoing changes in its growth over the centuries. It is appropriate to briefly mention the stages in the development of capitalism. Anatole Kaletsky, for example, divides the development of capitalism into four stages.<sup>1</sup> The first stage began from the defeat of Napoleon in 1815 to the end of World War I. The second stage began with the New Deal of the 1930's and ended with the stagnation of 1970s. During this period military Keynesianism helped western capitalism and European welfare states helped liberal democracy. The period beginning in 1979 is remarkable in modern world history for more than one reason. This period witnessed the emergence of Margaret Thatcher in the UK and Ronald Reagan in the USA who pushed forward privatization and monetarist counter-revolution in economic policy. This period of ultra-liberalism came to a devastating stage with the global financial crisis of 2007-09. In Kaletsky's view, the momentous liberal era of market fundamentalism which came to a crucial moment in the Great Recession (2007 – 2009) has given rise to the fourth stage of capitalism where symptoms of de-globalization, regionalism, protectionism and the rise of right-of-center leadership in countries are witnessed. Donald Trump becoming the President of America, Britain exiting the EU and emergence of China are a few global indications of things which are going to happen in the future. In this VUCA world, emergence of regionalism is one of the outcomes.

## 2. IS REGIONALISM A BETTER ALTERNATIVE?

Most observers claim that regionalism is a post-World War II phenomenon. However, it can be claimed that the intellectual roots and material needs for regionalism are quite ancient. A study explains that imperial integration that happened in ancient empires which developed into 'civilizations' may be described as early forms of regionalism<sup>7</sup>. In the modern era, nation-states appeared and expanded according to the Westphalian logic. Flag followed trade. British and European imperialist powers emerged and colonization of South American, African and Asian countries happened. There was scramble for land and other resources by the colonial powers. Regional movements like Pan-Asianism, Pan-Africanism and Pan-Arabism emerged during late 19<sup>th</sup> and early 20<sup>th</sup> centuries. In a way, voluntary and strategic regionalism is predominantly a post-World War II phenomenon.

The General Agreement on Tariff and Trade (GATT) was created in 1948 and it was upgraded into World Trade Organization (WTO) in 1995. During GATT era, inter-national trade growth outpaced GDP growth of nations. However, GATT lacked effective dispute resolution mechanism. The WTO, the GATT's successor has, among other mechanisms, General Agreement on Trade in Services (GATS) and Trade-Related Aspects of Intellectual Property Rights (TRIPS). The Doha Round (2001-2006) was a major trade negotiation attempt by the WTO in the interest of developing countries. But Doha development agenda failed. Doha's failure led to decline of multilateralism and acceleration of regionalism. There are now a large number of regional trade agreements. It is observed that except for Mongolia, all the WTO members are involved in some regional trade arrangement or other. There are EU, NAFTA, CAFTA, Mercosur, ASEAN, APEC and a few more regional arrangements. There are two views on these attempts at regional economic integration. One view is that in the absence of global economic integration, these efforts towards regional economic integration are the next best arrangement to promote free trade among countries. Another view is that these regionalism attempts become stumbling blocks for greater global economic integration.

After the collapse of the Doha Round and other similar WTO initiatives, the very assumption that the WTO would increase international trade is being questioned by some observers. One study points out that the WTO (and its earlier version GATT) has had no significantly positive effect on promoting global trade<sup>2</sup>. In a way it means that one does not need to be particularly sorry over the slow-down of multinationalism and the accelerated growth of regionalism in recent years. Regionalism seems to be more rewarding from the point of view of multi-national corporations (MNCs). The leading MNCs may have activity all over the world, but their center of gravity seems to be their native region. According to one study many leading MNCs headquartered in EU and NAFTA regions generate the major portion of their revenue from their home region<sup>3</sup>. One finds reason to believe that regionalism and protectionism trends seem to be more rewarding to international business than multilateralism and globalization. American President Donald Trump's policies towards protectionism and Britain's exit from EU are described to be in the interest of business enterprises and the people of respective countries. A few recent examples of increasing regionalism trends can be briefly mentioned to highlight the issue.

One can find display of nationalism, regionalism and also populism in the pronouncements of leaders of major countries. From America's Donald Trump to Vladimir Putin of Russia, Shinzo Abe of Japan, Xi Jinping of China, Erdogan of Turkey and Narendra Modi of India seem to display trust in regionalism and nationalism. China is promoting 'Belt and Road Initiative' (BRI) with a missionary zeal. Chinese President Xi declares the China Pakistan Economic Corridor (CPEC) to be BRI's flagship project. Some observer compare China's BRI to America's Marshall Plan. When China builds Gwadar Port in Pakistan, India builds Chahbahar Port in Iran. The Transnational Turkmenistan - Afghanistan-Pakistan-India (TAPI) pipeline project is another similar initiative. Indian leaders often mention the phrase "vasudhaiva kutumbakam" (the world is 'one family') to elucidate the country's global outlook. However there has been a paradigm shift in recent years and it is displayed in the ongoing regionalism and globalization contestation. The interests of people and protection of environment should not be lost in this contestation. Automation and other improvements in technology like Artificial Intelligence and 3-D manufacturing seem to take away jobs. Real wages are either stagnant or falling. Globalization seem to benefit not all but only a few. The question whether regionalism and protectionism have better record is yet to be answered.

The question why some countries developed when many countries remained underdeveloped attracted the attention of economists and other social scientists. There seems to be a "natural resources curse" in the sense many countries which have Gold, Oil and other valuable resources remain poor and miserable. For example, in an influential book "*Why Nations Fail*" (2012), the economic historians Daron Acemoglu and James Robinson explain the importance of "inclusive economic institutions" in economic development of countries. By inclusive economic institutions they mean an economic, social and political environment which encourages innovations and hard work. In another interesting book "*The Mystery of Capital- Why Capitalism Triumphs in the West and Fails Everywhere Else*" (2000), Hernando de Soto, a famous Peruvian economist explains how underdeveloped countries suffer due to unfavorable institutional arrangements and mismanagement of resources. Another economist William Easterly argues in his book "*The Elusive Quest for Growth- Economists, Adventures and Misadventures in the Tropics*" (2001) that foreign aid given by developed countries to the underdeveloped countries brings more harm than good in the poor countries. He says that foreign aid mostly benefits the dictators, rulers, the political class and the bureaucrats of under developed countries and not the needy and deserving people. These insights highlight the need for finding a solution to the prevailing problem of under management and mismanagement of resources in underdeveloped countries. Development economics emerged as a branch of economics to meet the challenges of the time. Similarly development management or

management for development must emerge as a distinct branch of management studies. As a general observation it may be mentioned that where capitalism goes, management education follows. It follows that when capitalism is in crisis, management education is in crisis also and the question of relevance arises.

### 3. THE IMPACT OF PROGRESS IN DIGITAL TECHNOLOGIES

Progress in digital technology is impacting globalization process, regionalism practices and economies all over the world. In an interesting book *"The Second Machine Age: Work, Progress and Prosperity in a time of Brilliant Technologies"* (2014) MIT Sloan School of Management Professors give a detailed account of the economic, social and business impacts of recent developments in digital technologies. The author of the book namely Prof. Erik Brynjolfsson and Andrew McAfee say that there has been "The Great Decoupling" process in recent years in advanced economies like the USA and also in the emerging economies. By the term "Great Decoupling" they mean a trend in which productivity and GDP continue to grow when job growth and labour income continue either to stagnate or fall. This trend is found in the USA and the developed countries of Western Europe. They say that workers' share of GDP has been declining in several countries including India.

There are unpleasant side effects when technology develops. On the positive side progress in the fields of automation, big data, artificial intelligence, business analytics, internet of things, cloud computing and augmentation creates value and adds comforts to life. On the negative side, this technological progress leads to unemployment and decline in relative income of workers. Inequalities in the distribution of income and wealth are increasing. Digital technology is doing to skilled manpower what steam engine and other related mechanical technologies did to semi-skilled and un-skilled manpower during the period of Industrial revolution. Modern digital technologies progress under "the winner-takes-all" principle. It means that income moves from the bottom to top. This trend is quite opposite to the "trickle-down effect" which economists were hoping to achieve all these years. It is said that in the 19<sup>th</sup> century machines did dirty and dangerous jobs, in the 20<sup>th</sup> century machines did the dull jobs and in the 21<sup>st</sup> century computers are doing intelligent jobs. Robots of the future may understand emotions and guide interpersonal relations. There are already discussions on driverless cars. There will be jobless growth and increase in income inequalities. Rethinking business management in the era of globalization and technology contestations is particularly necessary and compelling.

### 4. MANAGEMENT EDUCATION IN THE CONTEXT OF THE CONTESTATIONS

The contestations between globalization on the one hand and regionalism, protectionism and localization on the other hand have been widely debated. The new protectionism policies of the US and the possible reaction from other trading countries force some observers to talk about the end of globalization<sup>10</sup>. The phrase deglobalization is increasingly used<sup>11</sup>. Regionalism and globalization both encourage and interrogate economies located between the market and the state. The supporting institutions, activities and mindsets should also be located so. The present paper focuses on one such support, namely, business schools, management discourses and management mindsets and attempts to construct a management education in the context of regionalism and globalization contestations. In brief, the present paper argues that management education and management discourses have to undergo a transformation.

About 63 years ago Peter Drucker wrote a book, *"The Practice of Management"* (1954) which many people consider as the first book to view management as a distinct subject of study. There were books on production, sales and marketing, finance and accounting, labour relations etc. before Peter Drucker's book. However this was a book on general management and it could be taken as the beginning of the discipline of management. If we ask an MBA student, he would mention names of, for example, Igor Ansoff, Edward de Bono, Henri Foyal, Edward Deming, Herzberg, Hofstede, Joseph Juran, Philip Kotler, Douglas McGregor, Abraham Maslow, Michael Porter, C.K. Prahalad, Max Weber, Frederick Tylor etc. as influential management thinkers who enriched the field. If we again ask him to mention great management ideas, he would give a list of concepts like balanced scorecard, blue ocean strategy, customer relationship management, the 80:20 principle, the five forces of competition, the four P's of marketing, lean manufacturing, the learning organization, management by objectives, market segmentation, project management, outsourcing, six sigma, supply chain management, theories of X, Y, and Z leadership, total quality management, value chain and e-commerce. Understanding the management concepts, ideas and views of management thinkers enables one to fulfil the major organizational objectives of adding value to the products and managing people. In this context some questions like relevance and purpose of education in a business school arise. The need of the hour is to shift the emphasis from profits to the people and the planet. When Harvard Business School completed one hundred years, a few professors of the school took efforts to evaluate the status of management education. This effort which came out in the form of a book, concluded that 'knowing, doing and being' are the hallmarks of management education<sup>12</sup>. The question is whether the interests of the people and the planet are adequately protected.

As already stated, management education and discourses have to undergo a transformation since the capitalist system is undergoing rapid and huge transformation mainly due to technological advancement and globalization. A brief review of what is generally being taught will help us in our task of finding the necessary changes. We shall briefly mention what Philip Delves Broughton (2009) who spent two years as a student, says about what is taught at Harvard Business School which is called the “Cauldron of Capitalism”. He says that the first year of the MBA course contains ten courses, five in each semester. In the first semester, there are finance I, marketing, operations, organizational behavior etc. In the second semester there are finance II, negotiation strategy, leadership and corporate accountability and a macroeconomics course called ‘business, government and international economics’. In the second year, there is the elective curriculum and the student can choose from a wide variety of courses or work on an independent research topic. It is said that the entire HBS curriculum is made of case studies, generally containing three to thirty pages, which are prepared or selected by the faculty. Fifty percentage of the marks are based on student’s performance in mid-term and end-term examinations and the remaining fifty percent of the marks are determined on the basis of student’s participation in class discussions. The goal of the entire exercise is to make the students know how to run the most profitable business in a meritocratic, competitive and fair capitalist system. The huge problem is the kind of capitalism taught inside the class room and the kind of capitalism prevailing outside are different. The issue of future of management education and discourses has to be discussed in this challenging situation.

We shall briefly mention how capitalism is undergoing drastic and rapid transformation in recent years. Much has been written on this topic but we shall take the views of only one thinker namely Joseph Stiglitz<sup>13</sup>. He says that capitalist system is not working in the way it is supposed to work and as the result markets are neither efficient nor stable, that the political system namely democracy is not correcting the market failures and that economic and political systems are fundamentally unfair. There are rent –seeking activities in different sectors of the economy. It means that people who are close to political power make money illegally by exploiting the natural resources. Much of the inequality in income and wealth distribution is the result of rent-seeking behavior of individuals and organizations.

There is over financialization of the economy and as the result the financial sector grows at the cost of the real sector of the economy. Financial innovations are highly disruptive. The top one percent of the population gets most of the benefits of both globalization and regionalism leaving the rest of ninety nine percent dissatisfied. Democracy has been increasingly reduced to being a government of the one percent, for the one percent and by the one percent. The supreme irony of the modern democracy is that the 99 percent of the people adopt the interest of the one percent as their own.

Many observers point out that there is something terribly wrong in the system. Joel M. Podolny, for example, points out that the global financial crisis made people to doubt the standards of ethical behavior of mainly three institutions namely investment banks, rating agencies and business schools<sup>5</sup>. He says, “People don’t simply lack trust in business schools, they actively distrust them. In order to reduce people’s distrust business schools need to teach principles, ethics etc. They need to place a great emphasis on leadership responsibilities-not just its rewards”. In business schools, students are taught how to create barriers to competition and build monopolies in order to enhance profits even though the basic condition for efficient market system is competition. Some of the most important business innovation made during the last three decades were not intended to make the economy more competitive and efficient but to undermine competition and to circumvent government regulations framed to meet the objectives of the society. Everything has a price. Everything can be negotiated. Drug companies make huge profits and spend that money not on research to find life-saving medicines but on research on cosmetics and advertisements. Wars and preparation for war benefit the super-rich corporates. Even war is outsourced to contractors. Crony capitalism does not create value but allows unscrupulous individuals to amass wealth already existing in the form of forests, lands, minerals and other resources. In this scenario, one has to give a serious thought on what to teach in business schools.

Management for development is the need of the hour. A two-year MBA in management for development will have the following curriculum- in the first year there will be six papers namely accounts, operations, marketing, statistics, business economics and international economics. In the second year, there will be elective curriculum consisting of two streams –management for growth with the following papers- Strategy for profit, Marketing for profit, and Operations for profit, Negotiation for profit and corporate governance for profit. The other stream will contain similar titles but the crucial difference is that the learning will be for the people and the planet. The first year curriculum will be common for all students. By the time, the student comes to the second year she/he determines her/his priorities. Those who will select the ‘for profit’ titles will join the rat race after graduation and those who select the titles ‘for the people and the planet’ will try to change the world for

the better. Underdeveloped countries in particular need better management of resources and people and for this purpose MBA (Development Management) course should be introduced in the Business Schools of developed as well as underdeveloped countries.

A group of leftist scholars at the University of Frankfurt in 1920's developed a theory incorporating views of several influential thinkers like Kant, Hegel, Marx and Freud which came to be called the critical theory. One of the members of this group was Jurgen Habermas and he gave a classification of knowledge. According to Habermas there are three forms of knowledge namely technical, hermeneutical and emancipatory <sup>6</sup>. Much of what is being taught in business schools falls under the category of technical knowledge and the aim is to enhance the value of the organizations and increase effectiveness of people management. Hermeneutical and emancipatory knowledge creation and dissemination need different orientation in pedagogy. Paulo Freire, for example, explains how teaching can be emancipatory <sup>7</sup>. Business situations in real life and cases have to be discussed to give the students a holistic view of economic and social reality. The ultimate objective in learning to obtain an MBA in 'Management for Development' would be improving the condition of the poor people and saving the planet. Increasing income inequalities, near stagnation in real wages of workers, negative interest rates, robots replacing humans, computers trading with computers in stock markets, invasion of digital currencies and the danger of another global recession appear to be serious enough reasons to revamp our understanding of the prevailing inadequacies of management education and discourses.

It is time to realize that global capitalism is in crisis. On the one hand there is globalization process and on the other hand there are tendencies towards regionalism and protectionism. The logic of globalization process and regionalism process is based on profit motive. The interests of people and the planet are neglected. The state is on the retreat in the globalization process and the global corporates are on the retreat in regionalism and protectionism process. The welfare of the people and protection of physical environment are neglected in both the processes. Social and economic institutions have to be created and developed between the state and the market to protect the people and the planet from capitalist exploitation. The need for such institutional development is particularly urgent in the context of globalization and regionalism contestations. Management discourses have to be oriented towards the development of such empowering institutions and practices.

## **CONCLUSION**

The major arguments of the paper may be recapitulated. Management education and discourses are in crisis because capitalism itself is in crisis. Market system is not working in a way it should be functioning. There is procedural democracy and not truly representative democracy. Dysfunctional inequalities are increasing. Environmental degradation is on the rise. A new gold standard is emerging with bitcoin and other digital currencies in the era of internet and other advanced technologies. These trends make people to rethink on management education. Management for development is one option. However more research and debates are needed for refining this concept. Development economics emerged because the mainstream economics could not resolve issues of poverty, unemployment, and inequalities especially in underdeveloped countries. Economists could see clearly that 'trickledown economics' failed and economic growth did not benefit most of the poor people. In the same logic, management for development or development management has to emerge because the mainstream management theory and practice do not resolve managerial issues of 21st century globalizing world. Management thinkers and practitioners have to give serious thoughts on the increasing gap between theory and reality. Are workers paid according to productivity of labour? There are millions of 'working poor' who remains poor in spite of working. Are the CEO compensations justified? Are the tax heavens which benefit the rich and powerful MNC's and individuals at the cost of revenue of governments justified? Who will contain the tragedy of the commons? There are similar disturbing issues in production, marketing, finance and corporate governance. Development management must emerge to say that the emperor is naked. Management discourses have a huge role to play in shifting the focus from profit to people and the planet in the context of globalization and technology transformation.

## **NOTES**

1. There is a vast literature on this subject. There are western liberal approach, Marxian approach and institutionalist approach to growth of globalization process. In the first approach the emphasis is on capital and technology, in the second on falling rate of profit and the need of the capitalist to move from being national to international in search of profit and in the last approach the growth of social and economic institutions. As mentioned above, there are a number of works by liberal, Marxian and institutionalist scholars on the process of globalization. An elaborate description of various perspectives on capitalism and globalization is given in Anwar Shaik (2016) *Capitalism – Competition, Conflict, Crises* New York, OUP. The two stages or phases of globalization as a process have been explained in Frans J. Schuurman (ed)

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11. There are reports on end of globalization. Doubts about the progress of globalization began during the 2007-09 financial crisis. Even major periodicals like *The Wall Street Journal*, *The New York Times*, *The Guardian* and the *Financial Times*, report that globalization is on the retreat. See, Ghemawat, Pankaj “Globalization in the Age of Trump”. *Harvard Business Review*, July-August 2017.
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**A STUDY ON DIVIDEND POLICY AND PROFIT MAXIMIZATION OF AUTOMOBILE COMPANIES IN INDIA**

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**ABSTRACT**

*Automobile sector is a leader in product and process technologies in the manufacturing sector. It has been recognized as one of the drivers of economic growth and the domestic automobile industry is believed to be the barometer of the economy. The past ten years have witnessed a six fold increase in the industry and the automotive exports growing by almost twenty times. This sector has emerged as sunrise sector in the Indian economy. Dividend decision of the firms is considered as one of the prominent decisions that the firm would make. It must be depends upon what portion of earnings is to be retained by the firm and what portion is to be paid to shareholders. the dividend behavior of selected automobile companies in India and this study attempts to find out the impact of the global financial crisis on the dividend pattern and policy of the automobile sector of the Indian economy.*

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**INTRODUCTION**

Automobile is one of the largest industries in the global market. Owing to its strong forward and backward linkages with several key segments of the economy, the automobile Sector occupies a prominent place in the fabric of Indian Economy. Automobile sector is a leader in product and process technologies in the manufacturing sector. It has been recognized as one of the drivers of economic growth and the domestic automobile industry is believed to be the barometer of the economy. Dividends also act as barometers of financial soundness and solvency, management efficiency and overall growth of an organization. Investor's expectations are mostly affected by management's policy regarding dividends. If the large portion of the surplus is distributed as dividend among the shareholders then the management has to depend upon external sources like debenture or new issue of shares for financing future capital and working capital needs. Thus, both growth and dividend are desirable. But they are in conflict, a higher dividend amount to less provision of fund for growth and retention of large earnings leaves a little amount of funds for divisible to which shareholder may react strongly.

**OBJECTIVES OF THE STUDY**

- To analyze the dividend policy and the distribution pattern of earnings of select automobile companies in India.
- To assess the impact of dividend policies on profit maximization of select automobile companies in India.

**METHODOLOGY OF THE STUDY**

Data required for the study is secondary in nature. The required secondary data are available in the published Annual report of select automobile companies in India. The following are the list of data collected for the study. The study covers a period of Ten years Starting from 2007 -08 to 2016-17. In this study, the researcher has selected 10 automobile companies listed in NSE for analyzing the dividend policy and its impact on profit maximization. Purposive sampling method is used for analysis. 10 automobile companies were selected based on the following criteria.

**REVIEW OF LITERATURE**

**Henry Waleru Akani and Yellowe Sweneme (2016)** inspected the effect of partitioned approach on the benefit of chose cited fabricating firms in Nigeria from 1981-2014. In relapse show Return on investment(ROI) and net benefit margin(NPM) were dealt with as needy factors while profit payout ratio(DPR), maintenance ratio(RR), profit yield(DY) and income per share (EPS) were dealt with as autonomous factors. Discoveries uncovered that all the autonomous factors have positive association with the reliant factors aside from profit yield. **C.N.Ozuomba, Karthika and Geetha (2016)**The capital structure configuration is a noteworthy activity as it incorporates a multifaceted tradeoff among a couple of thought like salary, hazard, versatility, control, timing of issue and so forth. In case a company's capital structure essential administration is free of its profit payout procedure, at that point a higher profit installment will include a more critical dependence on outer financing. Thusly, the profit approach has a bearing on the choice of financing.

**Shrikant panigrahi and yuserrie zainuddin (2015)** this paper gives writing on profit strategy choices by the corporate in the point of view of investor's riches. Profit installment is a flag of execution of firms. On the off chance that profit builds, share cost will likewise expand, which prompts the making of investor's riches. The outcome demonstrates that the profit arrangement choice consolidates profits with share.

## ANALYSIS OF EARNINGS PER SHARE OF SELECT AUTOMOBILE COMPANIES IN INDIA

Table-4.1

S. no	Company Name Year	Tata Motors	Mahindra & Mahindra	Maruti Suzuki	Hero Motocorp	Bajaj Auto Ltd	Ashok Leyland	TVS Motor Company	Eicher Motors	Force Motors Ltd	Cheviot Company
1	2007 - 2008	52.63	46.15	59.89	32.41	52.24	3.53	1.34	21.81	63.47	48.71
2	2008 - 2009	19.78	30.84	42.17	33.72	45.24	1.43	1.31	22.45	94.52	26.53
3	2009 - 2010	39.26	36.89	86.42	64.41	117.54	3.18	3.71	45.58	45.85	36.35
4	2010 - 2011	6.06	46.21	73.01	65.21	115.41	2.37	4.11	28.01	44.49	63.92
5	2011 - 2012	3.91	48.97	57.01	55.43	103.81	2.13	5.24	46.01	625.62	63.99
6	2012 - 2013	0.93	56.85	79.19	42.31	105.21	1.63	2.44	54.04	10.84	168.08
7	2013 - 2014	1.03	63.67	92.13	37.66	112.01	0.11	5.51	103.01	58.97	29.42
8	2014 - 2015	15.01	56.23	123.01	36.47	97.01	1.21	7.32	206.01	76.93	76.65
9	2015 - 2016	0.68	53.51	151.33	39.42	126.21	2.54	9.11	453.21	136.17	80.85
10	2016 - 2017	7.31	66.71	242.91	33.39	132.31	2.24	11.75	573.75	136.55	100.98
11	Mean	14.66	50.60	100.71	44.04	100.70	2.04	5.18	155.39	129.34	69.55
12	Std Dev	17.91	11.20	59.43	12.78	29.34	0.99	3.40	198.62	178.84	42.08
13	C.V%	1.22	0.22	0.59	0.29	0.29	0.49	0.66	1.28	1.38	0.61
14	Range	51.95	35.87	200.74	-0.33	87.07	3.42	10.44	551.94	614.78	141.55
15	Skewness	2.88	1.49	1.44	0.36	1.74	0.83	1.25	1.43	0.76	1.58
16	Kurtosis	8.68	2.81	1.13	0.35	3.27	1.63	1.54	0.41	1.38	1.24

Source: Computer data

The highest average of Earnings per Share has been earned by Eicher motors Rs. (155.39) and the lowest average of Earnings per Share has been earned by Ashok Leyland Rs. (2.04). The highest Standard Deviation of Earnings per share occurs in Eicher motors (198.62). It indicates the Earnings per share are widely dispersed in that company. Ashok Leyland (0.99) realizes the lowest standard deviation of Earnings per share. The lowest Co-efficient of Variation of Earnings per share earned by Bajaj Auto Ltd (0.22 Per cent). It shows the stability of Earnings per share earned by this company during the study period. The highest Co-efficient of Variation of Earnings per share earned by Force Motors Ltd (1.38 Per cent). Force motors ltd maintains the highest Range of Earnings per share (Rs.614.78) and Hero motocrop (Rs.-0.33) secures the lowest range of Earnings per share. It is inferred that the highest variation in earnings per share is found in Automobile Company during the study period. The Earnings per share is more positively skewed in Tata motors (2.88). This is due to higher Earnings per share earned by this company during the study period. The Earnings per share is more negatively skewed in Hero motor crop ltd (0.36). This is due to lowest Earnings per share earned by this company during the study period. The distribution of Earnings per share is highly peaked in Tata motors (8.68). The distribution of earnings per share is highly platy kurtic in Hero motocrop (0.35).

## ANALYSIS OF DIVIDEND PER SHARE OF SELECT AUTOMOBILE COMPANIES IN INDIA

Table-4.2

S. no	Company Name Year	Tata Motors	Mahindra & Mahindra	Maruti Suzuki	Hero Motocorp	Bajaj Auto Ltd	Ashok Leyland	TVS Motor Company	Eicher Motors	Force Motors Ltd	Cheviot Company
1	2007 - 2008	15.01	11.51	59.89	19.01	20.01	1.51	0.71	5.01	1.05	10.01
2	2008 - 2009	6.01	10.01	42.17	20.01	22.01	1.01	0.71	5.01	2.01	6.01
3	2009 - 2010	15.01	9.51	86.42	110.01	40.01	1.51	1.21	7.01	3.01	8.01
4	2010 - 2011	20.01	11.51	73.01	105.01	40.01	2.01	1.11	11.01	5.01	12.01
5	2011 - 2012	4.01	12.52	57.01	45.01	45.01	1.01	1.31	16.01	10.01	13.01
6	2012 - 2013	2.01	13.01	79.19	60.01	45.01	0.61	1.21	20.01	3.01	15.01
7	2013 - 2014	4.11	14.01	92.13	65.01	50.01	0.01	1.41	30.01	3.01	15.01
8	2014 - 2015	3.11	12.01	123.01	60.01	50.01	0.45	1.91	50.01	5.01	17.01
9	2015 - 2016	0.51	12.01	151.33	72.01	55.01	0.95	2.51	100.01	10.01	17.01
10	2016 - 2017	0.18	13.01	242.91	85.01	55.1	1.56	2.52	100.01	10.01	16.01
11	Mean	7.00	11.91	100.71	64.11	42.22	1.06	1.46	34.41	5.21	12.91
12	Std.Dev	7.03	1.37	59.43	31.01	12.37	0.60	0.65	37.18	3.52	3.84
13	C.V%	1.00	0.12	0.59	0.48	0.29	0.57	0.45	1.08	0.67	0.30
14	Range	19.83	4.50	200.74	91.00	35.00	2.00	1.80	95.00	8.96	11.00
15	Skewness	0.62	0.70	0.96	0.47	2.17	0.05	1.03	0.22	0.75	1.28
16	Kurtosis	1.39	0.73	0.60	1.09	4.83	1.69	1.06	1.40	1.52	1.18

Source: Computed data

The highest average Dividend per share has been earned by Maruthi Suzuki (Rs100.71) and the lowest average Dividend per share has been earned by Ashok Leyland (Rs.1.06). The highest Standard Deviation of Dividend per share is observed in Maruthi Suzuki (59.43), It indicates that the Dividend per share is widely dispersed in that company. The lowest standard deviation of Dividend per share is earned by Ashok Leyland (0.60). The highest and lowest Co-efficient of Variation of Dividend per share is made by Eicher motors (1.08 Per cent) and Mahindra & Mahindra Ltd (0.12 Per cent) respectively. The Dividend per share is more stable in case of Mahindra & Mahindra. On the other hand, the Dividend per share has comparatively fluctuated in case of Maruthi Suzuki during the study period. The lowest Range of Dividend per share is maintained by TVS motors is Rs.1.80 Company. It is realized that the highest variation in the Dividend per share is found in Maruthi Suzuki ltd is Rs.200.74 during the study period. The Dividend per share is more positively skewed in Bajaj auto ltd (2.17). This is due to higher Dividend per share earned by this company during the study period. The Dividend per share is more negatively skewed in Ashok Leyland (0.05). This is due to lower Dividend per share earned by this company during the study period. The distribution of Dividend per share is highest in case of Bajaj auto ltd (4.83), which shows peakedness of Dividend per share during the study period. The distribution of Dividend per Share is highly platykurtic in Maruthi Suzuki (0.60) Company

#### ANALYSIS OF DIVIDEND PAYOUT RATIO OF SELECT AUTOMOBILE COMPANIES IN INDIA

Table-4.3

S. no	Company Name Year	Tata Motors	Mahindra & Mahindra	Maruthi Suzuki	Hero Motocorp	Bajaj Auto Ltd	Ashok Leyland	TVS Motor Company	Eicher Motors	Force Motors Ltd	Cheviot Company
1	2007 - 2008	15.01	25.61	8.34	39.21	20.01	42.56	52.34	22.28	5.01	21.51
2	2008 - 2009	6.01	33.16	8.29	31.15	22.01	69.92	53.51	36.02	5.05	22.61
3	2009 - 2010	15.01	26.22	6.93	98.41	40.01	47.09	32.39	32.39	6.54	21.99
4	2010 - 2011	20.01	26.52	9.46	108.75	40.01	42.14	26.86	39.27	11.23	18.77
5	2011 - 2012	4.01	26.65	13.25	37.78	45.01	47.01	24.81	34.67	1.59	20.31
6	2012 - 2013	2.01	23.81	10.1	56.56	45.01	36.81	49.14	37.01	27.68	22.03
7	2013 - 2014	4.1	22.94	13.02	61.59	50.01	35.51	25.42	29.11	5.08	25.24
8	2014 - 2015	3.02	22.44	20.34	50.22	50.01	38.25	25.95	24.24	6.49	22.17
9	2015 - 2016	2.01	23.53	23.12	45.89	55.01	37.45	27.48	22.08	7.34	21.02
10	2016 - 2017	1.18	18.22	14.4	51.44	55.1	26.61	21.28	20.05	5.25	20.01
11	Mean	7.24	24.91	12.73	58.10	42.22	42.34	33.92	29.71	8.13	21.57
12	StdDev	6.79	3.85	5.37	25.73	12.37	11.40	12.59	7.10	7.28	1.75
13	C.V%	0.94	0.15	0.42	0.44	0.29	0.27	0.37	0.24	0.90	0.08
14	Range	18.83	8.43	16.19	77.60	-5.09	43.31	32.23	19.22	26.09	6.47
15	Skewness	2.40	0.42	1.92	1.68	1.14	1.16	1.08	2.14	0.78	0.28
16	Kurtosis	6.35	1.94	1.90	3.61	1.13	0.16	0.72	5.20	1.63	1.70

Source: Computer Data

The highest and the lowest average of Dividend payout ratio have been made by Hero motorcorp ltd (58.10) and Tata motors ltd (7.24) respectively. The highest Standard Deviation of Dividend payout ratio is occurred in Hero motocrop ltd (25.73). It indicates the Dividend payout ratio is widely dispersed in that company. The lowest Standard Deviation of Dividend payout ratio is paid by Cheviot Company (1.75). It may be noted that the Co-efficient of Variation of Dividend payout ratio of Cheviot Company (0.08 Per cent) is lowest. On the other hand, the Dividend payout ratio has highly fluctuated in case of Tata motors (0.94 Per cent) during the study period. The highest Range of Dividend payout ratio is maintained by Hero motocrop (77.60). The lowest range of Dividend payout ratio is made by Bajaj Auto crop (-5.09). It is realized that the highest variation in Dividend payout ratio is found in Hero motocrop ltd during the study period. The Dividend payout ratio is more positively skewed in Eicher motors ltd (2.40). This is due to higher Dividend payout ratio earned by this company during the study period. The Dividend payout ratio is negatively skewed in Cheviot Company (0.28). This is due to lower Dividend payout ratio is made by this company during the study period. The Kurtosis of Dividend payout ratio is highest in case of Tata motors ltd (6.35), which shows peakedness of Dividend payout ratio during the study period. The distribution of Dividend payout ratio is highly platykurtic in Ashok layland (0.16).

## ANALYSIS OF ENTERPRISE VALUE OF SELECT AUTOMOBILE COMPANIES IN INDIA

Table-4.4

S. no	Company Name Year	Tata Motors	Mahindra & Mahindra	Maruthi Suzuki	Hero Motocorp	Bajaj Auto Ltd	Ashok Leyland	TVS Motor Company	Eicher Motors	Force Motors Ltd	Cheviot Company
1	2007 - 2008	27.71	18.73	24.21	13.21	10.56	5.23	1.67	8.35	543.42	111.41
2	2008 - 2009	21.06	12.13	21.29	21.82	10.86	4.82	1.87	1.82	225.68	47.64
3	2009 - 2010	57.89	31.79	41.94	36.54	30.76	9.93	2.34	7.35	582.66	115.14
4	2010 - 2011	91.57	42.05	34.31	33.92	42.17	9.25	3.02	3.92	125.28	142.67
5	2011 - 2012	96.96	43.99	37.19	41.92	46.04	10.41	2.34	3.72	228.94	148.28
6	2012 - 2013	99.96	52.07	39.14	30.86	51.43	9.07	2.11	7.75	255.11	128.93
7	2013 - 2014	142.26	58.51	60.68	45.31	59.03	10.03	5.78	13.42	259.3	145.27
8	2014 - 2015	196.63	75.66	111.25	52.47	57.68	22.51	13.11	40.44	155.13	158.75
9	2015 - 2016	144.22	71.22	112.12	58.34	68.28	31.27	16.72	51.88	344.62	329.02
10	2016 - 2017	177.83	77.79	182.36	64.88	81.85	24.91	21.95	69.23	587.24	483.47
11	Mean	105.61	48.39	66.45	39.93	45.87	13.74	7.09	20.79	330.74	181.06
12	StdDev	59.75	23.03	52.30	16.07	23.23	9.08	7.41	24.02	176.37	127.97
13	C.V%	0.57	0.48	0.79	0.40	0.51	0.66	1.05	1.16	0.53	0.71
14	Range	175.57	65.66	161.07	51.67	71.29	20.09	20.28	67.41	461.96	435.83
15	Skewness	0.64	1.83	0.03	1.23	1.44	1.07	1.32	1.07	1.26	1.28
16	Kurtosis	1.31	3.16	1.03	1.11	1.46	1.56	1.52	1.21	1.15	0.23

The above table depicts the results of Enterprise Value of select Auto mobile companies during the study period. The amount of Enterprise Value is highest in case of Force motors ltd (330.74) whereas TVS Motors Company (7.09) maintains the lowest amount of Enterprise Value. The highest Standard Deviation of Enterprise Value occurs in case of Force motors ltd (176.37), which shows more fluctuation in Enterprise Value, during the study period. TVS Motors Company (7.41) maintains the lowest Standard Deviation of Enterprise Value. The value of Co-efficient of Variation of Enterprise Value has remained low in case of Hero motocrop ltd (0.40 Per cent), indicates stability in enterprise value as compared to other companies. The highest value of co-efficient of variation is maintained by Eicher motors ltd (1.16 per cent). The highest Range of Enterprise Value is maintained by Cheviot company ltd( Rs.435.83) and the lowest range of enterprise value is maintained by Ashok Leyland( Rs.20.09). It is inferred that the highest variation in the Enterprise Value is found in Force motors ltd during the study period. The Skewness of Enterprise Value is more positively skewed in cheviot company (1.28). This is due to higher Enterprise Value earned by this company during the study period. The Enterprise Value is more negatively skewed in Maruthi Suzuki (0.03). This is due to lower Enterprise Value maintained by this company during the study period. The Kurtosis of Enterprise Value is highly peaked in Mahindra & Mahindra (3.16). On the other hand, it is platykurtic in case of Cheviot Company (0.23).

## CONCLUSION

The present study has made an attempt to analyse the dividend policy and profit maximization. The results suggests that dividend policy differs from company to company and year to year. The distribution pattern of earnings of all the companies' together show that dividend decision is residual and decision regarding dividend retention is primary. The results found that the distribution of dividends vary from company to company. Most of the Automobile companies assets are being used to generate income for the shareholders. It is also notified that few Automobile companies maximized shareholders' profit. It is observed that the dividend policy related decisions are positively related with maximization of profits of the Automobile companies. Hence, it is concluded that the corporate sector should take appropriate steps which would be useful for maximizing the profits of the shareholders.

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## A STUDY ON FACTORS INFLUENCING THE PURCHASE OF FLAT IN GATED COMMUNITIES

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### ABSTRACT

*In recent years, there has been growing demand for flat in gated communities because of increasing affordability of families to avail their own flat including low income groups in major cities in India. People purchase flat in gated communities in expectation of generating financial returns, value appreciation and higher rental yields. Besides, majority of young and middle aged population are very much interested in purchase of flat in gated communities because of security concerns and life style. The locality, economic value, structure and neighbourhood are the factors influencing the purchase of flat in gated communities. The economic value, locality, structure and neighbourhood have significant and positive impact on level of motivation of the flat owners to purchase flat in gated communities. The developers should construct gated communities where public infrastructure facilities are available including presence of schools, shops and retail centres and they must make sure of privacy and security of residents of gated communities. The developers must provide very good development schemes for purchasers of flats in gated communities and should ensure property gain and value appreciation to the owner of flats in gated communities.*

*Keywords: Flat, Gated Communities and Motivation*

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### 1. INTRODUCTION

The fast development and extension, traffic, pollution, crime and various violence activities show a new unattractive lifestyle in the urban area with two leanings that end in a pull and push effects. The varying character of spaces in urban areas has two elements namely dissections of settlements and internalization of housing within the borders of all of the essentialities of life. Therefore, the people in the urban areas require a safe and secure residential places lead to the emergence of the idea of gated communities.

Gated communities refer to residential complexes, which are closed to outsiders through different mechanisms namely walls, gates and fences and are protected against probable dangers through security guards and closed circuits television (CCTV) cameras (Tanulku, 2013). Gated communities have some common features and these are physical barriers for entry, communal control and privatization of public spaces and privatization of public services (Webster et al 2002). Gated communities are walled and gated residential developments that restrict public access (Atkinson and Flint, 2004).

In recent years, there has been growing demand for flat in gated communities because of increasing affordability of families to avail their own flat including low income groups in major cities in India. People purchase flat in gated communities in expectation of generating financial returns, value appreciation and higher rental yields. Besides, majority of young and middle aged population are very much interested in purchase of flat in gated communities because of security concerns and life style. A clear understanding and forecasting of decision making of people in purchasing of flat in gated communities would be completed when there is a superior knowledge on factors influencing the purchase of flat in gated communities. Therefore, the present research is carried out to study the factors influencing the purchase of flat in gated communities in Chennai city.

### 2. METHODOLOGY

The Chennai city has been selected for the present study. The flat owners have been chosen by using multi stage random sampling method. The data have been collected from 711 flat owners of gated communities through pre tested and structure questionnaire. The frequency and percentage analysis have been done to examine the socio-economic status of flat owners of gated communities and level of motivation of the flat owners to purchase flat in gated communities. The exploratory factor analysis has been carried out to examine the factors influencing the purchase of flat in gated communities. The multiple regression analysis has been used to analyze the impact of factors influencing the purchase of flat in gated communities on level of motivation to purchase flat in gated communities.

### 3. RESULTS AND DISCUSSION

#### 3.1. Socio-Economic Status of Flat Owners of Gated Communities

The socio-economic status of flat owners of gated communities was analyzed and the results are presented in Table-1. The results indicate that 53.73 per cent of flat owners are males and the remaining of 46.27 per cent of flat owners are females. It is observed that 39.80 per cent of flat owners are in the age group of 31 - 40 years,



29.82 per cent of flat owners are in the age group of 41 - 50 years, 18.71 per cent of flat owners are in the age group of 21 - 30 years, 7.03 per cent of flat owners are in the age group of 51 - 60 years and 4.64 per cent of flat owners are in the age group of above 60 years.

The results show that 35.58 per cent of flat owners are educated up to graduation, 31.37 per cent of flat owners are educated up to post graduation, 11.96 per cent of flat owners are educated up to higher secondary, 11.67 per cent of flat owners are educated up to diploma and 9.42 per cent of flat owners are educated up to secondary. It is clear that 38.26 per cent of flat owners are private employees, 20.96 per cent of flat owners are Government employees, 20.11 per cent of flat owners are professionals, 15.75 per cent of flat owners are businessmen and 4.92 per cent of flat owners are self employed.

The results reveal that 33.90 per cent of flat owners are in the monthly income group of Rs.30,001 - Rs.40,000, 27.00 per cent of flat owners are in the monthly income group of Rs.20,001 – Rs.30,000, 18.00 per cent of flat owners are in the monthly income group of Rs.40,001 – Rs.50,000, 16.18 per cent of flat owners are in the monthly income group of below Rs.20,000 and 4.92 per cent of flat owners are in the monthly income group of above Rs.50,000.

**Table-1: Socio-Economic Status of Flat Owners of Gated Communities**

Socio-Economic Status	Number of Flat Owners	Percentage
<b>Gender</b>		
Male	382	53.73
Female	329	46.27
<b>Age Group</b>		
21 - 30 years	133	18.71
31 - 40 years	283	39.80
41 - 50 years	212	29.82
51 - 60 years	50	7.03
Above 60 years	33	4.64
<b>Educational Qualification</b>		
Secondary	67	9.42
Higher Secondary	85	11.96
Diploma	83	11.67
Graduation	253	35.58
Post Graduation	223	31.37
<b>Occupation</b>		
Self Employed	35	4.92
Government Employees	149	20.96
Private Employees	272	38.26
Businessmen	112	15.75
Professionals	143	20.11
<b>Monthly Income</b>		
Below Rs.20,000	115	16.18
Rs.20,001 – Rs.30,000	192	27.00
Rs.30,001 - Rs.40,000	241	33.90
Rs.40,001 – Rs.50,000	128	18.00
Above Rs.50,000	35	4.92

### 3.2. Factors Influencing the Purchase of Flat in Gated Communities

To examine the factors influencing the purchase of flat in gated communities, the exploratory factor analysis has been carried out and the rotated component matrix are presented in Table-2. The results of Kaiser-Meyer-Olkin (KMO test) measure of sampling adequacy (KMO = 0.872) and Bartlett's test of Sphericity (chi-square value = 0.0036; significance = 0.000) indicates that the factor analysis method is appropriate.

There are four factors that are derived accounting for a total of 75.87 per cent of variations on 20 variables. Each of the four factors contributes to 26.74 per cent, 21.15 per cent, 16.62 per cent and 11.36 per cent respectively.

**Table-2: Factors Influencing the Purchase of Flat in Gated Communities**

Factor	Variables	Rotated Factor Loadings	Eigen Value	% of Variation	Factor Name
<b>I</b>	Presence of public infrastructures	0.69	2.36	26.74	<b>Locality</b>
	Presence of shops	0.67			
	Availability of retail centres	0.71			
	Presence of schools	0.72			
	Distance travelled for work	0.68			
	Prestige and seclusion	0.70			
<b>II</b>	Base lending rate	0.72	1.81	21.15	<b>Economic Value</b>
	Property gains	0.68			
	Mortgage loan to value	0.70			
	Property cooling measures	0.69			
	Development schemes of developers	0.71			
<b>III</b>	Size of living area	0.66	1.19	16.62	<b>Structure</b>
	Number of rooms	0.68			
	Number of bathrooms	0.64			
	Internal structure	0.70			
	External structure	0.67			
<b>IV</b>	Fear of crime	0.65	1.03	11.36	<b>Neighbourhood</b>
	Safety of neighbourhood	0.70			
	Life style	0.68			
	Lack of trust on Government	0.66			
	Cumulative % of Variation			75.87	
	Cronbach's Alpha				0.87

Method of Extraction: Principal Component Analysis.

Method of Rotation: Varimax with Kaiser Normalization.

Rotation converged in 9 iterations.

Factor-I includes presence of public infrastructures, presence of shops, availability of retail centres, presence of schools, distance travelled for work and prestige and seclusion. Hence, this factor is named as **Locality**.

Factor-II consists of base lending rate, property gains, mortgage loan to value, property cooling measures and development schemes of developers. Therefore, this factor is named as **Economic Value**.

Factor-III comprises of size of living area, number of rooms, number of bathrooms, internal structure and external structure. Thus, this factor is named as **Structure**.

Factor-IV encompasses fear of crime, safety of neighbourhood, life style and lack of trust on Government. So, this factor is named as **Neighbourhood**.

Cronbach's Alpha value of the scale is 0.87 showing that the internal consistency of each measure is at acceptable level. It reveals that locality, economic value, structure and neighbourhood are the factors influencing the purchase of flat in gated communities.

### 3.3. Level of Motivation To Purchase Flat in Gated Communities

The level of motivation of the flat owners to purchase flat in gated communities is presented in Table-3.

**Table-3: Level of Motivation to Purchase Flat in Gated Communities**

Level of Motivation	Number of Flat Owners	Percentage
High	69	9.70
Moderate	317	44.59
Low	325	45.71
<b>Total</b>	<b>711</b>	<b>100.00</b>

The results show that 45.71 per cent of flat owners opined that the level of motivation to purchase flat in gated communities at high level, 44.59 per cent of flat owners opined that the level of motivation to purchase flat in gated communities at moderate level and 9.70 per cent of flat owners opined that the level of motivation to purchase flat in gated communities at low level.

### 3.4. Impact of Factors Influencing the Purchase of Flat in Gated Communities on Level of Motivation to Purchase Flat in Gated Communities

To analyze the impact of factors influencing the purchase of flat in gated communities on level of motivation to purchase flat in gated communities, the multiple linear regression has been used and the results are presented in Table-4.

The coefficient of multiple determination ( $R^2$ ) is 0.65 and adjusted  $R^2$  is 0.63 indicating the regression model is good fit. It is inferred that about 63.00 per cent of the variation in dependent variable (Level of Motivation to Purchase Flat in Gated Communities) is explained by the independent variables (Factors Influencing the Purchase of Flat in Gated Communities). The F-value of 45.082 is significant at one per cent level implies that the regression model is significant.

**Table-4: Impact of Factors Influencing the Purchase of Flat in Gated Communities on Level of Motivation to Purchase Flat in Gated Communities**

Factors Influencing the Purchase of Flat in Gated Communities	Regression Coefficients	t-value	Sig.
Intercept	1.027**	19.020	.000
Locality ( $X_1$ )	.394**	14.709	.000
Economic Value ( $X_2$ )	.410**	15.175	.000
Structure( $X_3$ )	.358**	12.475	.000
Neighbourhood ( $X_4$ )	.296**	10.638	.000
$R^2$	0.65	-	-
Adjusted $R^2$	0.63	-	-
F	45.082	-	.000

\*\* Significance at one per cent level

The results indicate that economic value, locality, structure and neighbourhood have significant and positive impact on level of motivation of the flat owners to purchase flat in gated communities at one per cent level. Hence, the null hypothesis of there is no significant impact of factors influencing the purchase of flat in gated communities on level of motivation to purchase flat in gated communities is rejected.

### 4. CONCLUSION

The above study reveals that more than half of flat owners are males and more than one-third of flat owners are in the age group of 31 - 40 years. More than one-third of flat owners are graduates and more than one-third of flat owners are employed in private sector and one third of flat owners are in the monthly income group of Rs.30,001 - Rs.40,000.

The exploratory factor analysis shows that locality, economic value, structure and neighbourhood are the factors influencing the purchase of flat in gated communities. The regression analysis indicates that economic value, locality, structure and neighbourhood have significant and positive impact on level of motivation of the flat owners to purchase flat in gated communities.

The developers should construct gated communities where public infrastructure facilities are available including presence of schools, shops and retail centres and they must make sure of privacy and security of residents of gated communities. The developers must provide very good development schemes for purchasers of flats in gated communities and should ensure property gain and value appreciation to the owner of flats in gated communities. The developers should make both internal and external structures of gated communities more attractive and appealing and they should develop gated communities that offer life style living and high protection from crimes to the residents.

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**A STUDY ON OFF BALANCE SHEET EXPOSURE OF INDIAN SCHEDULED COMMERCIAL BANKS**

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**ABSTRACT**

*Due to huge and cut throat competition in the current market, the Indian banking industry has exposed to a lot of risk and threat and to different types of risks. Their profit is not increasing up to a global level. So they are going for the off balance sheet activities. Besides that Indian Public sector banks are doing their business in foreign currency in order to hedge these foreign exchange risks they are going for taking position in the international as well as domestic forward exchange market. This leads to huge amount of off balance sheet activity and as a result the Off-balance sheet activities started playing a probatory role in helping the banks to hedge their long-term financial assets in the on-balance sheet and enhancing the the profitability of the banks.. These are the fee based incomes of banks having no or a little investment. This study is designed to investigate the OBS exposure of Public Sector banks and private sector banks. This study describes the share of the each component of the OBS in the the total OBS by analysing data from 2005-06 to 2016-17. The results obtained from the study show that Bank group-wise analysis revealed that, off-balance sheet exposure remained significantly higher for foreign banks as compared with other bank groups, due to their higher exposure to forward contracts, guarantees and acceptance/endorsements. The bulk of the increase in OBS activity has been accounted for by foreign banks which comprise nearly three-fourths of the OBS activity of the commercial banking system. Besides that the public sector banks and private sector banks also by their exposure to off balance sheet activities contributing significantly to the total OBS activities of scheduled commercial banks from 19.82 % in 2005-06 to 25.3 % in 2016-17 and from 20.08 % in 2005-06 to 25.22 % in 2016-17. However, the market is dominated primarily by the foreign banks and some new private banks. The participation of the public sector banks in this market tend to be quite low vis-à-vis their foreign/ private counterparts.*

*Keywords: Financial Assets, Profitability, Off balance sheet activities, commercial banks, Risk Exposure*

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**INTRODUCTION**

Banking sector in India plays a very crucial role in the Indian economy. The Indian economy is the 3<sup>rd</sup> largest economy in the world and it has a significant contribution to the world economy. The mainstay of this economy rests upon the banking sector. Like other countries, Indian financial sector is still primarily bank-oriented. So, the banking sector represents the most important and significant part of the whole financial sector. Indian Banking Sector has traditionally remains a protected industry in many emerging nations including India. Banking had been under insulation cover! Over the decades with the protection and insulation given by the Government in the different functional activities of the banks. It was fully a regulated environment both for interest charges on deposits and lending activities of the banks, directed lending to institutions were the features of the Indian Banking System. Banking Sector had not experienced any competition from within the country and from outside in a regulated regime. In a protected environment there was a very limited pressure on banks and has resulted in lackluster and inefficiency in banks functioning.

After the liberalization of Indian economy in 1991, a number of radical developments have taken place in the banking sector which has a significant impact on the functioning and development of the banking system. Many of the developments are in the context and consequence of financial sector reforms – like monetary and credit policy, prudential guidelines, development of markets like Government Securities Market. With the opening of the economy in general and banking sector in particular!, there was an onslaught of competition in the form of entry of foreign banks, new banks under private sector, there is metamorphic change in the functioning of Banks. To get wider acceptance both at national and international levels prudential norms and guidelines have been made to introduce greater transparency in the functioning of the banking system.

Financial systems have experienced dramatic changes over the last two decades. The sharp acceleration in the pace of innovation has significantly altered the traditional face of the international financial system also. These developments have been mainly due to the interaction of a combination of factors. The revolution in information technology, and an increase in competition, at both the national and international levels, has led to a continuing erosion of dividing lines, as the major intermediaries have been global in their geographical coverage and universal in their financial functions, encompassing banking, securities market activities and increasingly, insurance. The risks to global financial stability continued to remain at elevated levels, with

global growth witnessing a fragile and multi-paced pattern of recovery. In the meanwhile, the global macro-financial risks shifted from advanced to emerging economies with the latter facing pressures from weakening prospects of growth, falling commodity prices and strengthening of the dollar. Within the emerging world, however, the Indian economy appeared quite resilient, given a modest recovery in the economy, declining inflation and buoyant capital flows that helped in maintaining the external sector balance.

A structural shift in the international financial architecture can be traced to the 1970s with the breakdown of the Bretton Woods system in the 1970s and the subsequent switch to floating exchange rates. The collapse of pegged exchange rates, in particular, created a strong demand from customers of banks for the hedging of exchange rate risks on a routine basis, while the transition from a situation of low and stable inflation and interest rates to one characterized by high and variable rates increased the need for firms to hedge their potential risk exposures. The increased demand for such risk management services meant that in addition to their traditional intermediary role, banks were called upon to provide such services. For example, companies that borrowed in their domestic currency, derived income in other currencies from their foreign operations and banks could help such companies to control their foreign currency risk.

Similarly, technology-intensive firms for whom unpredictable short-term revenues imposed severe constraints on their research and development (R&D) budgets, approached banks that provided products designed to hedge overseas income and plan R&D over longer period. This meant that banks had to increasingly diversify out of their traditional banking operations and provide fee-based services, implying higher incomes although at greater risks. The growth of off-balance sheet activities was a natural outgrowth of banks providing such risk management services.

The commercial banking industry has changed drastically over the past twenty years, and one notable change is in the composition of bank businesses and product lines towards non-interest income activities such as off balance sheet activities. As a result the structure of the balance sheet of commercial banks has experienced changes with the introduction of off balance sheet activities. Off-balance sheet activities refer to banking products and practices not related to traditional forms of portfolio lending. Off-balance sheet activities are contingent commitments or contracts which generate income to a bank, but are not captured as assets or liabilities under conventional accounting procedure (Nachane and Ghosh 2002). These items are recorded in a bank's accounts as notes to balance sheet. Off-balance sheet activities of commercial banks include guarantees, commitments, market-related activities (financial derivatives), and advisory or management functions. OBS activities include issuing various types of guarantees, like letters of credit, which often have a strong insurance underwriting element, and making future commitments to lend. Both services generate additional fee income for banks. OBS activities also involve engaging in derivatives transactions, such as futures, forwards, options, and swaps. A loan commitment is a contractual commitment to loan a certain maximum amount to a borrower at a given interest rate over some period in the future. Letter of credit is a guarantee that banks sell to underwrite the element, and making future commitments to lend. Both services generate additional fee income for Banks.

OBS activities also involve engaging in derivatives transactions, such as futures, forwards, Options and swaps. A loan commitment is a contractual commitment to loan a certain maximum amount to a borrower at a given interest rate over some period in the future. Letter of credit is a guarantee that banks sell to underwrite the future performance of the buyers of guarantees. A commercial letter of credit is used mainly to assist a firm in domestic and international trade. The bank's role is to provide a formal guarantee that it will pay for the goods shipped or sold if the buyers of the goods default on its future payments. Standby letters of credit cover contingencies that are potentially more severe, less predictable or frequent, and not necessarily trade related. Loans sold are loans that banks originate and then sell to other investors that (in some cases) can be returned to the originating institution in the future if the credit quality of the loans deteriorates. Derivatives are a position taken in the form of swaps, options, futures, and forwards contracts by the banks for hedging and trading purposes.

### **IMPORTANCE**

Banking Sector has undergone enormous changes over the decades initially from ownership to government ownership and open to competition from private and foreign banks after the liberalization of the economy in 1991. Under the regulated economic system, banks used to enjoy complete protection from the government and insulated totally from external shocks. The financial sector initiated by the Government brought unforeseen changes in the general functioning of the banks; as a result banks are compelled to extend their business activities which they were distancing over the years. The exposure to off banking activities to like foreign exchange contracts has led the banks to expose to greater risks but with incremental revenues in the



form of other incomes. It is necessary for banks to manage the risk through the exposure to various off balance sheet activities.

For commercial banks operating in India, off balance sheet activities have become important in the reform years because of the following reasons:

- (i) The deregulation of the banking sector entry and relaxation of branch licensing policy resulted in substantial decline in banking sector spread (in terms of total assets) compelling the commercial banks to look for some other source of income.
- (ii) The introduction of asset classification, income recognition and capital adequacy norms made lending a relatively risky proposition.

### **RESEARCH GAP AND STATEMENT OF THE PROBLEM**

There are a number of studies on off balance sheet items in other countries. But in India there is a very less number of studies that have been made. In these studies also it is observed that most of the studies were relating to off balance sheet items and its impact upon the market risks of the concerned countries. Besides that there was study relating to profitability of banks in relation to OBS activities of banks and whether there is efficiency of banks to generate profit out of OBS activities. So, a gap was found that no study has been made an attempt to study the trend of the off balance sheet exposure in public sector banks and private sector banks and the share of the each component of the off balance sheet item in the total OBS for the year 2005-06 to 2016-17

### **OBJECTIVES OF THE STUDY**

To study the off balance sheet exposure of public sector banks, private sector banks, and Foreign banks in India.

### **RESEARCH METHODOLOGY**

The data are basically collected from secondary sources. This secondary sources includes mainly Reports on Trends and progress of banking in India from the RBI website. The statistical tables are prepared by compiling data from RBI publications and statistical tables. Besides that the various other sources are Magazines & journals. Many websites are also been referred for collecting information.

### **IMPLICATIONS OF THE STUDY**

This study is designed to investigate the OBS exposure of Indian PSB and Private sector banks. It will identify the ability of these banks to generate fee based income which will neutralise the pressure of earnings income in terms of profit. Therefore conducting research in this area will benefit shareholders and stakeholders of the banking sector. The study would have benefit for Management, Government, Investors and practitioners and academicians by providing useful information about the impact of regulation in form of reserve requirement and capital adequacy requirement upon OBS activities of commercial banks. Knowledge of these factors would be useful in helping the regulatory authorities and bank managers formulate future policies aimed at improving the banking service, profitability and structure of the Indian banking sector. By establishing OBS activities and their determinants, bank regulators and management can gain better understanding of the issue. This study will help to enrich literatures on the subject matter by providing empirical evidence on the subject. The study could also be used as an initiation for those who are interested to conduct a detailed and comprehensive study regarding the topic. Thus it will serve as a reference for further study on related topics. Therefore, the research on the topic could be of great interest to management, shareholders, as well as for supervisory authorities and researchers and academicians.

### **LITERATURE REVIEW**

**Dr. Anil Kumar Swain & Ganesh Prasad Panda (2017)<sup>1</sup>**, in their study "Off Balance Sheet Exposure Of Public Sector Banks In India: An Empirical Analysis" describes empirically the role of OBS in profitability of Indian banking sector. Besides that the various determinants of off balance sheet activities like CRAR, NNPA, NIM, LT and ROA considered and empirically how these are related to Off balance sheet activities of scheduled commercial banks in India by analysing data from 2005-06 to 2014-15.

**AppalaRajuMiddi (2016)<sup>2</sup>**, in his article "Off Balance Sheet Exposure – Performance Analysis and Risk Measurement of Indian Banks" opined that the exposure to Off Balance sheet activities has gone such phenomenal levels where the size of the total off balance sheet exposures of the Indian banking! Sector! Was larger than the total balance sheet assets of the banking sector. The risk associated with this exposure is very high and any default will definitely affect the entire banking sector especially those of the new private banks and foreign banks and lead to systemic risk.

**Nachane & Saibal Ghosh(2007)<sup>3</sup>** in their article “An Empirical Analysis of the Off-Balance Sheet Activities of Indian Banks” traces the determinants of off-balance sheet activities in the Indian banking sector. Using data for the period 1996 to 2004, the article finds that not only regulatory factors, but also market forces captured by banks-specific characteristics and macro-economic conditions are at work in the diffusion pattern of off-balance sheet (OBS) activities. From the regulatory standpoint, while capital adequacy is dominant in the case of public sector banks, non-performing assets seem to be a prime concern for foreign banks, in addition to public sector banks. Among others, at the bank-specific level, size is an important consideration for public sector and foreign banks, while profits are a prime mover only for new private banks. Finally, the macro-economic environment seems to have played an important role in affecting OBS diffusion, more so for public sector and new private banks.

**Ram Pratap Sinha (2005)<sup>4</sup>** in his paper “Off Balance Sheet Exposure of Indian Commercial Banks – Some Empirical Results” revealed that The results obtained from the non-parametric exercise show that the public sector commercial banks are lagging behind the private sector commercial banks in terms of off balance sheet activities. This is one area where the banks must pay adequate attention to improve their financial health. Further, almost all the commercial banks exhibited decreasing returns to scale which is not very encouraging for the banking sector. The econometric exercise indicates that off balance sheet activity is positively related to operating profit ratio and negatively related to NPA ratio. This reinforces the hypothesis that strong banks have greater market risk taking ability as compared to the weak banks.

### Data Analysis and Interpretation

A detailed analysis of OBS of the Indian banking sector is provided in the following tables

**Table-1: Off Balance Sheet Exposure of Scheduled Commercial Banks**

YEAR	Public Sector Banks	Private Sector Banks	Foreign Banks	Scheduled Commercial Banks
2005-06	842205 (19.82)	853166 (20.08)	2553855 (60.1)	4249342 (100)
2006-07	1270669 (16.66)	1330091 (17.37)	5050678 (65.97)	7656023 (100)
2007-08	1857172 (12.87)	2326320 (16.12)	10244875 (71.01)	14427369 (100)
2008-09	1903782 (17.07)	1740745 (15.61)	7507672 (67.32)	11152217 (100)
2009-10	1763802 (16.75)	1842674 (17.5)	6923447 (65.75)	10529958 (100)
2010-11	2189664 (8.6)	2347719 (14.49)	10643105 (76.91)	13838389 (100)
2011-12	2658400 (18.21)	2787000 (19.1)	9149542.81 (62.69)	14594900 (100)
2012-13	3110400 (23.46)	2719400 (20.51)	7428625 (56.03)	13258300 (100)
2013-14	3247049 (24.25)	2725191 (20.35)	7417934 (55.4)	13389772 (100)
2014-15	3595137 (23.95)	3294597 (21.94)	8123883 (54.11)	15013645 (100)
2015-16	3698693 (25.29)	3429908 (23.45)	7496460 (51.26)	14624385 (100)
2016-17	3835500 (25.3)	3823400 (25.22)	7501712 (49.48)	15161100 (100)

Source: RBI, report on trend and progress of banking in India, 2005-2017

The off-balance sheet operations of the SCBs, which include forward exchange contracts, guarantees, acceptances, endorsements etc., had increased manifold in the recent years. In line with the trend observed in recent years, SCBs continued to expand their off-balance sheet (OBS) exposures. Among bank-groups, off-balance sheet exposure of foreign banks constituted 65.9 per cent of total off-balance sheet exposure of all SCBs in the year 2006-07. Of the total off-balance sheet exposures of SCBs, foreign banks constituted the largest share (71.01 per cent), followed by new private sector banks (16.12 per cent) and public sector banks (12.87 per cent) in the year 2007-08. The decline in OBS was especially evident in the case of foreign banks, whose contingent liabilities continue to be highest both in absolute terms as well as in terms of percentage in the previous years as compared to 2008-09.

1. Dr. Anil Kumar Swain & Ganesh Prasad Panda, “Off Balance Sheet Exposure Of Public Sector Banks In India: An Empirical Analysis”, Imperial Journal of Interdisciplinary Research (IJIR), Vol-3, Issue-2, 2017, pp182-191
2. AppalaRajuMiddi, “Off Balance Sheet Exposure – Performance Analysis and Risk Measurement of Indian Banks” Archives of Business Research – Vol.4, No.1, 2016 pp 112-117
3. Saibal Ghosh and D M Nachane “An Empirical Analysis of the Off-Balance Sheet Activities of Indian Banks”
4. Ram Pratap Sinha, “Off Balance Sheet Exposure of Indian Commercial Banks – Some Empirical Results” Conference Paper in SRN Electronic Journal · December 2005

Apart from the foreign banks, the private sector banks also witnessed a decline in their OBS. But still the foreign banks continued to have largest share of off-balance sheet exposures of the SCBs (67.32 per cent), followed by public sector banks (share of 17.07 per cent) and private sector banks (15.61 per cent). Off-balance sheet operations of the banking system contributed in a major way in the aggravation of the global financial crisis and have thus been an important area of concern for financial regulators worldwide.

In India, the Reserve Bank tightened the prudential norms for off-balance sheet exposures of banks, following which, there was a decline in this exposure in 2008-09 breaking the trend of increase observed during the earlier period. In 2009-10, there was a further decline in the off-balance sheet exposure of banks. Among bank groups, off-balance sheet exposure was generally the largest for foreign banks. Notwithstanding the decline, the off-balance sheet exposure continued to be the largest for foreign banks at end-March 2010. The global financial turmoil demonstrated the risk involved in accumulating large amount of off-balance sheet exposures (OBS). Recognising the risky and uncertain nature of OBS, the Reserve Bank tightened the prudential norms on OBS in August 2008. As a result the off-balance sheet exposures of the banking sector, declined in the previous two years, i.e. 2008-09 and 2009-10 witnessed a growth in 2010-11. The off-balance sheet exposures of foreign banks constituted more than two thirds of the total off-balance sheet exposures of the banking sector in 2010-11. In recent years, off-balance sheet activities of banks have come under the scrutiny of the Reserve Bank, especially given the fact that the excessive growth in off-balance sheet exposure of banks in advanced economies has been one of the factors behind the global financial turmoil.

During 2012-13, total off-balance sheet of banks registered lower growth than the previous year. Bank group-wise analysis of off-balance sheet exposure revealed that, off-balance sheet exposure was significantly higher for foreign banks as compared with other bank groups, due to their higher exposure in forward contracts, guarantees and acceptance/endorsements. During 2015-16, banks' off-balance sheet operations contracted. The share of FBs in total off-balance sheet operations of the banking sector remained the highest at 51.26 per cent, followed by PSBs (25.29 per cent) and PVBs (23.45 per cent). Off-balance sheet transactions play a significant role in hedging the risks associated with long-term financial assets on banks' balance sheets and in improving profitability, especially in the context of tepid credit growth. During 2016-17, off-balance sheet activities expanded across all bank groups except FBs recorded the lowest growth, although they constituted almost half of the total off-balance sheet operations of banks. As compared to previous years.

### **OBSERVATIONS**

Off-balance sheet activities are non-interest income activities concerned with FECs, Endorsements and advances and guarantees. OBS activities have both risk-reducing as well as risk-increasing attributes and the net impact of the risk will depend on the ability to manage the risk from engaging in these activities. Foreign Banks are the major component of OBS of Indian Scheduled commercial banks by having the highest amount of exposure. Indian public sector banks should go for more OBS as they have a huge competition from the private as well as foreign players. As off-balance sheet activity is a double-edged weapon and it has the capacity to both reduce and enhance risk, so SCBs banks should consider both pros and cons of off-balance sheet activities while going for that.

### **CONCLUSION**

Like many other financial activities represented as a transition in the financial system, financial researchers believe that OBS activities are driven by regulatory changes, financial innovations, and the technological progress that is accompanying them. Banks are just like any other firm in that they aim to maximize their revenues and minimize their expenses; the deregulation process during the last few decades has put more constraints in bank's traditional activities which, of course, decreased bank's revenues and increased bank's expenses, decreasing bank's profit. As a result of these regulatory changes bank's escaped from the traditional, on-balance sheet activities where the regulations applied, to off-balance sheet activities in order to generate new income sources. Although, this hypothesis is true for some new activities and it may be one reason to begin engagement in these sophisticated OBS activities.

At this competitive juncture Indian banking industry has undergone with a new era, where Public sector banks and private sector banks play a very crucial role in the lifeline of the country but in the same time they are being posed with various types of risks. So OBS activities are now regarded as a better way to neutralise the losses and to arrest the competition. But at the same time it is also creating risks among the banks. So the banks need to be very alert every time and grab the coming opportunities by evaluating the pros and cons before going for Off-balance sheet activities. This is one area where the banks must pay adequate attention to improve their financial health. This paper summarised the off-balance sheet exposure of Public sector banks, private sector banks and Foreign Banks in an empirical manner. The purpose of this paper is to study the contribution

of various components of off balance sheet to the total s Off- balance sheet items. The most significant off-balance sheet items in Indian banking sector in the period from 2006 to 2017 is foreign banks contribution towards the total scheduled commercial banks..

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**EFFECT OF COGNITIVE EXPERIENTIAL STATE AND AFFECTIVE EXPERIENTIAL STATE ON REPURCHASE INTENTION AMONG THE ONLINE CUSTOMERS**

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**ABSTRACT**

*The importance of analyzing and identifying the factors influencing the consumer when he or she decides to purchase on the internet is vital. It is a new virtual market which will bring significant difference to the consumers. If the consumer likes to do shopping, a study on the factors that will influence them to do online shopping will be meaningful. These factors need to be identified and taken into account by online retailers in order to satisfy the consumer's demands and compete in the online market. E-Retailing stores sell online promotion only for goods that can be sold easily online. The online retailing requires lot of display and specification of products to make the viewers have a personal feel of the product and its quality as he gets while physically present in a shop. The rapid development of the technologies surrounded the Internet.*

*Key words: Customer experience, Experiential State, Electronic retailing, online shopping satisfaction*

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**INTRODUCTION AND LITERATURE REVIEW**

Internet is changing the way consumers shop and buy goods and services. It has rapidly evolved into a global phenomenon. Many companies have started using the Internet with an aim of cutting marketing costs. They reduced the price of their products and services in order to stay ahead in highly competitive markets. Electronic retailing or e-tailing, as it is generally being called now, is the direct sale of products. Online shopping refers to the shopping behavior of consumer in an online store or a website used for online purchasing purpose. People are busy with their work and commitments; they are left with a little spare time. In addition, with wide availability and usage of smart devices, they find internet as the easiest medium to meet their requirements. that "Customer Experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and usually initiated by the customer.

Online repurchase intention as the endogenous variable instead of studying the online consumers' actual behavior because, based on the theory of reasoned action proposed by Ajzen and Fishbein [1], intention is considered the best immediate factor in the relationship between attitude and behavior, and is appropriate to test consumers' behavior. Online customer retention is a hot issue in both the IT and marketing areas Just like traditional shopping, customers' return intention is primarily based on satisfaction in a previous shopping experience. Satisfaction has also been tested in several academic studies as an important factor affecting repurchase intention in the context of e-commerce

Cognitive Experiential State (CES): This component of OCE is connected with thinking or conscious mental or thought processes. Cognition, in a marketing context, has been found to be influenced by the emotional state of the individual (Bagozzi, Gopinath, and Nyer 1999). Cognitive style is indicated when the purpose of processing information is to solve the problem or to learn.

Cognitive experiential state is the active participation in events or activities, leading to the accumulation of knowledge or skill.

Affective Experiential State (AES): This component of OCE "involves one's affective system through generation of moods, feelings and emotions." Russell and Carroll (1999) found that affective refers to internal feeling state and symbolize a collection of moods (low intensity, diffuse affective states) and emotions (differentiated, intense affective states with clear causes).

Repurchase intention is a positive attitude of consumers towards e-retailer that will generate repeat purchases (repeat buying behavior). Zhou et.al.(2009) & Kim et al, (2012), repurchase intention is that consumers are interested in making a purchase by using online shopping, consumer online shopping will be revisited in the using online shopping, consumer online shopping will be revisited in the future and consumers are interested in to recommend online shopping because they also use online shopping

Repurchase Intention: Repurchase intention is a positive attitude of consumers towards e-retailer that will generate repeat purchases. Repurchase Intention is the ability of the customer to visit the website again and involve in shopping. Fang, Chiu and Wang (2011) define 'online repurchase intention' as a probability of a

person to repurchase the product from the same online store in the future. Customer's repurchase intention depends on the value obtained in their previous transactions such as appropriate performance criteria (benefits), competition, and cost considerations

Richa D ,(2012) studied the impact of demographic factors of consumers on on-line shopping parameters like satisfaction with on-line shopping, future purchase intention, frequency of on-line shopping, numbers of items purchased, and overall spend on on-line shopping. The data was collected through questionnaires on a sample of 580 respondents from Delhi, Mumbai, Chennai, Hyderabad and Bangalore. The results of study reveal that on-line shopping in India is significantly affected by various demographic factors like age, gender, marital status, family size and income.

Liljander and Mattson, (2002) in their study demonstrated the importance of past service experiences for customers responses, especially their repurchase intentions. Past service experiences or product experiences influence future purchases, marketers need to focus on improving experiences. Communicating about customer experience assumes significance.

Virgil Popa, Madalina Barna.(2013) in the case study stated that the customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction.

### OBJECTIVES OF THE STUDY

- To determine the factors affecting customer experience management among online customer experience.*
- To determine the effect of cognitive experiential state and affective experiential state on repurchase intention among the online customers*

### RESEARCH METHODOLOGY

Descriptive research design is used for the study. The respondents of the study constitute e-retailing customers all over India .The data was collected from 500 respondents through the survey methodology. The sampling technique used is judgment sampling. Respondents who were involved in online shopping were considered for the study. Primary data was collected through a questionnaire and the secondary data was collected through various research journals and IAMAI survey report. Coimbatore city in the state of Tamil Nadu, India is chosen for the study.

### ANALYSIS AND FINDINGS

#### . Friedman Tests for Cognitive Experiential State Factors

Table -1: Friedman Tests for Cognitive Experiential State Factors

Organizational Factors	Mean Rank	Rank	Test statistics	
Skill	3.10	II	N	500
Challenges	2.03	V	Chi- Square	855.137
Telepresence	2.89	III	df	4
Interactive Speed	4.63	I	Asymp sig.	.000*
Flow	2.35	IV		

\* - significance 5%

H<sub>016</sub> -There is no significant difference among various cognitive experiential state variables.

H<sub>116</sub> -There is significant difference among various cognitive experiential state variables.

The table 1. describes Friedman test for cognitive experiential state factors. It consists of skill, challenges, telepresence, interactive speed and flow. Since the significant value is less than 5% the null hypothesis is rejected for the cognitive experiential state factors. The interactive speed (4.63) is ranked first, skill (3.10) is ranked second, telepresence (2.89) is ranked third, flow (2.35) is ranked fourth and challenges (2.03) are ranked fifth. From the respondents point of view challenge and flow has less effect on the cognitive experiential state. Flow is a cognitive state in which an individual is completely absorbed in an activity to the extent that he or she is mentally immersed and oblivious to time or other things around them. Challenge is defined as using stimulating Internet shopping websites to perform to the best of his or her ability. Over the period of time the respondents do not feel challenged as they have gained lot of exposure and knowledge regarding the websites. Similarly respondents do not completely get absorbed in the activities.



### FRIEDMAN TESTS FOR FACTORS AFFECTIVE EXPERIENTIAL STATE FACTORS

H<sub>017</sub> .There is no significant difference among various affective experiential state variables.

H<sub>117</sub> .There is significant difference among various affective experiential state variables.

Table – 2: Friedman Test for Factors Affective Experiential State Factor

Organizational Factors	Mean Rank	Rank	Test statistics	
Ease of Use	2.69	III	N	500
Connectedness	3.17	II	Chi- Square	999.982
Perceived benefit	2.61	IV	df	4
Perceived Control	1.81	V	Asymp sig.	.000*
Affective state	4.72	I		

\* - significance 5%

The table 2. describes the Friedman test for affective experiential state factors. It consists of ease of use, connectedness, perceived benefit, perceived control and affective state. Since the significant value is less than 5% the null hypothesis is rejected for the affective experiential state factors. The affective (4.72) is ranked first, connectedness (3.17) is ranked second, ease of use (2.69) is ranked third, and perceived benefit (2.61) is ranked fourth and perceived control as ranked fifth.

### FRIEDMAN TESTS FOR REPURCHASE INTENTION

H<sub>018</sub> .There is no significant differences among various repurchase intention factors.

H<sub>118</sub> .There is significant difference among various repurchase intention factors.

Table – 3: Friedman Tests for Repurchase Intention

Organizational Factors	Mean Rank	Rank	Test statistics	
Trust in online shopping	3.04	II	Chi- Square	408.092
Satisfaction	2.41	IV	df	4
Cognitive Experiential State	2.79	III	Asymp sig.	.000*
Affective Experiential State	4.16	I		

\* - significance 5%

The table 3 describes Friedman test for repurchase intention factors. It consists of trust, repurchase intention, satisfaction, cognitive and affective experiential state. Since the significant value is less than 5% the null hypothesis is rejected for the repurchase intention factors. Hence there exists significant difference among various repurchase intention factors. Affective experiential state (4.16) is ranked first, trust (3.04 is ranked second), cognitive experiential state (2.79) is ranked third, repurchase intention (2.60) is ranked fourth and satisfaction is ranked fifth. The study result shows that the internal feeling state and emotions play a vital role in the repurchase intention. Trust in online shopping also has effect on the repurchase intention.

Table - 4: Standardised Regression Estimates for Repurchase Intention

Construct			Path Coefficient ( β value)
Repurchase Intention	<---	Satisfaction	.585
Repurchase Intention	<---	Trust In Online Shopping	.116
Trusts in Online Shopping	<---	Satisfaction	.066
Satisfaction	<---	AES	-.006
Satisfaction	<---	CES	.824
Trusts	<---	CES	.307
Trusts	<---	AES	.388

It is clear from the above table 4, that the highest standardized regression weight estimate of 0.824 explains and substantiates it. When CES goes up by 1 standard deviation, Satisfaction goes up by 0.824 standard deviations. The next independent variable which makes the next highest loading is satisfaction on the repurchase intention. The value .585 explains and substantiates it. It means that when satisfaction goes up by 1 standard deviation, repurchase goes up by 0.585 standard deviations. When checking the β value of AES and its loading on satisfaction is negative with a value of -.006. This indicates that when AES goes up by 1 standard deviation, satisfaction goes down by 0.006 standard deviations.

Table – 5: Standardised Regression Estimates for Cognitive Experiential State

Construct			Path Coefficient ( $\beta$ value)
Flow	<---	CES	.419
Interactive speed	<---	CES	.520
Telepresence	<---	CES	.457
Challenges	<---	CES	.409
Skills	<---	CES	.741

Table - 5 represents the standardized regression weights of skills, challenges, telepresence, interactivity and flow on cognitive experiential state. The highest estimate of .741 explains and substantiates it. When CES goes up by 1 standard deviation, skills goes up by 0.741 standard deviations. The variable that makes the next highest loading is interactive speed. This means When CES goes up by 1 standard deviation, Interactive speed goes up by 0.52 standard deviations. After checking the value for telepresence and its loading on CES, it can be concluded that when CES goes up by 1 standard deviation, telepresence goes up by 0.457 standard deviations. Similarly when CES goes up by 1 standard deviation, challenges goes up by 0.409 standard deviations and finally when CES goes up by 1 standard deviation, the flow goes up by 0.419 standard deviations.

Table – 6: Standardised Regression Estimates for Affective Experiential State

			Path Coefficient ( $\beta$ value)
Affective State	<---	AES	.541
Perceived Control	<---	AES	.613
Perceived Benefit	<---	AES	.631
Connectedness	<---	AES	.544
Ease of Use	<---	AES	.550

Table - 6 represents the standardized regression weights of ease of use, connectedness, perceived benefit, perceived control and flow on affective experiential state. The highest estimate of perceived benefit with standardized regression weight is estimated at 0.631 explains and substantiates it. When AES goes up by 1 standard deviation, perceived benefit goes up by 0.631 standard deviations. The variable that makes the next higher loading on AES is perceived control. The estimate .613 explains it. When AES goes up by 1 standard deviation perceived control goes up by 0.613 standard deviations. While checking the standardized regression weights of ease of use and its loading on AES it can be concluded that when AES goes up by 1 standard deviation, ease of use goes up by 0.55 standard deviation. Similarly when the AES goes up by 1 standard deviation, affective state goes up by 0.541 standard deviations. When AES goes up by 1 standard deviation, connectedness goes up by 0.544 standard deviations

## CONCLUSION

This paper has focused on the effect of cognitive experiential state and affective experiential state on repurchase intention among the e-retailing customers. The dual state of cognitive and affective reactions to online services is directed in purchase intentions. Online shopping has increased with the evolution of experiential and utilitarian shopping practices. This finding of the study provides insight on the major factors influencing the customers. Trust in online shopping , satisfaction ease of use contributed in the customer's repurchase intention.

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## **A STUDY ON EMOTIONAL BRANDING - CREATING LOYAL CUSTOMERS**

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### **ABSTRACT**

*The Human being has a natural tendency to shift between brands to attain satisfaction, here marketer tries to satisfy his customer by using emotional branding as a tool to touch customer emotional chords and there by establishing a perfect bond between brand and customer purchase decisions. This paper discusses about how brands are emotionally connecting with customer hearts and the same brands which are nationally renowned. In present day situation all brands compete with each other and they themselves to make their brand a unique perceived brand and a distinctive solution for the customer requirement.*

*Keywords: Emotional Marketing, Brands, Advertising, Consumer requirements and benefits.*

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### **OBJECTIVES OF THE STUDY**

- To review the importance of emotional Branding.
- To study the brand emotional benefits to customers.
- To explore the dimensions of emotional branding and the effects do these dimensions have on consumers.
- To analyses the consequences of emotional branding on post purchase behavior of customers.

### **RESEARCH METHODOLOGY**

The data is collected from secondary sources like books, articles, journals and websites.

### **NEED FOR EMOTIONAL BRANDING**

Emotional branding uses a series of themes and symbols to create meaning for a consumer. In this sense, "theme" means a concept or story line that is present throughout an ad, and if integrated well-enough, throughout the brand. A "symbol" is representative of the theme. The Hidden Persuaders suggests that the symbol represents a promise and consumers buy the promise. The text reads, "The cosmetic manufacturers are not selling Lanolin, they are selling hope.. We do not buy just an auto, we buy prestige. Themes must appeal to human motivations in order to be successful. Motivation lies deep with a person's subconscious desires to achieve or meet certain goals. The first is making the theme and symbol of a brand continuously publicized. The second technique is making sure that the theme and symbol hold substance and promote a specific idea about the company. The company symbol needs to be adaptable to a changing society while standing firmly as a set of values. Symbols can represent multiple themes simultaneously and provide a promise for a sense of fulfillment associated with their brand. Vance Packard highlights the eight hidden needs that consumers have that themes and symbols attempt to sell. So we have to concentrate eight needs are as follows

- Emotional security
- Reassurance of worth
- Ego-gratification
- Creative outlets
- Love objects
- Sense of power
- Sense of roots
- Mortality

### **LITERATURE REVIEW**

In this paper, there is a range of different attempts to explain the effectiveness of emotional and rational appeals from a general perspective. In the Elaboration Likelihood Model (ELM), the effectiveness of emotional and rational appeals depends, for instance, on the involvement of consumers (Cacioppo & Petty, 1986; Lee & O'Conner, 2003). The higher the involvement of a consumer, the more convincing and persuasive Are rational arguments in contrast to emotional arguments and vice versa (Mukherjee, 2002; Lee & O'Conner ,2003; Chen et al.2007). Comparable to the classification of rational and emotional elements is the perspective of Puto and Wells (1984), who distinguish between informational and transformational advertising. They argue that those

two categories are not mutually exclusive, but that any advertisement may involve both elements (rational and emotional together), but with different emphasis. Generally, the logic behind rational advertising is the notion that buyers process objective information to make their purchasing decision on the basis of logical thinking (Albers-Miller & Tafford 1999). On the one hand, emotional appeals like love, humor or pride can trigger positive emotions for consumers (Kotler & Armstrong, 2014). On the other hand, it is also possible that emotional appeals are intended to create negative feelings like fear or guilt (Taute, McQuitty, & Sauter 2011). Either way, those appeals can enhance the consumers' purchasing motivation and enhance, as a consequence, advertising effectiveness (Kotler & Armstrong, 2014). According to Albers-Miller and Stafford (1999), research has examined whether emotional or rational appeals are more effective in advertising. However, there are also studies showing that the effectiveness of the advertising appeal is closely related to product types (Golden & Johnson, 1983; Johor & Sirgy, 1991). Therefore, different advertising approaches should be applied for different product categories (Albers-Miller & Stafford, 1999; Johor & Sirgy, 1991). More specifically, rational appeals are more suitable for utilitarian products. Panda and Mishra (2013) conclude that an emotional relation between consumers and Brands leads to a lower price sensitivity and, thus, it is more likely that customers are willing to pay a premium price. Similarly, Rossiter and Bellman (2012) state that "emotionally attached" to consumers are those with the highest profitability for a brand. However, it is problematic to relate to emotional advertising. They argue that a rational appeal would have been more successful because the brand itself had with "value for money" a rational character, the challenge whether rational or emotional appeals are superior is also transferable to premium and standard brands in automotive advertising. Since price premiums are particularly relevant for premium brands, it can be assumed that emotional appeals, consequently, play a greater role for premium brands compared to standard brands (Quench, 1987). Then, automobiles of standard brands can be associated more with utilitarian products. Thus, one may conclude that rational-based advertising can be found more within standard brand.

### SOME EXAMPLES OF THE EMOTIONAL BRANDING

**HAVELLS:** Son can't see his mother in pain. It's a universal fact. Created along these lines, this heartwarming yet simple ad shows a woman, her little son and a crying baby in a construction site. The woman is making rotis in an open area and every time she flips them she burns her fingers. The boy sees this and goes to a place nearby where construction materials are stored. He takes out a box of Havells' cable and makes a pair of tongs by bending the cable. We see the mother using the tong to make rotis and serving them with a smile to her son. The ad concludes with the voiceover "Havells. Wires that don't catch fire."

**Fortune Ghar ka khana :** Ghar ka Khana – 3 words that make everyone say yes and wow. Most of us have fond memories of homemade food. Whether it's mom cooked dal or gajar ka halwa – the taste of home cooked food lingers on the palate...on...and on. The ad shows an old lady carrying a tiffin climbing up the hospital stairs to meet her grandson. She reaches just at the moment when the nurse starts feeding her grandson with a spoonful of bland and tasteless khichdi. The grandmother requests the nurse to feed him home cooked dal. But the nurse says no, saying bahar ka khana .it is not allowed in the hospital. It's not the first time we see her requesting the nurse. But every time her requests are met with a curt no. However, one day the grandmother brings 2 tiffin boxes and gives 1 to the nurse.

**Titan Watches :** What do you gift a man who's spent nearly half of his life inspiring students. A Titan watch and memories they're worth cherishing. It tugs at the heartstrings without going emotionally overboard.

**Dabur Vatika:** Their Brave and Beautiful Campaign salutes female cancer survivors. The ad shows a bald woman who's just recovered from cancer. She's survived the disease but not confident of how her neighbors or colleagues would look at her. Then we see her getting ready for her first day at office after the treatment. She ties a head wrap first but then removes it. She looks at herself in the mirror after wearing a saree – with doubt written all over her face. Then a small bindi act by her husband gives her the needed support to go out into the world. She enters office with apprehension and what happens next might leave you with tears.

**Birla Sun Life Insurance :** This ad will melt your heart. Called Khud ko kar buland itna the commercial plays out like a short film. The clip that runs for over 3 minutes features the story of a father and his autistic son. It's got all the emotional ingredients right – the husband has lost his wife, his son has autism, to add more to his woes he loses his job just when he plans to get his son enrolled in an autism-specific school. As the ad concludes we see the father-son duo laughing and having fun moments together – thanks to Birla sun Life Insurance. An example of subtle marketing that packs an emotional punch.

**ICICI Prudential Life Insurance :** Bande Acche Hain, by ICICI Prudential, celebrates men who care, protect and love their family. The ad showing different situations – which are funny, moving and true. There's a

general perception about men – they're often forgetful, usually unaware of what's happening around them, can't keep things clean and so on and on. But this ad in a way breaks that perception. Here's one of the situations - it's dark and the husband is going out of station with his bags on the taxi roof rack. We see his wife coming out of home with his wallet that he forgot to take (which is a common problem with men!). The taxi starts to move but we see the man asking the driver to stop. He waits till his wife reaches inside and switches on the light. And the best part is – he does it without letting her know. Small things that mean a lot – good men do it and they do it without making any fuss.

### EMOTIONAL BENEFITS TO COSTUMERS OFFERED BY COMPANY

- **Approach:** Emotional branding strategies appeal to the consumer's emotions; consumers process rational branding strategies on a cognitive level. An emotional strategy may make a consumer want to buy something simply because they like the look of it, while a rational strategy uses features and benefits as evidence that the product is worth buying. As such, the approach in each method is very different. Common emotional approaches include emphasizing a personal story that relates to the product, such as user testimony. Common rational approaches include showing the product being used, rather than discussed.
- **Context:** The context of a brand, whether it is a slogan or text, varies depending on the type of appeal used. An emotional appeal strategy would emphasize the benefits of a product, service, or company to the consumer. A rational brand strategy would emphasize the benefits of the product, service, or company itself. An emotional appeal for a hotel chain, for example, might include phrases like "value" and "family friendly" in the text, while a rational appeal might include phrases that describe the features of the hotel in correlation to the room rate.
- **Product Placement:** Both emotional and rational branding strategies present the product to consumers, but how they use product placement in ads can be very different. Showing people enjoying the product or, very commonly, showing customers interacting with friendly, helpful salespeople or employees is a common strategy for companies attempting to appeal to their customers on an emotional level. Rational brand advertising often places the product in the center of the ad, with all the activity revolving around the product as opposed to revolving around the people who use it.
- **Visual Elements:** Visual elements in branding can be anything from a logo, photos used on a website or ad, and even company colors. Warm, soft colors and photos of people are often used to create emotional brand appeal. Brighter, bolder, and contrasting colors, and photos of the product, people using the product, or the end result of using the product or service are more commonly used in rational brand appeal strategies.

### SPECIALTIES OF EMOTIONAL BRANDING

- Emotional branding allows companies to create a relationship with its consumers would help potential consumers to have a positive attitude towards the product, creating an attraction between the brand and the items being sold without being forced to purchase.
- Emotional branding creates an emotional memory between the buyer and the product as a form of connection that goes beyond need.
- Emotional branding builds trust, brings total comfort to customers and put their brand as one of their top choices.
- Emotional Branding helps a brand become a consumer's preference, to the consumers mean that the product made a real connection with its users.
- Emotional Branding shapes a business to be an aspiration instead of simply being known the brand must be able to inspire the user to be desired.
- Emotional Branding teaches a company to build its personality to create a lasting impact on users.
- Emotional Branding makes experience as an important factor in creating brand identity. The product may perform according to its practical function.
- Emotional branding promotes brand presence as it also creates an impact on potential users, ensuring a permanent connection with people.
- Emotional branding encourages to having a conversation with its target audience, personal message to share actual experiences with the product.



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**CRITICISMS ON EMOTIONAL BRANDING**

One of the more obvious criticisms of emotional branding is concerning the morality of manipulating human emotion, which is often an extremely vulnerable and irrational element of human thinking. Encouragement to accept emotional appeals, oversimplification, superficiality and shoddy standards of proof for claims. These are

- An emphasis on ease and gratification rather than on austerity and restraint.
- The notion that advertisers should allow people to show them how to live the good life.
- A constant encouragement to consume lest one miss out on something new.
- The false belief that products will deliver the non-market good with which they are associated.
- Because of the amount of competition today, the industry calls for more ways to subliminally affect the consumer.
- Both the likeness of products on the market today and the clutter of advertisements, more creative tactics, which may be criticized by some, are being used to subliminally affect the mind.

To overcome the criticisms of emotional branding, our new campaigns brings the celebrities down to consumer level; *winning, falling, healing*. People can feel bonded with these brands when the brands demonstrate they understand their consumers' needs and motivations. So, we have to demonstrate our customers ahead of all other considerations, like

- **Decide which emotion you want to target in your audience.** It could be the 'American dream', confidence or trust in the future. Discerning and defining your target audience's core emotional need is the most important aspect of emotional branding. It is vital to communicate this insight through all your internal and external communications.
- **Encourage customers to reach the desired emotionally bonded state; "I will only buy brand x"?** Start by considering your customers' needs - what they want, need and aspire to.
- **Create consistent communications centered on customers' emotional needs.** Every point of contact should reflect and reinforce the message that the brand is responding to its customers' emotional needs; i.e. customer relations, online content and social media engagement. This is especially important at 'moments of truth'.

When people form an emotional attachment to a brand the strength of that bond is not dissimilar to an attachment to another person. It becomes hard for that person to separate themselves from one brand and begin a new relationship with another. Emotional branding can only be achieved by putting what customers deem most important ahead of everything else.

**CONCLUSION**

Emotional branding helps create a special relationship between the brand and its loyal users. Creating a relationship with the consumers is perhaps the most important aspect of emotional branding because the company intends to have a deep connection with its customers and it will create an important bond among its users. The Emotional Strategy for a brand differs from company to company to effectively utilize that cognitive dissonance marketer must make two approaches. One to build specific brand identity and two attach the emotions to that brand identity. For co-operate, the main objective is to position the product effectively and create a passion and emotions among the consumers for owning it. The emotional branding creating advertisements creates a story which can be remember by customers and it can be act as a kind information that company wants forward to the end users, in the mere future it can be used as a change perception, to change behavior and to give convincing message about products.

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  10. Pandemonium "A Book on Advertising written by Piyush Pandey"

## DISCOURSE ON CLIMATE CHANGE

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### ABSTRACT

*Climate change is considered to be a serious environmental problem. The objective of preventing average global temperature from rising by more than two degree Celsius requires that constructive action be taken in the near-term. Like many other social problems, climate change is closely tied to the burning of oil, coal and gas. The overall strategy should be focused on developing low-carbon or no-carbon energy sources, including renewable energy, and increasing energy efficiency. Reforms at the national level would include: Leveling the playing field between renewable and fossil fuels, and internalizing the latter's costs by phasing out fossil fuel subsidies and adopting cap and trade systems as well as encouraging ecological tax reform and performance based efficiency incentives. Reforms at the international level would include: Reviewing and significantly increasing the World Bank target to increase its investment in renewable energy. The method of climate mitigation or adaptation can be adopted. The international panel on Climate Change defines mitigation as: 'an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases' and climate adaptation refers to the ability of a system to adjust to climate change to moderate potential damage. Finally climate prevention needs an integrated approach on economy, politics, ecology, social stability, sustainability and spatial planning.*

*Keywords: Adaptation, Equity, Kyoto protocol, Greenhouse effect, Global warming, Mitigation, Sustainability.*

Climate change has become the most significant environmental and developmental challenge to human society in the twenty-first century. Responding to climate change is the core task to achieve global sustainable development, both for today and for a rather long period of time. International negotiations on prevention of global warming and related actions not only concern human living environment, but also directly impact the modernization process of developing countries. Although the process of global climate protection depends on the consensus of our scientific awareness, political wills, economic interests, society's level of acceptance, as well as measures adopted; a low carbon development path is undoubtedly, the critical choice of future human development.<sup>1</sup>

Understanding how the global climate system works and monitoring its changes comprise only part of the mission of climate change science. For this task the essential elements are- building a predictive capacity to forecast the rate, magnitude, and direction of future climate change. Without this capacity, climate change would occupy only a minor role in climate change politics and the formulation of an international policy response. International climate change policies and their attendant politics rest at the top of climate research as represented by the outputs of models of the global climate and the scenarios of future climate change. Building this understanding of the greenhouse effect was the culmination of a long, varied, and interactive process between the changes in the environmental world and the evolution of knowledge, involving rising global temperatures, increasing greenhouse gases, terrestrial climatic and greenhouse gas monitoring.<sup>2</sup>

Global climate change has been described as the mother of all problems. This rhetoric suggests that apocalyptic events will unfold as humanity marches blindly forward demanding more and more autos, jet travel, and air-conditioned homes. Once having crossed over the precipice, there will be no returning to that earlier world. The Earth's atmosphere will have been irreversibly violated and humans must forever reap the consequences of their profligate lifestyle. Whether or not this alarmist view is correct is open to debate. Climate change brings together the disciplines of botany, climatology, biology, atmospheric and oceanic chemistry, glaciology, systems modeling, cloud physics, statistics, economics, and political science. Climate is a statistical summary of weather. Climate change means that the distribution of weather outcomes changes systematically. The Earth's climate has changed significantly since geologic time.<sup>3</sup>

Scientists predict the rise of global average surface temperature by another 1.4 to 5.8 degrees celsius over the next hundred years. It is predicted to have strong adverse effects due to the rise in sea level and extreme weather events like droughts and storms. At the international level, global climate change has its place on the agenda for

<sup>1</sup>. Sarkar, A.N (2010), *Global Climate Change :Beyond Copenhagen*, New York: Pentagon Press, p-247.

<sup>2</sup>. Glover, Leigh (2006), *Postmodern Climate Change*, U.K: Rutledge, p-85.

<sup>3</sup>. Griffin, James M (2003), "The Many Dimension of the Climate Change", in James M Griffin (Eds.) *Global Climate Change: The Science, Economics and Politics*, U.K: Edward Elgar, pp.1-25.

sustainable development. The United Nations Framework convention on climate change (1994) and the Kyoto Protocol (1997) had established the link between environment and development. The monetary conference in 2002 stressed the need to mobilize and increase the effective use of financial resources to eliminate poverty, improve social conditions, raise living standards and protect the environment. Lastly, at the World Summit on Sustainable Development (2002) five priorities on climate change were identified: water, energy, health, agriculture and biodiversity. At the European level too environmental concerns form an integral part of development strategies.

The Inter-governmental Panel on Climate Change (IPCC) integrated assessment shows that since 1750, human activities have been a major cause of global warming. According to the third working group report of the IPCC, human actions to mitigate climate change is feasible, both economically and technologically. The effects of the climate change are asymmetry in nature. Further the capacity to adapt to climate change is determined by factors such as economic resources and other assets, technology and information, infrastructure and stable and effective institutions. Adverse effects on ecosystems, natural resources and related economic sectors will affect poor people hardest. Climate change could cause many complex alterations: a shift in temperature zones caused by climate change could lead to the extinction of species, droughts, desertification, food insecurity, and vector borne diseases, displacement of population. Some of the adoption goals involve improving the design of infrastructure and increasing long term investments, flexibility of vulnerable systems and improving the preparedness and awareness of society.<sup>4</sup>

There are three key factors which are likely to guide how and in what manner climate change will continue to develop as a global policy concern. First what strategies will the international community choose as responses to various complex, climate-driven environmental phenomenon? Second how will ethical or social- justice issues influence future climate- change policymaking? Third what roles will non-state actors play in global climate governance? One of the most important underlying components of sustainability thinking is the notion that humanity and nature are inextricably linked in a dynamic socio ecological system. Equity and justice concerns surface in climate change policymaking in two important ways: first there is the question of an equitable allocation of emission levels. The second Equity issue concerns the uneven impacts of global climate change.

According to the IPCC report released in 2001, the impact of climate change is expected to fall disproportionately on poor countries in Africa, Asia, and Latin America. Long term climate change will have greater impact on the world's poor because a larger portion of less developed economies are dependent on developed countries. Most coral reefs could disappear within thirty to fifty years due to warming oceans, while three quarters of the world's mangrove forest in the Sundarban regions of India and Bangladesh could be flooded by a sea-level rise of eighteen inches. According to the latest impact studies from the Tyndall centre for climate change research at the English university of East Anglia, Afghanistan, Ethiopia, Sierra Leone, and Tanzania are the most vulnerable countries to the impacts of climate change.<sup>5</sup>

There were three critical elements in framing the climate change discourse in the early days. First, the academic literature, policy documents and political declarations highlighted the global nature of climate change. The Climate Change Convention (UNFCCC 1992) uses the term global nine times to frame the issue and does not use the term local at all. The combination of definition of climate change as a global issue and the willingness of the developed countries to finance the global benefits of measures emphasized the global, abstract and western nature of the problem. In doing so it tended to appear distant and remote from the day-to-day priorities of countries and people. Second, the discourse tends to focus on the direct emissions of greenhouse gases and the impacts of sea level rise and average increases in global temperature. Finally, the discourses emphasized intergenerational equity. The Climate Convention refers to present and future three times and framed the issue more in terms of future generations than present ones; again framing the issue more as a challenge and benefit to future generations rather than as an urgent pressing issue.

The combined impact of the framing process was that climate change was viewed by developing countries as a western problem, which the West would have to address. Since the West had a more substantial contribution to the problem and the impacts would be felt ultimately in the South, it was argued that the West should compensate the South for the disproportionate burden the South would have to face (UNFCCC 1992, Art. 4(2)).

<sup>4</sup>. Sarkar, A.N (2010), *Global Climate Change: Beyond Copenhagen*, pp.247-49.

<sup>5</sup>. Park, Jacob (2005), "Global Climate Change: Policy Challenges, Policy Responses", in Pirages, Dennis and Cousins, Ken(eds.) *From Resource Scarcity to Ecological Security: Exploring New Limits to Growth*, Cambridge: MIT Press, pp.165-84

It was therefore necessary to keep the climate change discussion highly focused and to draw sharp boundaries in order to give the issue the attention it needed. <sup>6</sup>Arrhenius' climatic work was built on the research of many other scientists. He openly attributes the coining of the idea greenhouse effect, the key description of global warming, to an aristocratic mathematician, Baron Jean Baptiste Joseph Fourier, of the French Academy of Sciences, in a reference dating back to 1827. He says Fourier maintained that the atmosphere acts like a glass of a hot house, because it lets through the light rays of the sun but retains the dark rays of the ground. In the year that Arrhenius was born Tyndall started to study the atmosphere and the way that different gases were capable of absorbing heat to different degrees. While many gases seemed alike in that they were colorless and invisible he saw that heat passed through them in very different ways. Gases like oxygen and hydrogen appeared transparent to heat while water vapors and carbonic acid (carbon dioxide) contained heat. Most importantly he noted that the latter absorbed more heat than the atmosphere itself. This meant that they acted like the sheets of glass in a hot house.

Arrhenius realized that enough new carbon dioxide was now being released into the atmosphere to make a significant difference to the ground temperature of the planet. Also, he realized that modern industry, human economic activity, was chiefly to blame: the slight percentage of carbonic acid in the atmosphere may, by the advances of industry, be changed to a noticeable degree in the course of a few centuries. He calculated that increasing the concentration of carbon dioxide in the atmosphere by between two and two and a half times would increase temperatures by 3.4 degrees centigrade. In 1938, G.S. Callendar resurrected Arrhenius theory about fossil fuel-driven global warming.<sup>7</sup> Callender argued that the bulk of carbon dioxide from fossil fuel combustion remained in the atmosphere.

One of the earliest American scientific proponents of the global warming thesis was the geophysicist Roger Revelle who argued for and eventually won the support in the 1950s for the establishment of permanent stations to monitor carbon-dioxide levels in the atmosphere. The first high-level government mention of global warming was noted in 1965 white house report on the nation's environmental problems. One result of the 1972 United Nation Conference was the elevation of climate to the status of an international issue. It led to a series of climate-related United Nation conferences in the 1970s, including the 1974 World Food Conference, 1976 Water Conference, and the 1977 Desertification Conference. Concern over climate change formed one of the reasons for holding the First World Climate Conference in Geneva in early 1979, primarily under the auspices of the World Meteorological organization (WMO), and organized by prominent scientists and government officials from the America and Europe. Later in 1979, WMO established the first international program of research into climate, the World Climate Programme. Although the Conference offered no climate change policy recommendations, it was instrumental in fostering several conferences on the issue in Villach, Austria in 1980, 1983, and 1985, and Bellagio, Italy in 1987. Outcomes from the 1985 Villach conference became pivotal in the future direction of greenhouse science. Villach offered a science program designed to meet an anticipated political need for any scientifically based policy response to climate change.

Dominance of the global warming theory within the greater scientific community occurred in the 1980s and its popular acceptance was doubtless aided by the global prevalence of unusual weather events in that decade. During this time, the trend of global warming was unequivocal: 1987 becomes the warmest year on record, with the decade of the 1980s on its way to being the warmest on record, containing seven of the eight warmest years on record. Climate made the headlines of the world's papers: the globally hottest years on record, the effects of the strong 1982/83 El Nino/ Southern Oscillation, a 1987 freak hurricane in the English Channel, the separation of a particularly large piece of the Antarctic ice shelf, a severe U.S. drought, a devastating Bangladesh flood in 1988, and other events. Outcomes from the 1990 Second World Climate Conference reinforced those of the first world conference in 1979. In the U.S, the National Research Council (NRC, 1983) and the U.S. Environmental Protection Agency (EPA) produced major studies of climate change. Interest in atmospheric protection produced the United Nation Montreal Protocol on Substances that Deplete the Ozone Layer in 1985 (for the protection of stratospheric ozone). North Atlantic Space Association (NASA) climate scientist James Hansen's testimony to the U.S. Senate Energy and Natural Resources Committee in 1988 that he was ninety-nine percent sure that global warming was occurring as a result of anthropogenic greenhouse gas releases.

<sup>6</sup>. Park, Jacob (2005), "Global Climate Change: Policy Challenges, Policy Responses", in Pirages, Dennis and Cousins, Ken(eds.) *From Resource Scarcity to Ecological Security: Exploring New Limits to Growth*, pp.176-78.

7. Simms, Andrew (2005), *Ecological Debt: The Health of the Planet and Wealth of Nations*, London: Pluto press, pp.16-18.

With the formation of the IPCC, climate change receives a further impetus and a great scientific enterprise emerges. New climate change research programs are initiated by international organizations- Organisation for Economic Cooperation and Development (OECD) and some non-OECD national governments, together with those under various research and educational institutions. A major institutional development was the creation of the U.S. Global Change Research Programme (GCRP) in 1989, one of the largest science projects ever funded by the U.S. Findings of the first assessment report on climate change science by the inter-governmental Panel on Climate Change (IPCC) in 1990 concluded that global warming has taken place and United Nation negotiations drew upon.<sup>8</sup>

The Toronto Conference recommended an international framework convention on climate change, to be supplemented by additional and specific protocols. Specifically, it sought a Twenty percent reduction in carbon dioxide emissions by developed nations by 2005 as the first phase in reducing global emissions. Also recommended was a World Atmosphere Fund funded by a fossil fuel tax levied in the developed nations. During the later years of the 1980s, climate change acquired a rapidly escalating public profile and appeared on the agenda of mainstream political interests. While most participants favoured a reduction regime to curb greenhouse emissions at their 1988 levels by 2005, four critical nations opposed such an explicit target (namely England, Japan, U.S., and the U.S.S.R.). Accordingly, the Noordwijk declaration called for reductions to achieve stabilization of emissions by developed nations at totals to be established by the IPCC at the forthcoming Second World Climate Conference. The key aspects of the Noordwijk declaration formed part of the wording of the UNFCCC.

Developing nations also held their own meetings in this period, such as in New Delhi in 1989 and in the Maldives and Nairobi in 1990. Internationally, climate change was raised at the 1989 Group of Seven meeting in Paris, the communiqué of which called for the urgent creation of an international framework convention on climate change. Climate change was raised in the same year at the Malta summit of the U.S.-Soviet Union, at the Commonwealth nation's conference in Langkawi, Malaysia, and at the Belgrade Conference of Non-aligned nations. In 1988, the government of Malta proposed that the United Nation should respond to climate change, and subsequently UN resolution 43/53 (Protection of the Global Climate for Present and Future Generations of Mankind) was passed. President Gorbachev called on the UN Conference on Environment and Development to be held in Rio (popularly known as the 'Earth Summit') to become a summit meeting attended by heads of states during the Global Forum on Environment and Development in Moscow in 1990. In April 1990, the U.S. George Bush convened a two-day meeting of representatives of eighteen nations to explain U.S reluctance to agree to any commitment to abate their greenhouse gas emissions, citing scientific uncertainties.

Hopes that the Second World Climate Conference might provide a forum for a multilateral agreement on emissions reduction were disappointed. Efforts by the majority of ministers from one hundred forty-four nations during the Conference's final two days to fix an abatement timetable and targets for industrialized nations were opposed by Saudi Arabia, the Soviet Union, and the U.S. However, the Conference did recognize the principle of "equity and the common but differentiated responsibility". Subsequently, the UN established an International Negotiating Committee to negotiate a framework convention on climate change for signing at the Rio Earth Summit.<sup>9</sup> In 1989 the United Nation General Assembly, following the recommendations of the Brundtland Report, passed a resolution to hold another world conference on the environment, the United Nation Conference on the Environment and Development (UNCED), to be held in 1992 in Rio de Janeiro, Brazil. The recommendations in the Brundtland Report dominated discussions at Rio, especially the notion of sustainable development. Agenda 21 an action program to promote sustainable development was also adopted.

The conference also opened two legally binding conventions for signature: the UN Framework Convention on Climate Change and the Convention on Biological Diversity. Further, the conference established the United Nation Commission on Sustainable Development to monitor and evaluate the progress on meeting the Rio objectives. Negotiations also began at Rio on a treaty on desertification. Finally, Rio was a trigger for the restructuring of the Global Environment Facility (GEF), set up to finance efforts in developing countries to protect the global environment. Five years later a special session of the United Nation General Assembly, known as the Earth Summit +5, reviewed global progress with the implementation of Agenda 21.<sup>10</sup> It identified

<sup>8</sup>. Glover, Leigh (2006), *Postmodern Climate Change*, pp.70-80

<sup>9</sup>. Glover, Leigh (2006), *Postmodern Climate Change*, pp.138-45

<sup>10</sup>. Clapp, Jennifer and Dauvergne, Peter (2005), *Paths to Green World: The political Economy of the Global Environment*, Cambridge: MIT Press, pp.64-67.

a set of principles - precaution, equity, co-operation and sustainability and a wide range of measures to enable the international community to stabilize greenhouse gas concentrations at levels that should mitigate climate change. However, no firm targets or deadlines were agreed; developed countries were simply given the voluntary goal of returning greenhouse gas emissions to 1990 levels. The principle of 'common but differentiated responsibilities' was written into the convention, so developed countries were expected to take the lead in combating climate change and to transfer financial and technological resources to developing countries to help them address the problem, but no one was committed to anything specific, apart from establishing a fund under the auspices of the newly formed Global Environment Facility.<sup>11</sup>

Under Convention design an annual meetings known as the 'Conference of the Parties' (COP) was established to develop legally binding instruments and to bring the Framework Convention into force. The first Conference of the Parties to the Framework Convention (COP-1) was held in Berlin in 1995. However it was unable to agree on any new commitments, although the 'Berlin mandate' recognized the need to work towards a protocol that set targets and strengthened commitments to reduce greenhouse emissions. Eventually, the Kyoto Protocol, hammered out over ten days of intense negotiations in December 1997 (COP-3), agreed legally binding targets for developed countries (so called Annex 1 countries) intended to achieve an overall reduction in greenhouse gases (GHG) emissions of 5.2 per cent of 1990 levels in the period 2008 to 2012. Bush renounced the Kyoto Protocol. As the U.S was responsible for around twenty five percent of global greenhouse gas emissions this decision prompted a major crisis because the Kyoto Protocol could not come into force until it had been ratified by (a) fifty-five countries, which (b) represented at least fifty-five percent of the carbon emissions of the Annex 1 countries.<sup>12</sup>

Frenzied diplomatic activity amongst the other developed countries resulted in the Bonn agreement in July 2001, where Japan and Russia were persuaded to sign a binding agreement, but it was not until November 2004 that Russia, after winning several concessions through hard bargaining, finally ratified the agreement. Yet, as the Kyoto Protocol came into force, attention had already switched to what happens next, with the dialogue about a post-Kyoto agreement after 2012 being launched at the Montreal (COP-11) in 2005. Two fundamental tensions have dogged the climate regime bargaining process, neither of which has yet been satisfactorily resolved. First, there are divisions among developed countries regarding their willingness to make firm commitments. Second tension was the resistance of the U.S (plus Australia and Canada and Japan) to agree greenhouse gas reduction targets. While the EU and other industrialized nations pressed for quantified targets throughout the negotiations, the US government was initially reluctant to sign the Framework Convention at Rio and blocked agreement on targets or timetables at Berlin. Before eventually agreeing to a seven percent reduction target at Kyoto, the U.S won significant concessions, including the introduction of a tradable permit system that would allow rich polluting nations (i.e. the U.S) effectively to buy the right to maintain high emission levels from countries emitting less than their target.

The main sticking point at the unsuccessful Hague Conference in 2000 was the insistence of the U.S government that it be allowed to offset its emissions against its carbon sinks (i.e. its vast forests). Disagreements between developed countries can be attributed primarily to differences in energy resources and the structure of the energy industry. Countries that rely on fossil fuels for export income, such as Middle Eastern oil-producing states, and those with large energy resources, including the U.S, have been most resistant to cuts. The U.S has an abundance of fossil fuel energy: it is the world's second largest oil and natural gas producer, and the largest coal producer. America has developed a 'gas-guzzler' culture of cheap, available energy, which generates strong resistance to improving energy efficiency.

The economic and political costs of implementing emission cuts are therefore seen as higher in the U.S than elsewhere and because climate change is not perceived to be as serious a problem in America as it is across the Atlantic, the US government believes the costs of adapting to climate change are affordable. Furthermore, American politicians have been subjected to strong pressure from a powerful domestic industrial lobby, particularly motor and energy interests to obstruct the regime-building process. Consequently, the Bush administration has played the role of veto state with some aplomb, doing its best to reframe the climate change debate on its terms. Support for emissions cuts was also inconsistent with Bush's domestic agenda of hijacking the California energy shortages to justify the exploitation of oil reserves in Alaska on the grounds that there was a huge demand for more energy.

<sup>11</sup>. Carter, Neil (2007), *The Politics of the Environment*, U.K: Cambridge University Press, p- 243.

<sup>12</sup>. Annex 1 Countries include Australia, France, Sweden, Spain, Norway, Portugal, Belgium, Austria etc.



By contrast, most European governments regard climate change as a much greater threat. European countries are heavily dependent on imported energy and there is no gas-guzzling culture as in the U.S. However, there is evidence of growing opposition in the U.S to the President's intransigent position. Several states have developed their own climate change strategies. California has passed laws requiring vehicles to cut carbon emissions and all major industrial producers to cut emissions by twenty five percent by 2020 in order to reduce greenhouse gas emissions to 1990 levels by 2020. President Bush's changing rhetoric on climate change, as illustrated by his trumpeting of the Asia-Pacific Partnership on Clean Development and Climate, a 2005 initiative with Australia, China, India, Japan and South Korea, which is intended to find voluntary ways of reducing emissions by accelerating the development and deployment of clean energy technologies.

A second fundamental tension dogging negotiations has been the North-South divides. Although the principle of 'common but differentiated responsibilities' was enshrined in the Convention, there has been bitter disagreement over what this means in practice. For example, by imposing targets only on Annex 1 countries, the U.S government has been able to criticize the Kyoto Protocol for effectively absolving developing nations from taking action to reduce carbon emissions. Conversely, the major developing countries such as China and India have ensured that the issues of development, sovereignty and equity have had a prominent place on the agenda. Many disputes boil down to conflict over the transfer of financial and technological resources from North to South. Underlying both these key tensions is the familiar trade-off between economic and environmental interests.<sup>13</sup>

Delegates sought to build on the Marrakesh Accords at Conference of Parties (COP 8) and (COP 9) and agreed on two new measures. At Conference of Parties (COP 10) in Buenos Aires agreed to the Buenos Aires Programme of Work on Adaptation and Responsibility measures. At Bonn summit delegates addressed some of the broader issues facing the climate change process, including a future framework and commitments beyond 2012. G8 summit in Gleneagles recognized human beings impact on climate change and making a commitment to innovation, energy efficiency, technological and logical solutions. On July 25, 2005, a new six country partnership Asia- Pacific Partnership on Clean Development was held. It was announced to combat climate change through technology based solutions. It includes Australia, South Korea, China, India, Japan and the United States. The 2005 World Climate Summit was held in New York and highlighted the need to work for establishing the worldwide early warning system for natural hazards. The Fourth replenishment of the Global Environment Facility trust fund took place on November 21 and 22, 2005 in Japan.

The twelfth Conference of the parties was held at Nairobi which declared the creation of a new fund to help poor countries to adapt to the climate change. At Bali it was decided upon a new set of principles that will, over the next two years, help the countries decide a post- 2012 deal. At Poznan, the main focus was on the long term cooperation after the expiry of Kyoto Protocol's first commitment period. Conference of Parties (COP15) to the UNFCCC was held in Copenhagen from December 7-8, 2009. It was a culmination of two year process that began in Bali in December 2007. The negotiations have proceeded in two parallel tracks since Bali- one relating to the long term cooperative action of the parties under the Bali Action plan known as LCA track and other relating to the commitment of the Annex 1 parties for the second commitment period under the Kyoto Protocol known as the KP track. The accord promises \$ 100 billion fund to developing countries for importing clean technology and sets a target limiting the increase in temperature up to two degree Celsius but fails to specify the quantity of greenhouse gas emission.

Developing countries managed to highlight that the principle of common but differentiated responsibilities and respective capabilities has been pushed back by developed countries. The accord also devotes disproportionately greater attention to the mitigation actions of the developing countries. Nevertheless critique claimed that Copenhagen fail to produce an equitable and viable plan. India too criticized for accepting the accord. India made it clear that it would not compromise on three key issues- no legally binding emission cut, no peaking year and no international review of domestic- funded mitigation actions. Cancun summit also ended with uncertainty with no decision on the commitment to the second phase of the Kyoto protocol. Japan too took a negative stand on the second phase of the commitment period. Bolivarian Alliance (ALBA) demanded a firm commitment from the developed countries.

The resistance of veto states is usually motivated by a desire to protect vital economic interests. European states initially resisted attempts to freeze Chlorofluorocarbon (CFC) production because their chemical industries had not yet developed substitutes. Japan, Iceland and Norway have championed their coastal communities by

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<sup>13</sup>. Carter, Neil (2007), *The Politics of the Environment*, pp.252-55.

resisting bans on commercial whaling. British opposition to an acid rain agreement reflected a wish to protect its energy industries from the enormous costs of compliance. In each case, governments have been subjected to strong lobbying from powerful domestic economic interests opposing the regime. One of the most effective lobby groups was the Global Climate Coalition, which was instrumental in President Bush's refusal to sign the Climate Convention at Rio in 1992 and later in persuading the Clinton presidency to take a tough negotiating stance at Berlin and Kyoto.

It should be noted that economic interests do not always oppose international environmental co-operation. The insurance industry, for example, is relatively sympathetic towards action on climate change because damage to property from rising sea-levels and the disruption of weather patterns is likely to generate massive insurance claims. Conversely, domestic political pressure from environmental groups, the media or public opinion may persuade a government to become a lead state. When the West German government swung from veto to lead state on acid rain in the early 1980s, it was influenced by the rising importance of environmental issues and the emergence of the Green Party as an electoral force. The decision of the Australian Labor Party to reject an Antarctic minerals treaty and push for a moratorium on minerals extraction was a result of its pro-green stance at the 1987 election aimed at winning the support of environmentally concerned voters.<sup>14</sup>

In September 1988 the British Prime Minister, Margaret Thatcher, in a talk at the Royal Society, emphasized that the issue of human-induced climate change, as a threat to mankind, would have to be taken seriously. Her motives were, however, presumably also political. It was indeed a political advantage to have a forceful environmental justification for closing coalmines and instead developing the British oil and gas resources. The Kyoto conference was a first step toward the introduction of economical instruments to achieve specific targets. Article 6 of the protocol stipulates: '... For the purpose of meeting its commitments under Article 3, any Party included in the Annex I may transfer to, or acquire from, any other such Party emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy ...'

It should be recalled that U.S President Bill Clinton had specified that the U.S's goal should be not to increase greenhouse gas emissions during the commitment period 2008–2012 above the 1990 level, while the European Union (EU) had set its goal as decreasing emissions by about fifteen percent but without really being clear about how to achieve it. This difference in targets was not resolved until U.S Vice-President Al Gore arrived in Kyoto towards the very end of the negotiations and an agreement could be reached on the commitments for the European Union, America and Japan to be eight percent, seven percent and six percent respectively. On the other hand, the Russian Federation and the Ukraine were allowed 'hot air', i.e. to increase their emissions back to their levels in 1990. The protocol also contained a paragraph about 'joint implementation' amongst Annex-1 countries, which allowed the possibility that a country in the need of greater emission allowances than it had been awarded could acquire (buy) these from a country with an excess of such quota. Paragraph twelve of the Protocol also established a form of cooperation between Annex-I and Non-Annex-I countries (clean development mechanisms, originally proposed by Brazil). Rich countries could assist poor countries by investing in means to reduce their emissions, although they had no formal obligations to do so during the first commitment period, and thereby relax their commitments according to the Kyoto Protocol.

Developing countries were also uneasy about the implications of the Kyoto Protocol. They concluded with a paragraph emphasizing that the long term goal had to be achieved by ... aiming for equal per capita emission of greenhouse gases. This principle may sound harsh to many industrialized countries. The agreement on the Kyoto Protocol was a political compromise. National and economic interests were brought into focus. The agreement by the U.S Senate in a 95–0 vote not to accept a compulsory requirement for the U.S unless developing countries also took on quantified obligations, became a serious obstacle to progress. The Russian Federation, which in 1990 was responsible for about seventeen percent of the industrialized countries' emissions also hesitated and delayed ratifying the Kyoto Protocol. The world oil and gas market was becoming increasingly important for the Russian Federation. The EU proceeded with its preparations for the legal acceptance of the Kyoto Protocol. But the charge of reducing emissions by 8% had been modified. At the COP11 summit, the U.S maintained a cautious and rather low profile.<sup>15</sup>

<sup>14</sup>. Carter, Neil (2007), *The Politics of the Environment*, pp.256-60

<sup>15</sup>. Bolin, Bert (2007), *A History of the Science and Politics of Climate Change: The Role of the Intergovernmental Panel on Climate Change*, U.K: Cambridge University Press, pp.56-68.

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## **Examples of References**

All references must be arranged first alphabetically and then it may be further sorted chronologically also.

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