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COMPREHENDING AND IMPLEMENTING BEST PRACTICES OF QUALITY MANAGEMENT ACROSS INDUSTRIES

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ABSTRACT

The paper aims to comprehend the quality co-creators and documents how quality philosophies applicable to automotive manufacturing are definitely distinct from quality implementations in the healthcare services industry and how the study may extend to research in other sectors. This study does a review available on the differences associated with quality implementations, challenges and differentiating quality in the manufacturing and healthcare services industry. There are successes and challenges of comprehending and implementing quality in the manufacturing and health care services sector. There are valuable discussions on developing paradigms and quality concepts for both these sectors and how the customer becomes the value co-creator for innovation in products and services. The manufacturing and the healthcare services industry provide perfect instances of quality in their processes. The Japanese manufacturing provides a learning opportunity in customizing for health care services in making quality profitable and quality implementation effective and the healthcare industry, an example on delivering care processes and methodology for improving businesses by eliminating waste, reducing expenses and enhancing satisfaction. The research is limited to literature that is available and future studies require further research on how quality standards gets developed for different sectors. Future studies may explore on customer as a quality co-creator for innovation of products and services. Integrating customers in the social innovations development for quality improvements in the innovation of products and services may require study. This study explores the differences between quality implementations in two sectors and provides valuable discussions on extending the studies to other industries.

KEYWORDS

Juran, six sigma, Deming, total quality management

JEL CLASSIFICATION SYSTEM CODE

L15

INTRODUCTION

Management gurus such as Deming, Juran and Crosby focused on quality by studying them and defined the different quality measures that establishments needed to implement making processes and products better suited to customer satisfaction. Quality defined by management gurus differ. Deming emphasized on process improvements and use of statistical process control charts. Crosby discussed on zero defect specifications and do it right the first time. Juran's focus on quality popularly called Juran's philosophy has the three significant quality parameters of *quality planning*, *quality control* and *quality implementation*. These individuals were three important contributors to *total quality management* that firms learnt from if they had to zero in on defects and produce the best possible products and services. The resounding success of firms especially those of Japanese firms mainly attributes to excellent practices in quality management. First, this study discusses Kawasaki, a Japanese automotive company that successfully implemented quality management. Why were companies like Kawasaki able to provide greater quality products at affordable prices? Did Kawasaki make any tradeoffs with performance attributes and cost to deliver greater quality products? A perfect example of quality management, Kawasaki, brought in notable effectiveness in quality at the same time being cost effective. The resounding success of Japanese manufacturing units and service units were a perfect cause for other companies to think about implementing quality in their processes and practices. Quality is one of the most important reasons why Japanese firms were able to establish in markets of America. They were able to secure a market share in America due to deficiencies in the quality and performance of products created by companies there. The Japanese were able to define and incorporate perceived quality into manufacturing of automobiles that appealed to the customer during decision making in the vehicle purchases. In literature, this perceived quality is one of the five core elements of a firm's brand equity (Cole and Flynn 2009) along with other factors such as loyalty towards brands, brand awareness; brand associates and defined proprietary traits of quality such as patents, trademarks and associates. This in turn adds value to firms selling automobiles by profiting from pricing; building the brand portfolio; automobile differentiation and customer willingness to purchase the vehicle. For the healthcare industry, value systems are necessary to healthcare quality (Azam et al. 2011). Quality is the best performance measures across all industries. The product sector improves by quality implementation for remaining competitive.

Continuous improvement in quality has also led to defining new measures of quality such as vehicle safety (Cole and Flynn 2009). Two very different industrial sectors are leading the way in quality implementation due to their adherence to total quality management in all their procedures, processes and techniques. In the automotive sector, Kawasaki motors has adhered to *six sigma* quality measures in implementing almost zero defect products and in the health care service industry, The Red Cross Hospital (Netherlands) services has adhered to quality in service performance. The health care services industry is an example of quality implementation on how they comprehend quality management concepts of quality gurus such as Deming, Juran and Crosby and have applied them to the services sector where the customer needs are both tangible and intangible. Other quality implementation scenarios are discussed from these two industry sectors. Both these industry sectors have incorporated either Juran or Deming's philosophy to quality. The two industries apply quality management from different perspectives and are able to implement the quality objectives by customizing and evaluating required quality parameters. Studies on literature in healthcare emphasize on developing integrated healthcare models.

These take into consideration customization of the use of SERVQUAL, a tool used in measuring:

- Customer expectations and service perceptions
- Facility management
- Quality management
- Internal quality and service capabilities
- Evidence based management from leadership and governance for continuous improvement in service quality
- Requirement for team quality in hospitals

g) Re-evaluation and Total Quality Management (TQM) implementation (Azam et al. 2011; Mosadeghrad 2014; Esain et al. 2011; Rubenstein et al. 2013; Abdallah 2013)

Quality function deployment (QFD) requires customizing and integrating care procedures for patients during continuous quality improvement programs. The QFD customization along with the Pareto analysis in an integrated service delivery system has facilitated the necessary performance measures identification useful for effective quality assurance in healthcare (Vanteddu and McAllister 2014; Thor et al. 2008). In firms such as Medtronic Inc. in the USA that manufactures devices that improve cardiovascular and neurological health of patients worldwide, the quality improvement in manufacturing is associated with excellence in manufacturing, timely production and a *quality improvement* process (Atherton and Kleiner 1998). It has deployed a quality concepts training program and 40 quality improvement teams for its customer-focused quality (CFQ).

APPLICATIONS OF QUALITY IN MANUFACTURING: KAWASAKI MOTORS

Quality concept of Deming in the manufacturing industry was the greatest contributor to present day management thought processes. He laid the foundation for many manufacturing industries to bring in their best product and service. Most Japanese manufacturing units owe their tremendous success to Deming's teachings. The basic premise of quality management is that it is possible to provide good quality products and services to customers at a much lower price and firms will become profitable in the end if they incorporate quality. Crosby also spells this on how establishments can profit from comprehending the costs of quality (Ghobadian and Speller, 1994). His philosophy was that only firms that were doing well knew this and others were ignorant of this. Deming's concept to quality was a four-rule process called the plan, do, check and act popularly called the PDCA, also called the Shewart cycle (Rienzo 1993). Customizing the PDCA cycle needs to coordinate with the QFD for ensuring customer comfort with healthcare services (Vanteddu and McAllister 2014). A manufacturing unit that manufactures motor bikes will have to adhere to the PDCA if they have to bring in quality to their product. Established firms that are into manufacturing will benefit if they adhere to Deming's proposal. In manufacturing units inspecting a lot of defects in the manufacturing process, these defects need to be set right before the final output is ready. Hence, Deming's proposal about the 14-point strategy for quality concentrates on the knowledge that employees ascertain about the management, the establishment and the deployment of work flow processes (Rienzo 1993; Ghobadian and Speller 1994). Any manufacturing unit needs to optimize its total systems knowledge at work. No individual sub system in manufacturing can work independently of another. For example, in the manufacture of motorbikes, the engine division cannot work independently of the other division. They adopted profound knowledge systems with the theory of optimization (Rienzo 1993). For a manufacturing firm to incorporate quality, the total system should focus towards the firm's long-term objective of creating a winning situation for all its customers, employees, suppliers, the community and the environment. Kawasaki won the global race for Caterpillar bronze award in 2009 after it became the first in the hydraulic business to receive a bronze award across all its manufacturing sites. The firm was delighted to achieve the Supplier Quality Excellence Process Bronze status from Caterpillar. The strong values and ethical principles in conducting business and the commitment to collaborate with the objective to implement a culture for "zero-defects" across the supply base was the reason for this excellence. *Quality processes* at every production stage is significant. As quoted by Kawasaki Precision Machinery's (KPM) General Manager Steve Cardew: "This is a fantastic result as for 15 years our success is the result of a determination to produce the greatest quality products in the world. Now we are proud to be recognized for that quality, as well as delivery and performance, and the next step is to achieve silver." This manufacturing unit made several improvements in its specific areas of operation especially in safety and lean manufacturing. The supply base optimization at Caterpillar and Kawasaki required years of consistent greater quality deliverables. The materials purchased by KAWASAKI for its motor bike parts is of the greatest quality regardless of the cost of manufacture as it would have resulted in manufacturing defects at the cost of the system. Inferior material may lead to adjustment and repair during manufacture and assembly and it may come to such a stage that the product gets withdrawn. Kawasaki's design of production parts has not seen many variations in recent times due to the improving performance quality though there were variations before. Variation control was due to product improvements and meeting changing engine designs that were part of the quality improvement process. Kawasaki's adherence to Statistical Process Control and *control charts* to demonstrate variation in processes and its keen knowledge of how to determine if a process is in statistical control has led to greater quality performance in all systems and sub systems. It is generally felt that if the whole system is optimized and standardized, there will not be any variation. However, even with the same inputs, production results can differ due to human and machine errors. These are statistically controlled. This system is very much in vogue in Kawasaki where the source and range of variation can be easily identified using statistical control tools. Whereas in the healthcare industry, literature have discussed the necessity for a Human Resources Management (HRM) evaluation of measures and criteria specified by the Deming Prize, Malcolm Baldrige National Quality Award, European Quality Award, and George M Low Quality Award (Azam et al. 2011; Abdallah 2013).

In another perspective regarding awards and recognition within healthcare services industry, Baxter Healthcare Corporation in the USA that manufactures products that treat kidney, heart disease, blood disorders and perform blood processing, award programs recognizing employee's ideas for improvement in service quality and cost optimization systems saved Baxter millions of dollars every year. This became motivational factors for its employees (Atherton and Kleiner 1998). Medtronic Inc. in the USA, a company that manufactures products in cardiovascular and neurological healthcare has created an awards program that recognizes employee for their participation in product and service quality improvement. The pharmaceutical industry has demonstrated innovation and management successfully using quality implementations and quality improvement programs by knowledge development, medical innovations and creating revenue (Kim et al. 2016). The focus is on healthcare technologies development; process and knowledge creation and conceptualization; healthcare value systems, supply and logistics; and healthcare systems, quality and social technologies.

The other most important tool that Kawasaki used for quality was a working Research and Development wing establishment manned by experts in dynamics and motorbike production techniques. The R and D division at Kawasaki was like a school because it learnt that knowledge does not grow out of experience alone. There should be theoretical experience conceptualization and the results of the experience charted. The cause and effect associates establish validated results. Standardizing is possible only if there is a theoretical base.

In the case of healthcare provided by a Swedish hospital, concurrent implementation of quality improvement programs added to the coordination efforts at the establishment (Nyström et al. 2013). This has resulted in the hospital establishing a learning initiative in quality for continuous improvement. The hospital now focuses on leadership for holistically managing dynamism and transitions to facilitate coordination; network management for innovation and knowledge sharing in the area of specialization through learning seminars and improving hygienic conditions in hospitals to prevent contracting diseases. At Baxter Healthcare Corporation in the USA, the Quality Leadership Program (QLP) for services focuses on continuous improvement; total employee participation; prevention, defect-free work; and accomplishing customer requirements (Atherton and Kleiner 1998). In terms of quality implementation in manufacturing, the company's intention of becoming an organization of excellence has facilitated quality in *Computer Integrated Manufacturing* (CIM); statistical process control; standardization and simultaneous engineering. Another Swedish hospital was able to apply quality improvement in improving program effectiveness over five-years of time and standardize it (Thor et al. 2008). Similar studies have demonstrated quality improvements in learning by applying the PDCA (Esain et al. 2011). Some studies in healthcare services have identified that continuous quality improvement in certain contexts may not be associated with the PDCA concept and cannot be standardized (Rubenstein et al. 2013).

In the automotive industry, Kawasaki makes use of Deming's rules to quality in its truest. Every process, be it manufacturing or supply chain adheres strictly to the rules given by Deming.

Kawasaki is Deming's baby because Kawasaki has absorbed Deming's principle of quality and implemented these objectives:

1. Kawasaki's objective of purposeful improvement towards its product is to remain competitive and to provide employment.
2. Kawasaki has ushered in the new philosophy by comprehending the economies of scale through the incorporation of new management techniques and consideration of new leadership challenges.
3. Kawasaki has built quality control systems before setting up manufacturing. So it is always quality first and then process.
4. They have brought in the cost revolution by optimizing and identifying with one supplier to usher in loyalty and trust.
5. Constant improvement in production systems to improve productivity through processes has led to decrease of expenses for Kawasaki.
6. Kawasaki's training institutes for in house employees brings excellence to the automobile industry.

7. Leadership of Kawasaki has turned and brought in a revolution and supervision is of the greatest order and target.
8. People working at Kawasaki have no fear so they work with happiness and contentment. There are no barriers of communication in any department and between departments. The entire unit works as one.
9. Kawasaki has never emphasized or exhorted and solicited targets for zero defects and new levels of productivity. Though quality is a chief parameter it is subtly introduced.
10. The factory floor has no work quotas, there are no management by objective, instead it is management by substitution.
11. Kawasaki has instituted workmanship pride by giving away awards for excellence in workmanship. It has changed the responsibility of supervisors from numbers to quality control.
12. The opportunity given to workers for advanced education and research is the best technique for instituting loyalty and self-improvement.
13. Kawasaki says, "Everyone is a part of transformation. So let us work towards it".
14. Kawasaki allows changes to happen from within and welcomes participative suggestions (Rienzo 1993).

USE OF PERFORMANCE MANAGEMENT AT KAWASAKI MOTORS

Kawasaki's quality processes are significantly simple in nature. The quality process applied by Kawasaki is simple design and institution of training its work force. Every employee has to undergo training workshops at least once in 6 months. No one is exempt from training. Training allows employees to comprehend production techniques and institutionalize changes. Deming recommended that incorporating statistical thinking through training is necessary so workers can appreciate variation (Rienzo 1993). So does Ishikawa, another revered quality guru on the need for training employees in manufacturing and services for customers by learning process flow charting; audits, statistics, pareto analysis; schemas for quality control and control charts (Ghobadian and Speller 1994). Kawasaki has formalized its performance management systems and processes. "Formalizing the process would remove some of the perceived ambiguity and arbitrariness that employees feel and increase the manager consistency and supervisors who manage subordinate performance," said Donell Rubidoux, who took responsibility for leading the way for the establishment to increase the employee productivity by deploying performance management. This aims at imparting quality techniques to employees that Kawasaki conducts regularly. In fact, it is said jocularly that employees at Kawasaki attend more school hours than work hours. This has led to superior performance and great leadership. Being able to translate company goals and vision into action for subordinates is important for the leadership as they institute improvement methodologies. Training and excessive stress on self-development has brought about the world's best turn around leadership that has made Kawasaki the number one player in the industry. This has spurred quality concept implementation to work force transformation and driven out fear and has created trust and brought in lot of innovation. Deming encouraged that people perform better in establishments when they feel secure and eliminate fear. This works in the favor of leadership within their establishment when optimizing system performance for delivering product and service quality (Rienzo 1993). Workers are no longer bothered about numerical quotas. Instead, they have worked towards institutionalizing methods for improvement. Deming insisted that quality and productivity in manufacturing and services improve from replacing quotas with taking initiatives that encourages workmanship and stabilizing the system performance with teamwork (Rienzo 1993; Ghobadian and Speller 1994). The leadership at Kawasaki is very inspirational as it has prodded on great levels of output and a technically very strong team of robust well knowledgeable engineers pride themselves in working at Kawasaki. The implementation of quality is so simple that everyone in Kawasaki needs no introduction to it. It is also very important to understand that almost 90% of the work forces at Kawasaki are permanent employees and promotions happen from within. Hence, performance management is the target. This performance management is one of the total quality management attributes. The work ethos at Kawasaki has broken down barriers between areas; fostered mutual trust, respect and admiration for everyone's work. A notable contribution in quality processes is the nonexistence of internal and external barriers that break the information flow. Hence everyone within and outside the establishment are able to perceive the internal and external barriers that impede the information flow, and prevent entities from perceiving establishment agendas, and foster the quality management pursuit between cross functional teams and change in customer attitudes and associated parties by a better way of comprehending attitude and work culture. Similarly, another company named Windsor Export Supply, a division of Ford Motor Company faced problems with Freight auditing and was able to apply Deming's philosophy to correct discrepancies in the information flow for reducing the time to process an invoice receipt and issuing checks for payments (Rienzo 1993). US companies in the auto sector faced similar problems in not being able to perceive the market needs and getting comfortable with their secure market niches and ways of functioning (Cole and Flynn 2009). It can be said that Kawasaki has become a leader only with a carefully chalked out management process that has aimed at quality and customer satisfaction with impeccable standards of customer and employee facilitation to bring in excellence in purpose, deliverables and workmanship.

Innovation and sustainability can happen only if there are continuous quality implementation programs. It is justified by Kawasaki that their dedication to implementing the industry best practices has made them the leaders of the market. Notwithstanding challenges, they have been able to incorporate quality in all their processes.

FIGURE 1: APPROACHES TO QUALITY IN A SERVICE INDUSTRY: JOSEPH M JURAN'S TRILOGY AS APPLIED TO HEALTH CARE SERVICES

THREE UNIVERSAL PROCESSES OF THE JURAN TRILOGY®



(Source: Business 901 - Building Funnel of Opportunity, 2011)

Joseph M Juran's application to quality management is similar to Deming's 14-points on quality implementations. Juran focuses on his trilogy of quality planning, quality control and quality improvement. According to Juran, firms face quality problems because of the constraints imposed by the top management rather than at the operational level (Kolesar 2008). Taguchi has insisted that the inadequacies in product and service design quality add expenses to society (Ghobadian and

Speller 1994). The losses for the establishment in manufacturing require optimizing costs. Juran defines quality as “fitness for use”. Some literature phrase product or service quality as “fitness for purpose” (Ghobadian and Speller 1994). According to Juran, any establishment that is quality defined needs to have constant activity spirals like market research; product development and design; instructions for production process control and testing with appraisals from customers. Interdependent departments in an establishment need establishment wide quality management. The top management must define quality management according to Juran. To bring in superior quality processes any establishment has to invest in planning infrastructure. Juran organizes his quality program into three facets. The planning that includes the process of preparing to meet quality needs, the process of meeting quality needs during deployment and the process of reaching unprecedented performance. Juran’s application to quality bases its concept that quality once instituted needs continuous upgrades so that quality systems are still in place. Quality dynamics require support at all management levels. No establishment is complete without some quality update happening regularly. Quality needs to be underway across the entire establishment (Ghobadian and Speller 1994). Health care services cannot be defined on a basis quantitatively as they are intangible, inseparable to performance parameters, variable from time to time and are generally perishable in nature in the sense that service definitions keep changing from time to time depending upon people’s way of living prevalent at that time. These peculiar health care service characteristics pose a great challenge to firms’ providing these services. The attributes that are closely associated to health care services need identification with some sort of quality definition and the necessity of quality incorporation in the service provision. Not only was this service intangible, it became very difficult to measure quality service. This led to arguments about improving service quality and implementing quality across all deliveries. Juran’s trilogy of quality management unified the quality management concepts and brought them together as a system (Bisgaard 2007) known as the Juran’s Trilogy. Juran’s excellent definition defined quality as ‘fitness for use’ of a product or service, a definition based on meeting customer needs. This adherence is also rephrased as “fitness for purpose” (Ghobadian and Speller 1994). The design of a technique, product, or service applies to features, while freedom from deficiencies applies to the delivery (Juran and Godfrey 2005). For example, any health care program would require the program beneficiaries to undergo a basic pathological set of tests for assessment before entering the program. If the test is not identifiable or defined, then the purpose of a quality health care program will be lost. Juran’s trilogy of *quality planning*, *quality improvement* and *quality control* intend impeccable standards of health care services to the customers. Any health care service needs to discover and correct its problems and defects through a documentation system. Parkview Episcopal Medical Center was able to incorporate Deming’s philosophy of quality improvement and reduce delays and that too from forty eight percent occurring in delayed surgeries due to late arrival of doctors and increased setup time of the operation room in the mornings to an improvement in punctuality to about eight percent (Rienzo 1993).

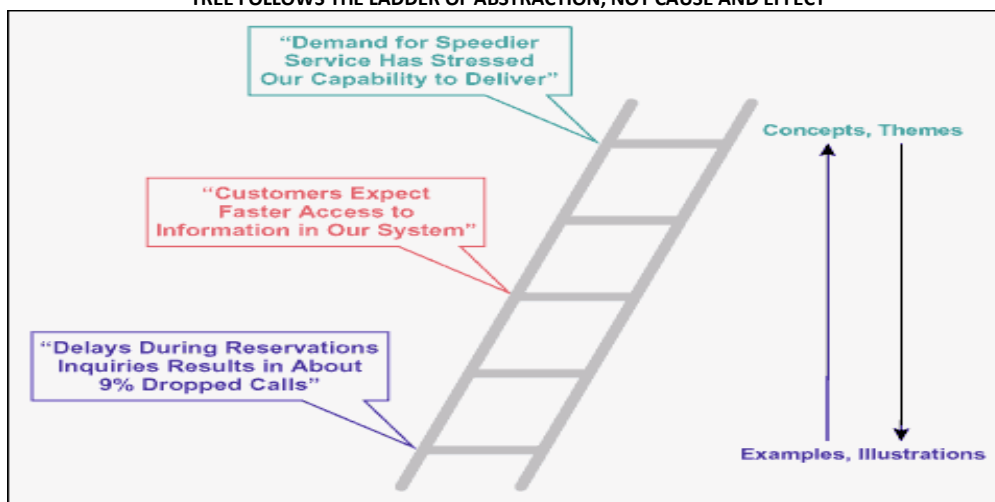
A health care service’s implementation of quality is by establishing the agenda that the quality program would result in, identifying customer sectors with health care services and determining the imminent customer needs. It would also require designing of features to meeting customers’ needs, develop processes to meet the quality plans and thereafter transition the quality process to deployment. Juran’s second focus is on quality improvement as health care services can never rest on complacency and require timely recharges on quality deliverables. Improvement in quality health care services can happen only by identification of infrastructure needs for improvement, training for teams, resources and remedies to manage control of the profitability resulting out of quality implementation. A health care service should be consistently improving its quality of deliverables. Quality control in health care services should be able to evaluate performances that are currently running, compare the outcomes with those that are in practice and act prudently on the difference.

USE OF SIX SIGMA TOOLS TO BRING IN QUALITY IN HEALTH CARE SERVICES

Health care services have extensively used quality to bring in top rated professional healthcare. A hospital in Northampton, Massachusetts used Six Sigma Quality Planning (QP) to create an employee vaccination process that continues to save money and offer a better quality and a more comprehensive service (Kaplan et al. 2009). The Red Cross Hospital (Netherlands) implemented Six Sigma (QI) into the ISO 9001:2000 system saving 1.2 million Euros annually, significantly improving quality (Heuvel et al. 2005). Other studies have demonstrated similar savings of €1.2 million with the successful implementation of *six sigma* in 22 hospitals out of 44 hospitals considered for a study on *six sigma* implementation (Abdallah 2013). The application of quality in health care requires continual need for a good and affordable healthcare program that respond to the needs of various customers including the practitioners of healthcare and government agencies that facilitate health care programs. The use of *six sigma*, a superior measure in quality planning requires systems to analyze and define the quality program in health care services with community participation for responsibly creating and bringing a healthy lot of citizens leading to standardization, best practices and assessment and addressing to the health care needs in communities that depends on public policy. This would also lead to participation of people in health care programs defined by income levels. Deficiencies in quality can be measured by *six sigma* measures that tabulate the planned and the expected from delivering quality health care. The health care system similar to the one illustrated in Figure 1 in the previous page should be able to take care of the human error of sampling and communication in testing the data and fitting it into a quality measure that makes way for consistent improvement. Development, validation and implementation improve quality of services and *six sigma* implementations. *Six Sigma* implementations need to consider adhering to healthcare service needs by ensuring better information flow and timely facilitation of services. This illustrated in Figure 2 where the quality of the healthcare service demonstrates a ladder of abstraction and not a cause and effect way of functioning. Health care services may also use the SERVQUAL model to measure the service quality by assessing customer expectation with service quality. Though health care services concept changes from sector to sector, the health care practices delivery meter down to just another ordinary *six sigma* quantitative measure. Service sectors have used the SERVQUAL measure to quantify service and on the contrary, health care services commonly use simple quality techniques that do not go in for any strict adherence to qualified quality procedures. Health care quality initiative sustainability discussed widely and researched suggests that Juran’s trilogy for quality will be most suited.

The justification of using the *six sigma* concept to quality implementation in health care industry is to zero out the defective practices that may result in poor quality health care to people and community. Since it is a service attribute, expectations are that defects lean out to almost nil.

FIGURE 2: SIX SIGMA IN HEALTHCARE INDUSTRY
TREE FOLLOWS THE LADDER OF ABSTRACTION, NOT CAUSE AND EFFECT



(Source: isixsigma.com - 'Tree Diagrams for Six Sigma: Plain and Simple?')

CONCLUSION

The QS 9000 suitable for the supplier parts industry is a noteworthy quality system standard as best practices for implementing quality developed by integrating the quality systems at Chrysler, General Motors and Ford (Brown 1997). It incorporates the basic standard requirements of the ISO 9000. The manuals focus on advanced quality planning and control, failure mode and effects analysis, measurement systems, statistical process control and production parts approvals. The implementation takes into consideration an implementation team, management supervision, project management, documentation, audits, information systems registrations and maintenance. Other industries may benefit from developing similar industry standards in developing products and services of a greater quality. Quality implementations may greatly benefit from customer participation in the development of products and services of a greater quality for innovativeness. Businesses and services are now integrating customers into learning systems while developing products and services of a greater quality. Statistics has demonstrated that customer participation in *value co-creation* in learning systems is significant taking into consideration *people usage of information and communication technologies (ICT)*; *people usage of new services and products*; *values added from ICT to new businesses*; *values added access to basic services*; *government investment in telecommunications*; *secondary education gross enrolment rate (percentage)*; *energy and utilities and affordability*. Industries may now focus on customer as the value co-creator in improving quality deployment and implementations.

It is imperative to track the process life cycle attributes in manufacturing and services for achieving greater performance without deviating from instructions and what requires implementation. Mathematical and statistical measures effectively measure quality. The *six sigma* and lean techniques are the most common of all quality measurement and the industry and health care services are striving for quality certifications to prove their sophistication to unstinted quality in their products and services. Customers' satisfaction is possible only if firms are able to stick to greatest quality performance and deliverables and this in turn would comprehend to a firm's commitment to quality leading to better performance. It is also significant to comprehend that whatever be the nature of the industry, the shop floor attributes to 100 percent quantitative quality and customers needing 100 percent qualitative quantity. A good quality management system should be able to make a manager comprehend attributes that are quantifiable, qualified and delivered to a customer and go along with a method of translating themselves into unambiguous quantifiable design parameters and manufacturing. The challenge of quality lies in converting this as a critical success factor. In addition, an integrated quality model is useful in healthcare that examines the patient-medical scientist – hospital interactive associative model that qualify as manufacturer-seller-product-customer and after-sales service or service industry mode (Azam et al. 2011; Rubenstein et al. 2013). The discussion in this article goes to show that the extent of participation between the customer and the firm necessitates the need for facilitating the customer as the co-creator of value (Mosadeghrad 2011). An example is how companies such as Medtronic Inc. of the USA have established Customer-Focused Quality (CFQ) programs that enable its global leadership strategy of providing quality products, services and comfort in conveniences for its customers (Atherton and Kleiner 1998).

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INVENTIVE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE OPEN AND DISTANCE LEARNING SYSTEM: AN EMPIRICAL STUDY**B. RUPINI****DIRECTOR****SCHOOL OF INTER-DISCIPLINARY AND TRANS-DISCIPLINARY STUDIES****INDIRA GANDHI NATIONAL OPEN UNIVERSITY****NEW DELHI****ABSTRACT**

This study aimed to use inventive ICT tools in Open and Distance Learning system (ODL) to generate awareness among the people, on the issues of environment and their adverse impact, technological deficiencies, skills gap in implementing the various environmental assessment tools, and the preventive measures to stop the further deterioration of the environment by proposing a "technology-centric skill learning model". By using the developed model need assessment survey has been done on the required ICT related competencies a teacher should possess under Technological Operations & Concepts domain, Professional domain and Social & ethical domains, from the University teachers, researchers, NGOs working in the environmental sector. Data was collected and analyzed using various statistical techniques. Findings of the study reveal that all the teachers agreed to possess those competencies to develop and deliver the ICT based skill development programmes through ODL mode.

KEYWORDS

ODL, technology- centric, domain, ICT competencies, skill development.

INTRODUCTION

Internationally there is a revamp in educational systems by integrating Information and Communication Technologies (ICT) in the teaching and learning process, to equip the students with the knowledge and skills in their respective subject matter. This educational revolution makes the teaching profession from teacher-centered to student-centered learning environments. ICT facilitates self learning process by using computer based technologies, digital imaging, the internet, file servers, data storage devices, network infrastructure, desktops, laptops and broadcasting technologies. To use this technology in teaching learning process a teacher should possess basic knowledge on ICT to teach effectively and to promote active, collaborative, creative and integrative self learning methods. A model on a systemic architecture for capacity building and need based education using ICT has been developed (Rupini et al 2016).

The purpose of this study is to examine the role of information and communication technology (ICT) in enhancing community outreach, academic and research collaboration, education and support services (IT-CARES) in an academic setting.

OBJECTIVES

The aim of this paper is to study the intensive use of ICT in Open and Distance Learning system for skill development in educational sector. Accordingly, the following objective have been formulated:

1. To standardize the developed ICT model on the basis of parameters.
2. To check the influential factors and variables required in ICT model for skill development.

To achieve these objectives, the author implemented the developed model in the following way.

IMPLEMENTATION

To begin with as part of implementation, a template was designed using need assessment manager component of the system for a questionnaire. A survey was conducted online on "ICT competencies for developing and offering skill based education programmes through Open and Distance Learning mode." The following shows the outcome of the survey as part of need assessment to start any programme either it could be for awareness, skill development or a need-based education.

SURVEY

By using the proposed model, an attempt is made to conduct a survey through empirical research approach on required proficiency of distance education teachers to develop and deliver the content by using ICT. For this purpose, the following methodology was adopted.

METHODOLOGY**SELECTION OF SAMPLE RESPONDENTS**

The study is based on the primary data collected by adopting the stratified sampling. The first stage for identifying the different categories of respondents namely, University teachers from ODL and conventional, researchers and NGO's working in environmental sector. At the second stage the sample respondents have been chosen through judgment sampling method. The sample size was decided as 300 respondents. Out of which 150 respondents are from university teachers, 100 respondents are from research institutes and 50 respondents from NGOs have been chosen. Finally, 245 filled in responses were received from the respondents.

DATA COLLECTION INSTRUMENT

The questionnaire was developed by identifying three broader domains namely 1. Technological operations and concepts domain 2. Professional domain 3. Social and ethical domain as per the National ICT competency standard for teachers (NISC) developed by the Commission on ICT. These three domains comprise total 30 questions formulated by using the 5 point Likert-scale. The questionnaire was standardized by conducting a peer review, which was examined by four experts and then finalized. Accordingly, the primary data was collected from the above stated sample respondents with the help of this structured questionnaire. Codes have been allotted to each question for analysis with the help of AMOS.20.

TECHNIQUES USED FOR ANALYSIS

Percentages, frequency and mean are used with the help of SPSS. To check the reliability and validity of the defined constructs, Structural Equation Modeling with the help of AMOS 20.

DATA ANALYSIS

TABLE 1

Factor	N	SD		D		UD		A		SA	
		f	%	f	%	f	%	f	%	f	%
TOCa	245	16	6	27	11	37	15	67	27	98	40
TOCb	245	22	9	59	24	53	21	74	30	37	15
TOCc	245	4	1	26	10	55	22	107	44	53	22
TOCd	245	6	2	20	8	51	21	106	43	62	25
TOCe	245	6	2	22	9	82	33	97	39	38	15
TOCf	245	4	1	31	12	32	13	112	46	66	26
TOCg	245	13	5	16	6	29	12	105	43	82	33
TOCh	245	6	2	18	7	49	20	114	46	58	24
TOCi	245	5	2	18	7	35	14	112	46	75	31
TOCj	245	8	3	22	9	43	18	113	46	59	24
TOCk	245	7	3	23	9	52	21	113	46	50	20
TOCl	245	5	2	18	7	66	26	114	46	42	17
TOCm	245	13	5	23	9	40	16	112	46	57	23
TOCn	245	6	6	28	11	43	17	108	44	50	20
TOCo	245	7	3	23	9	79	32	101	41	35	14
TOCp	245	8	3	46	18	41	16	112	45	38	15
TOCq	245	7	2	22	9	37	15	135	55	44	18
TOCr	245	7	2	14	5	32	13	109	44	83	33
TOCs	245	9	3	34	13	45	18	114	46	43	17
TOCt	245	8	3	23	9	51	20	117	48	46	18
Pda	245	9	3	20	8	49	20	125	51	42	17
PDb	245	5	2	25	10	57	23	105	42	53	21
PDC	245	7	2	35	14	62	25	91	37	49	20
PDd	245	4	1	29	11	91	37	92	37	29	11
Pde	245	23	9	52	21	53	21	72	29	45	18
SEDa	245	18	7	41	16	69	28	81	33	36	14
SEDb	245	8	3	35	14	61	24	81	33	60	24
SEDC	245	16	6	60	24	62	25	63	25	44	18
SEDD	245	7	2	30	12	40	16	109	44	59	24
SEDe	245	3	1	21	8	42	17	89	36	90	36
Valid N (listwise)	245										

Table -1 discloses that the opinions of the respondents on each question on an average is above 65% agreed to possess the required ICT skills in the proposed domains to develop and deliver the programmes through ODL mode. On observation of the frequencies and its percentages there is a significant variation found from the score of strongly disagreed & disagreed to strongly agreed & agreed. The Mode of all variables (questions) from the three constructs observed that either 'Agreed' or 'Strongly Agreed'. However, in order to check the reliability and validity of the defined constructs, the following Structural Equation Modeling (SEM) techniques have been used.

VALIDATION OF CONSTRUCTS (COMPONENT IDENTIFICATION)**TECHNOLOGY OPERATION AND CONCEPTS**

TABLE 2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.927
Bartlett's Test of Sphericity	Approx. Chi-Square	2333.050
	df	190
	Sig.	.000

KMO (Kaiser-Mayer-Olkin): Kaiser-Mayer-Olkin (1974) recommends accepting values greater than 0.5 as acceptable (values below this should lead you to either collect more data or rethink which variables to include). Furthermore, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Hutcheson and Sofroniou, 1999). For these data the value is 0.93, which falls into the range of being superb. It is established that factor analysis is appropriate for these data. KMO measured of sampling adequacy mixed the minimum criteria, the value of KMO measure of sampling adequacy.

BARTLETT'S TEST OF SPHERICITY: Bartlett's Test is another indication of the strength of the relationship among variables. This is also the way to test the null hypothesis. For factor analysis to work we need some relationships between variables and if the R-matrix were an identity matrix then all correlation coefficients would be zero. Therefore, we want this test to be significant (i.e. have a significance value less than 0.05). A significant test tells us that the R-matrix is not an identity matrix; therefore, there are some relationships between the variables. For these data, Bartlett's test is highly significant ($p < 0.001$), and therefore factor analysis is appropriate.

TABLE 3: Rotated Component Matrix^a

	Component	
	Technological Pro	Conceptual Domain
TOCp	.764	.168
TOCq	.755	.152
TOCt	.719	.216
TOCn	.651	.371
TOCr	.627	.291
TOCI	.593	.405
TOCo	.584	.298
TOCj	.561	.527
TOCs	.493	.230
TOCh	.471	.377
TOCe	.055	.760
TOCf	.151	.713
TOCg	.344	.712
TOCd	.396	.672
TOCm	.534	.585
TOCc	.411	.572
TOCk	.486	.518
TOCi	.455	.461
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 5 iterations.		

By factor analysis two components are identified in Technological Operation and Concepts that is Technological Pro and Conceptual Domain
PROFESSIONAL DOMAIN

TABLE 4: KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.709
Bartlett's Test of Sphericity	Approx. Chi-Square	205.560
	df	10
	Sig.	.000

For these data the value is 0.709, which falls into the range of being good sample adequacy.

TABLE 5: COMPONENT MATRIX^A

	Component
	1
PDb	.830
Pda	.781
PDd	.663
Pde	.532
PDc	.440
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Factor analysis identified only one component in Professional Domain.

SOCIAL AND ETHICAL DOMAIN

TABLE 6: KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	520.361
	df	10
	Sig.	.000

For these data the value is 0.709, which falls into the range of being very good sample adequacy.

TABLE 7: COMPONENT MATRIX

	Component
	1
SEDb	.855
SEDC	.827
SEDa	.808
SEDD	.780
SEDe	.665
Extraction Method: Principal Component Analysis.	

Factor analysis identified only one component i.e., Social and Ethical Domain.

1. CONVERGENT VALIDITY: In this study, convergent validity was assessed by factor loading, Composite Reliability (CR) and Average Variance Extracted (AVE) (Fornell & Larcker, 1981). Confirmatory Factor Analysis (CFA) is conducted to estimate factor loading of variables. In fact, a factor loading presents the level of a regression path from a construct to its indicators. According to (Hair et al., 2010), an acceptable factor loading value is more than 0.5 and when it is equal to 0.6 and above it is considered good for one indicator. Convergent validity was verified for each factor loading. Some data transformations have been done and those observed variables were deleted whose factor loadings were less than 0.6 in the process of model fit analysis.

TABLE 8: STANDARDIZED REGRESSION WEIGHTS: (Group number 1 - Default model)

Variables		Constructs	Factor Loading (λ)
TechPro	<---	TC	0.921
Conceptual	<---	TC	0.999
TOCp	<---	TechPro	0.717
TOCq	<---	TechPro	0.677
TOCt	<---	TechPro	0.722
TOCn	<---	TechPro	0.697
TOCr	<---	TechPro	0.666
TOCi	<---	TechPro	0.718
TOCj	<---	TechPro	0.762
TOCf	<---	Conceptual	0.618
TOCg	<---	Conceptual	0.721
TOCd	<---	Conceptual	0.761
TOCm	<---	Conceptual	0.744
TOCc	<---	Conceptual	0.664
TOCk	<---	Conceptual	0.707
TOCi	<---	Conceptual	0.633
SEDa	<---	SED	0.718
SEDb	<---	SED	0.829
SEDC	<---	SED	0.83
SEDD	<---	SED	0.672
SEDe	<---	SED	0.632
Pda	<---	PD	0.742
PDb	<---	PD	0.794
PDd	<---	PD	0.518

The average variance extracted (AVE) for each of the factors is calculated manually for all the constructs are presented in Table-8.

TABLE 9: AVE AND FACTOR LOADINGS OF THE FACTORS

Constructs	AVE	Construct Factor Loading
Professional Domain	0.583	0.68
Social & Ethical	0.549	0.74
Technology Operation & Concepts	0.923	0.96

As seen from the table, all AVE values and factor loadings are greater than 0.5 with almost all values above 0.60. For all the constructs, all items have high loadings, with majority above 0.5 therefore demonstrating convergent validity. This study satisfied this criteria hence convergent validity was established.

COMPOSITE RELIABILITY

Composite reliability measures the overall reliability of a set of items loaded on a latent construct. Value ranges between zero and one. Values greater than 0.70 reflect good reliability, between 0.60 – 0.70 is also acceptable if other indicators of the construct's validity are good (Hair et al., 2006). Reliability of the factors was estimated by checking composite reliability. Composite reliability should be greater than the benchmark of 0.7 to be considered adequate (Fornell and Larcker, 1981).

The composite reliability and AVE'S of all constructs are presented in **Table 10**. All composite reliabilities of constructs have a value higher than 0.70, indicating adequate internal consistency.

TABLE 10

Construct	CR (Composite Reliability)	AVE
Professional Domain	0.731	0.583
Social & Ethical	0.857	0.549
Technology Operation & Concepts	0.960	0.923

DISCRIMINANT VALIDITY

Discriminant validity is established on the basis of AVE and Maximum Shared Variance (MSV). Criteria for ensuring discriminant validity are $MSV < AVE$ and Average Shared Variance (ASV) $< AVE$ (Hair et al., 2010). In this study, MSV and ASV for each of the five individual constructs have been determined and presented in -3. MSV and ASV of each factor shows the proper sharing of variances with the AVE. Maximum AVE is explained in Learning from experience which is having least error with highest composite reliability. Other factors contain the same property on the basis of the CR, AVE, MSV and ASV score.

TABLE 11

Constructs	CR	AVE	MSV	ASV
Professional Domain (PD)	0.731	0.583	0.580	0.640
Social & Ethical (SED)	0.857	0.549	0.551	0.546
Technology Operation & Concepts (TOC)	0.960	0.923	0.780	0.686

To examine discriminant validity, the partial proof of discriminant validity is presented in **table 12**. The diagonal items in the table represent the square root of AVE's, which is a measure of variance between construct and its indicators, and the off diagonal items represent squared correlation between constructs and found that the most strongly inter correlated items are **Technology Operation & Concepts (TOC) activities best facilities of ICT**.

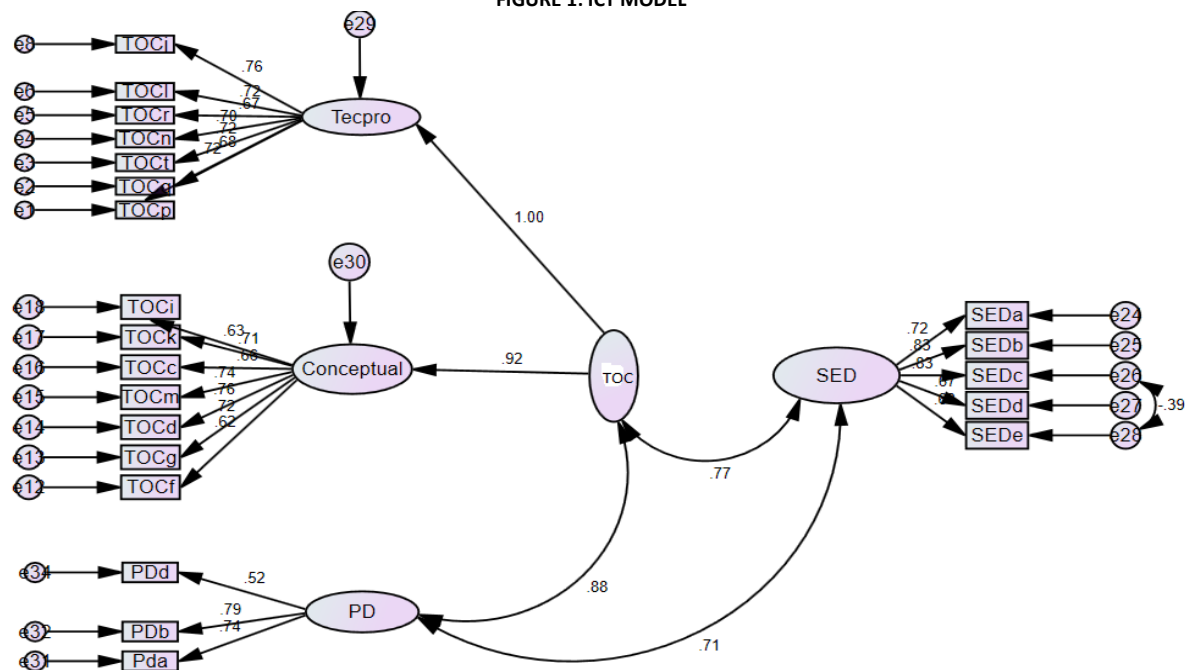
TABLE 12

Constructs	PD	SED	TOC
Professional Domain (PD)	0.695		
Social & Ethical (SED)	0.708	0.741	
Technology Operation & Concepts (TOC)	0.883	0.769	0.961

NOMOLOGICAL VALIDITY

In the given model of ICT it would be identified that how ICT scales are related with the factors and factors are interrelated with other constructs. On the basis of available data and its transformation, fit Measurement Model is representing 11 factors which are highly correlated and 25 variables supporting the factors. The **figure-1** of model supports the statement along with statistical scores explained earlier.

FIGURE 1: ICT MODEL



After measuring the reliability and validity of the constructs and the variables of the model, the results of Confirmatory Factor Analysis (CFA) using AMOS 20 has been used to evaluate the model fit of the measurement model. The proposed model in this study is an over-identified model with positive degrees of freedom (203) as shown in **table-13** drawn from the AMOS output. In this model there are 253 distinct sample moments (i.e., pieces of information) from which to compute the estimates of the default model, and 105 distinct parameters to be estimated, leaving 203 degrees of freedom, which is positive (greater than zero). Hence the model is an over identified one.

TABLE 13

Number of distinct sample moments	253
Number of distinct parameters to be estimated	50
Degrees of freedom (253 - 50)	203

Finally, model estimation and evaluation have been done by using standard methods and found that the estimation process yielded an admissible solution, evaluation process indicates good fit model.

VALIDATING THE MEASUREMENT MODEL

The results shown in **table -14** provide a quick overview of the model fit, which includes the value (497.905), together with its degrees of freedom (203) and probability value (0.000). In the table NPAR stands for Number of parameters, and CMIN (χ^2) is the minimum discrepancy and represents the discrepancy between the unrestricted sample covariance matrix S and the restricted covariance matrix. DF stands for degrees of freedom and P is the probability value.

TABLE 14: MODEL FIT

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	50	497.905	203	.000	2.453

TABLE 14: FIT STATISTICS OF THE MODEL

Fit Statistic	Recommended	Obtained
χ^2	467.905
df	203
χ^2 Significance	$p \leq 0.05$	00
χ^2/df	<5.0	2.453
GFI	>.80	0.85
AGFI	>.80	0.81
NFI	>.90	0.919
RFI	>.90	0.9
CFI	>.90	0.90
TLI	>.85	0.89
RMSEA	$\leq .08$	0.077

For the current CFA model, as shown in **table** χ^2/df was 2.453 (= 497.905; df = 203), suggesting acceptable model fit. Goodness of Fit index (GFI) obtained is 0.92 as against the recommended value of above 0.90, The Adjusted Goodness of Fit Index (AGFI) is 0.88 as against the recommended value of above 0.85 as well. The Normed fit Index (NFI), Relative Fit index (RFI), Comparative Fit index (CFI), Tucker Lewis Index (TLI) are 0.92, 0.90, 0.90, 0.89 respectively as against the recommended level of above 0.80 to 0.85. RMSEA is 0.077 and is equal to the recommended limit of 0.08. Hence the model shows an overall acceptable fit. The model is an over identified model.

The confirmatory factor analysis shows that how the model can be proved. The constructs and variables verified all the level of goodness of fit. Model explains that how ICT constructs are intercorrelated and need to be implements collectively. Implementation of **Technology Operation & Concepts (TOC)** is showing the strong relation this strengthen the ICT implementation.

FINDINGS

The survey revealed that, most of the participants perceived that teacher should possess ICT competencies to develop and offer ODL programmes by integrating ICT as a tool. It was established that by using various ICT tools, models for different concepts, teachers can explicitly explain and enhance their ability of instruction.

DISCUSSION AND CONCLUSION

ICT based education is not a new concept but the attempts to make it a part of the pedagogy is new and challenging. Its usage in pedagogical resources reduces the distance learner dependency on the SLM. It provides programme developers an opportunity to use the virtual tools associated with rich learning material, lecture series and practicals. Some of the ICT tools like Google earth, virtual field trip, virtual museum, virtual economic pond, video pod casts and environmental field trips provide additional knowledge and experience which are inaccessible to the learner. This creates an authentic setting to ODL philosophy and pedagogy. This paper also justifies the incorporation of ICT to develop and offer educational programmes in environmental sector through ODL mode, based on the psychological and intellectual abilities of present generation learner because they are proactive, independent and can obtain the required information from the society whenever required. The learner needs to process the information swiftly for decision making. The objectives of this paper can be achieved through proper utilization of the appropriate ICT tools by bringing awareness, by developing skill based programmes, creating positive attitude and learner's participation for critical thinking. The skill orientation makes the learner to recognize and solve the environmental problems at all levels that helps the society towards environmental stewardship as well as for future resolutions.

The survey results validated the competencies required by a programme developer in distance education through blended mode of ODL and online. Based on the developed model it is proved that required skills of ICT as projected in the model are to be possessed by a teacher. Therefore, it is suggested that any institution developing programmes through ODL with the intervention of educational ICT should design quality training programmes and evaluation for the teachers are indispensable in general and particularly development of need based programmes in the domain of environment.

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A STUDY ON PROBLEM FACED BY VEGETABLE PRODUCING FARMERS IN NILIGIRI - DISTRICT**DR. S. NAMASIVAYAM****HEAD****DEPARTMENT OF COMMERCE IN BUSINESS PROCESS SERVICES****DR. NGP ARTS & SCIENCE COLLEGE****COIMBATORE****K. ARTHI****M. Phil. RESEARCH SCHOLAR****DEPARTMENT OF COMMERCE****DR. NGP ARTS & SCIENCE COLLEGE****COIMBATORE****ABSTRACT**

Agriculture may be defined as an integrated system of techniques to control the growth and harvesting of animal and vegetables. It is an uncomplicated endeavor comprising of technical and practical processes that helps in the maintenance of the ecological balance and protects human resources; and most importantly it is a viable food production system. Human beings started practicing farming/cultivation some 10,000 years ago. Since then, agriculture as a practice and as a process has undergone substantial changes which have had consequential impact on human progress and lifestyle. The present study is intended to study the socio economic of characteristics of vegetable producing farmer's. It also given importance to know the satisfaction regarding the farmers and the problems faced by the vegetable producing farmers by which they can improve the vegetable growing and motivated their self farming.

KEYWORDS

problems, government subsidies, forms of agriculture, fertilizers.

INTRODUCTION

Indian agricultural economy under the impact of green revolution witnessed sharp increase in production and productivity, leading to higher income. Further, the percolation of the green revolution to the lowest level particularly in Punjab State led to structural transformation all around. Big strides in raising the production and productivity of cereal crops particularly of wheat and paddy were taken leading to increased adoption of biochemical and mechanical technologies. Remunerative returns under the assured price policy were also instrumental in concentration of the area under wheat and paddy at the cost of other traditional crops. Paddy and wheat yield in Punjab have reached the point where only a marginal increase in level of production per acre is possible. Serious repercussions are being felt in form of resource depletion, soil degradation, nutrient deficiency, and fallen ground water table the intensive paddy-wheat rotation has led to multiplication of insects/pests and diseases and intensive use of energy are some of the other consequences of paddy-wheat rotation faced by the agricultural sector. Heavy doses of fertilizers and chemicals are further causing environmental degradation.

PROBLEMS FACED BY FARMERS

For farmers, the potential problems associated with contract farming include:

- increased risk;
- unsuitable technology and crop incompatibility;
- manipulation of quotas and quality specifications;
- corruption;
- domination by monopolies; and
- Indebtedness and overreliance on advances.

STATEMENT OF THE PROBLEM

The farmers who produces crops, struggle a lot of bring them up. They plough and till his land, seed the plants, water resources, clean them and pack the produce ready to be taken to the market for sale. Even at the time of producing the crops and at the time of selling them, the farmers face a lot of hurdles and obstacles such as interference of brokers and middlemen, lack of insurance facility, lack of finance, high cost of inputs and problems of storage and transportation. In the market, the farmers are cheated by the brokers as they sell their produces by weighting the produce fault scales and so on. Thus the farmers face the problems from the initial stage till the marketing.

SCOPE OF THE STUDY

The present study is intended to study the socio economic of characteristics of vegetable producing farmer's. It also given importance to know the satisfaction regarding the farmers and the problems faced by the vegetable producing farmers by which they can improve the vegetable growing and motivated their self farming.

OBJECTIVES OF THE STUDY

- To know the socio-economic profile of the vegetable producing famers.
- To know the problems faced by the vegetables producing farmers in niligiri district.
- To know the growers level of satisfaction.
- To know the government schemes for increasing productivity.
- To offer suitable suggestion for the improvement of vegetables producing.

REVIEW OF LITERATURE

Saxena et al. (1999) while evaluating the physical distribution efficiency of vegetables in the hills of Uttar Pradesh found that marketing cost increased with the introduction of wholesaler cum commission agents in the marketing channel. The study also revealed that share of the producer increased with the high priced vegetables. The perish ability of the produce had direct relationship with the cost of marketing and inverse relationship with share of the producers in consumer's rupee.

Sankhyan et al. (1973) found that in the case of all fertilizers except two, the price spreads in the case of private dealers were larger than those in the case of co-operatives. Thus, the distribution costs were higher in the case of private dealers as compared to the co-operatives. This was primarily due to the shortage of fertilizers which enabled the private dealers to charge higher than the controlled prices and retain bigger margins.

Sinha and Verma (1973) attempted to study the input supply conditions and marketing mechanisms in Saharsa district of Bihar. The study revealed that the three major nutrients viz., Nitrogen, Phosphorus and Potash were distributed at Saharsa through public and private sectors, which was recently monopolized by co-operatives. There was no standard performance by co-operatives and were not able to meet the demand at the required time. Those selling on credit involved complicated procedures. Hence, they suggested checking unhealthy competition from private traders. The Federation of co-operatives should join the private sector in management of indigenous procedures. There was a need for opening of agricultural input shops in the rural areas at close distances.

Rajagopalan et al. (1973) examined the efficiency of retailing fertilizers in Coimbatore district. The study revealed that the marketing system was not efficient as increased satisfaction could be derived at increasing cost due to non availability of desired types of fertilizers in

Time. The farmer's preference was not technically sound and hence he was not optimizing. Hence, they suggested more intensive extension education strategies to be devised for educated farmers. The timeliness of supply influenced cost. Optimization over time and space had become increasingly crucial for distribution.

Yaledhalli (1991) had studied the agency-wise marketing of fertilizers in Karnataka and found that the agencies operating in the state are KAIC, MARKFED and private. The private agency had the lion shares in marketing of fertilizers. He found that the distribution of retail outlets in the districts was also dominated by private agencies.

RESEARCH METHODOLOGY

Methodology is one of the main aspects of any research. Methodology is defined as, "The procedures by which researchers go about their work of describing, explaining and predicting the phenomena." The study of Methodology emphasizes, the understanding of social, scientific inquiry by means of describing analysis and evaluating various methods specifying their assumption and identifying their strength and weakness, suggesting new applications.

METHODS OF DATA COLLECTION

A research plan can involve collection of both primary and secondary data. The primary data is information collected or generated by the researcher for the purpose of the project through observation, questionnaire and interview, secondary data refers to the information collected for some earlier research work and which is relevant and applicable to the study the researcher has presently undertaken. Both primary and secondary data have been used for the study.

SAMPLING TECHNIQUE

Convenience sampling technique was adopted. In this method, the researcher had selected those units of the population in the sample, which appear convenient to him or the management of the organization where he was conducting research. Total samples taken for the study was 250.

TOOLS FOR DATA COLLECTION

The data collected through questionnaires were analyzed using simple percentage method, chi-square method, co-efficient of correlation and ranking method.

LIMITATIONS OF THE STUDY

- The study is restricted to Nilgiri only. Hence we are not able to generalize
- The study is mainly based on the data given by the vegetables producing farmers in Nilgiri.
- The study aims at farmer's satisfaction aspects and problems faced by them.
- The sample size of the study is less.

TABLE 1: DEMOGRAPHIC FACTORS OF RESPONDENTS

S. NO.	FACTORS	DESCRIPTION	NO. OF RESPONDENTS	PERCENTAGE (%)
1	Age	Upto 30 Years	32	13
		30-40 Years	100	42
		Above 40 Years	108	45
2	Monthly Income	Upto 5000	24	10
		5000-10000	66	28
		10000-15000	90	38
		Above 15000	60	25
3	Acres of Land	2 Acres	78	33
		2-5 Acres	118	49
		5-10 Acres	30	13
		Above 10 Acres	14	6
4	Type of Land	Lease	30	13
		Own	210	88
5	Type of Soil	Alluvial Soil	150	63
		Black Soil	90	38
		Red Soil	0	0
		Laterite Soil	0	0
6	Types of Vegetables	Potato	60	25
		Cabbage	76	32
		Carrot	54	23
		Beetroot	50	21
7	Kinds of Fertilizers	Organic	52	22
		Chemical	46	19
		Both (A) And (B)	122	51
		Others	20	8
8	Period of Cultivation	2 Months	32	13
		3 Months	110	46
		4 Months	86	36
		Above 4 Months	12	5

Ho: There is no significant relationship between acres of land and production level

TABLE 2: ASSOCIATION RELATIONSHIP BETWEEN ACRES OF LAND AND PRODUCTION LEVEL

Calculated value (cv)	Degree of freedom (v)	Level of significance	Table value
5.33	3	5	7.81473

INTERPRETATION

The table 2 indicates that calculated value (5.33) is less than the table value (7.81) at 5% level of significance. Therefore, framed null hypothesis is accepted. Hence there is no significant relationship between acres of land and production level

Ho: There is no significant relationship between type of land and cost of land maintenance

TABLE 3: ASSOCIATION RELATIONSHIP BETWEEN TYPE OF LAND AND COST OF LAND MAINTENANCE

Calculated value (cv)	Degree of freedom (v)	Level of significance	Table value
2.44	1	5	3.84146

INTERPRETATION

The table 3 indicates that calculated value (2.44) is less than the table value (3.84) at 5% level of significance. Therefore, framed null hypothesis is accepted. Hence there is no significant relationship between type of land and cost of land maintenance.

H1: There is a significant relationship between fertilizer and availability of fertilizer

TABLE 4: ASSOCIATION RELATIONSHIP BETWEEN FERTILIZER AND AVAILABILITY OF FERTILIZER

Calculated value (cv)	Degree of freedom (v)	Level of significance	Table value
8.58	3	5	7.81473

INTERPRETATION

The table 4 indicates that calculated value (8.58) is less than the table value (7.81) at 5% level of significance. Therefore, framed null hypothesis is rejected. Hence there is a significant relationship between fertilizer and availability of fertilizer.

TABLE: 5 RANKING THE PROBLEMS FACED BY VEGETABLE PRODUCING FARMERS

S.No.	FACTORS	TOTAL	MEAN	RANK
1	Climate Problem	1497	6.24	9
2	Financial Problem	1073	4.47	12
3	Lack of transportation	1643	6.85	2
4	Price Flexuation	1639	6.83	3
5	Lack of labor	1451	6.05	11
6	High cost of production	1828	7.62	1
7	High labor cost	1495	6.23	10
8	Lack of cold storage facility	1529	6.37	8
9	Lack of market information	1543	6.43	7
10	Intermediaries or middlemen	1600	6.67	4
11	Poor quality of seeds	1585	6.60	5
12	Higher commission charge	1545	6.44	6

INTERPRETATION

The above ranking analysis shows that high cost of production (Rank 1) is the most problem faced by respondents from cultivating vegetables. Its followed by after Lack of transportation (2), Price Flexuation (3), Intermediaries or middlemen (4), Poor quality of seeds (5), Higher commission charge (6), Lack of market information (7), Lack of cold storage facility (8), Climate Problem (9), High labor cost(10), Lack of labor(11), Financial Problem(12).

The major of respondents stated that high cost of production is the common problem faced. Financial Problem is the least common problem.

FINDINGS**CHI-SQUARE**

- There is no significant relationship between acres of land and production level
- There is no significant relationship between type of land and cost of land maintained
- There is significant relationship between fertilizer and availability of fertilizer

CORRELATION

- relationship between cost of land maintenance and cost of production is positive
- relationship between cost of production and production level is positive

SUGGESTIONS

In order to alleviate the various problems faced by the farmers in cultivating the vegetables, the following suggestions are provided by the researcher:

1. The Government should take instantaneous initiatives in the field of production, and marketing activities can be carried out under the supervision of the appropriate agencies. A regulated market, to some extent, can do the needful to redress the grievances of the producers. Installation of cold storage facilities can play an important role to store the surplus produce in the glut period and to supply the surplus in the lean season. Well connected network transport facilities should be developed for an efficient marketing system.
2. The vegetable producers should be encouraged with right and timely supply of inputs and facilitate credit for better performance in the yield of commodity.
3. Public weighing machines should be installed in each market to ensure the correct weighing for the vegetable sales in the market. In order to provide accurate weighing, electronic weighing equipment should be installed at all market places.

CONCLUSION

Though India is the second largest producer of fruits and vegetables in the world, but our country has been facing the situation of glut and scarcity in respect of many crops. This is because of the non-existence of efficient marketing infrastructure and proper storage facilities for the regulated supply management of the vegetables, scarcity of agricultural inputs, lack of proper training and knowledge about new developments in cultivation methods and technological developments. The study clearly reveals that the increase in the number of middlemen and higher market charges were the major problems faced by the vegetable farmers and the financial position of these farmers was not very sound. Therefore, they were unable to make proper investments for the farming of vegetables. Therefore, the government should take appropriate steps to strengthen these farmers' markets. These markets have to provide new business opportunities for the vegetable sellers. It would help the farmers to sell their produce easily to the consumers directly so that they can save the middlemen commission and hence, are able to improve their financial position.

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STUDY ON CONSUMER BEHAVIOUR TOWARDS FROZEN FOOD IN JAMMU CITY OF J & K STATE**TAVLEEN KAUR****STUDENT****DIVISION OF AGRICULTURAL ECONOMIC & AGRI BUSINESS MANAGEMENT****SHER-E-KASHMIR UNIVERSITY OF AGRICULTURAL SCIENCES AND TECHNOLOGY OF JAMMU
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JAMMU****ABSTRACT**

The present investigation was conducted in Jammu city in which customers were selected at different supermarkets in Jammu city through convenience sampling. The research was conducted with 150 respondents. A likert-scale based schedule was developed & data was collected accordingly. The information from various retail outlets and distributors was collected with the help of structured schedule and the data was analyzed by using descriptive statistics, regression analysis and cross tab analysis to analyze the behavior of consumer regarding frozen foods. The analysis reflects that respondents neither agree nor disagree (median=3.00) to the fact that they often buy frozen foods because of health, safety, price, impulsiveness. This indicates that consumer's attitude is neutral towards frozen foods. It was also found that consumers in Jammu city were neutral towards the pricing of frozen foods.

KEYWORDS

consumer behavior, novelty, impulsiveness, health.

INTRODUCTION

Consumer behaviour is one of the stimulating and challenging areas in marketing studies being a human activity focused on the purchasing, consuming and using of the products and services. Understanding the behaviour of consumer is a great challenge. It involves the psychological processes that consumers go through in recognizing needs, finding ways to solve these needs, making purchase decisions, interpret information, make plans and implement those plans by engaging in comparison shopping or actually purchasing a product. The present study highlighted the determinants of consumer behavior regarding buying decision-making and develops a model to understand their relationship. Food retailing has undergone a drastic change in the last two decades due to substantial industry consolidation, globalization, retail format proliferation, alternative delivery options and threatened profit margins. The most dramatic change is the change in consumer demographics and demand preferences. So, an attempt has been made to analyse the consumers' shopping frequency for food products among different occupations. Further efforts have also been made to know the consumers' attitude towards food product labels and to analyze consumers' perception about food safety.

Food plays a central role in the life of consumers. It is the source of nutrition. It serves a social and cultural function and has considerable economic significance since a major proportion of the household budget is allocated to purchasing food. Yet food consumption behavior has not attracted much systematic attention by consumer behavior researchers. At least part of the difficulty in conducting consumer behavior research in this important area lies in the complexity and the diversity of the influences at work in food choice and consumption and in the fact that such research requires knowledge of the concepts of and insights from a wide range of science and social science disciplines, including food science, nutrition, medicine, psychology, physiology, psychophysics, sociology, economics, marketing, and anthropology.

All of us are consumers: all of us behave. This does not mean that all of our behaviour can be defined as consumer behaviour, of course. Specific consumer behaviour has been defined as follows: Consumer behaviour is the activities people undertake when obtaining, consuming and disposing of products and services. (Blackwell et al. 2001).

Consumer's buying behaviour is also influenced by needs for which the products are purchased (Applebaum, 1951). Housewives would prefer to buy nutritious meal for the family members since most of housewives really concern about the health of their kids. In a family, it requires balancing the family budget, quick cooking time and healthy food ingredients; therefore, their basic need for food is satisfied through affordable convenience and nutritious food (Coughenour, 1972). Thus, forming marketing strategy that fits consumer needs and preferences is vital for the new company to enter the market.

OBJECTIVES OF THE STUDY

1. To analyze the behavior of consumer regarding frozen food in Jammu city.
2. To analyze the impact of Quality, Price, Novelty, Impulsiveness and Orientation towards consumption of frozen foods on consumer behavior in Jammu city

LITERATURE REVIEW

Solomon (2004) in his study suggested that consumers tend to ask for advice about purchases from people who are knowledgeable about products and whose advice is considered valuable. These people are called opinion leaders. An opinion leader is a person who is frequently able to influence others' attitudes or behavior. Opinion leaders are valuable information sources because they are usually technically competent, they do not represent the interests of the company and they are often among the first to buy new products. He further studied that memory plays an important role in buying decision process.

Myers (2005) in his study observed that the biggest factor contributing to buying behavior in grocery stores was the price and convenience of frozen foods that were preferred over traditional forms of grocery purchase. Even though where prices were lower in those neighborhoods people would tend to buy frozen foods as to the ease of cooking and handling of the product.

Blackwell et al. (2006) in their study revealed that families or households are consumer units of critical importance in the study of consumer behavior for two reasons. Firstly, many products are purchased by a family or household unit. Secondly, other family members may heavily influence an individual buying decision. Hensen and Traill (1993) in their study stated that access to information is an elementary condition for the functioning of markets. Indeed, manufacturers and retailers are inevitably better informed about the quality of their products than individual consumers.

MATERIALS AND METHODS

The present study has adopted convenience sampling technique to conduct the survey among different consumers of Jammu city. A total of 150 sample respondents were selected. The research was conducted with the help of pre-tested structured schedule that incorporated information related to the behavior of the consumer regarding frozen food. The primary data has been collected from the consumers of Jammu city of various retail outlets of frozen food items and secondary data from various sources like: websites, journals and research papers etc. After collection of data from various sources the data has been analyzed using Descriptive statistics, Regression analysis and Cross tab analysis.

REGRESSION ANALYSIS

$$Y = \alpha + \beta x_i$$

$$\text{Or } Y = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4)$$

Where Y = Consumer behavior,

X₁ = Quality,

X₂ = Novelty,

X₃ = Price

X₄ = Impulsiveness

Here X₃ denotes statements like

- Price is not an important criterion for buying frozen food items now compared to earlier period.

CROSS TAB ANALYSIS

The formula for calculating cross tab is as under:

$$\chi^2 = \sum_{\text{cells}} \frac{(F_e - F_o)^2}{F_e}$$

RESULTS AND DISCUSSIONS

Table 1, includes the descriptive statistics of the various statements. It has been identified that for the statement T, U, V, Y, Z, AA, BB, CC, DD, the median was found to be (3) implying that consumers were neutral regarding these statements. It was further noted that DD statement implied that the customers disagreed it which is clear from its median (3.5). The table 1 makes it clear further that highest standard deviation was found for the statement U (1.054) and lowest in case of statement AA (0.870)

From figures 1, 2, 3, 4, 5, 6, 7, 8 and 9, it was observed that the responses of consumers of frozen food items were neutral meaning that they neither agreed nor disagreed to various statements like T, U, V, Y, Z, AA, BB, CC, DD. Their behavior was neutral to the various statements to the extent of 51.33 per cent (T), 32.67 per cent (U), 36.91 per cent (V), 38.67 per cent (Y), 43.33 per cent (Z), 50.00 per cent (AA), 37.33 per cent (BB), 42.00 per cent (CC) and 40.00 per cent (DD) which was highest among all the responses.

TABLE 1: DESCRIPTIVE STATISTICS FOR ANALYZING CONSUMER BEHAVIOR

T	U	V	Y	Z	AA	BB	CC	DD
150	150	149	150	150	150	150	150	150
0	0	1	0	0	0	0	0	0
3	3	3	3	3	3	3	3	3.5
.925	1.054	1.010	1.046	.937	.870	.896	.949	.916
.855	1.111	1.019	1.095	.878	.757	.803	.901	.839
1	1	1	1	1	1	1	1	1
5	5	5	5	5	5	5	5	5

Note*

* T denotes "I often buy frozen food products"

U denotes "I often buy frozen food products for my health"

V denotes "Choosing frozen food products are good for health"

Y denotes "Sometimes I am a bit reckless about what I buy"

Z denotes "Price is not an important criteria for buying frozen food now compared to earlier period"

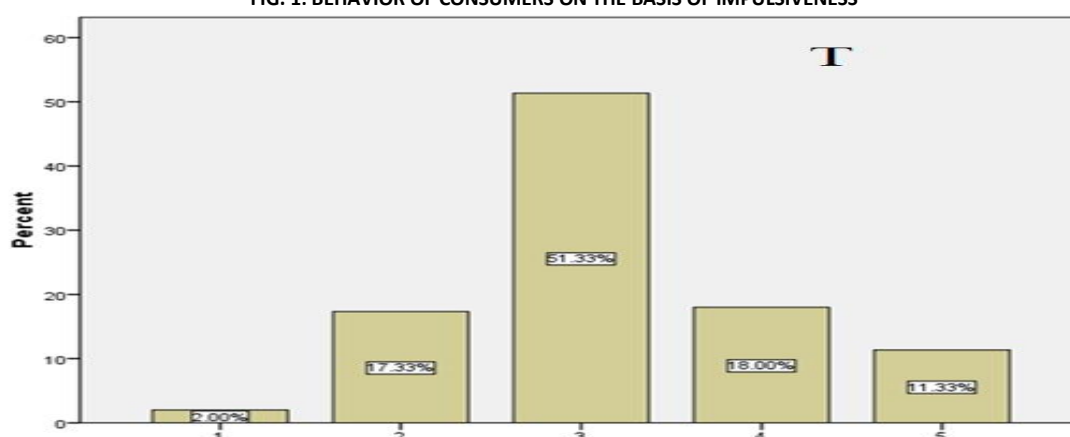
AA denotes "Frozen food contains more vitamins & minerals"

BB denotes "Frozen food products are nutritious"

CC denotes "Frozen food products are safer to eat"

DD denotes "Frozen food can reduce the food poisoning risk"

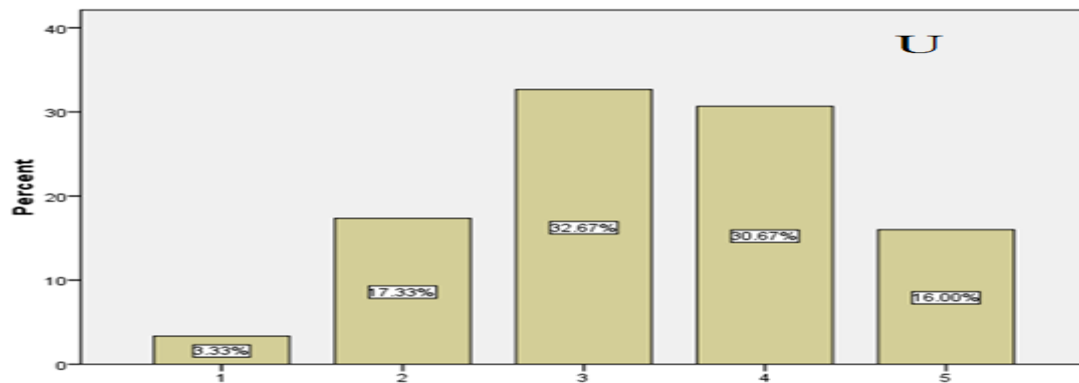
FIG. 1: BEHAVIOR OF CONSUMERS ON THE BASIS OF IMPULSIVENESS



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

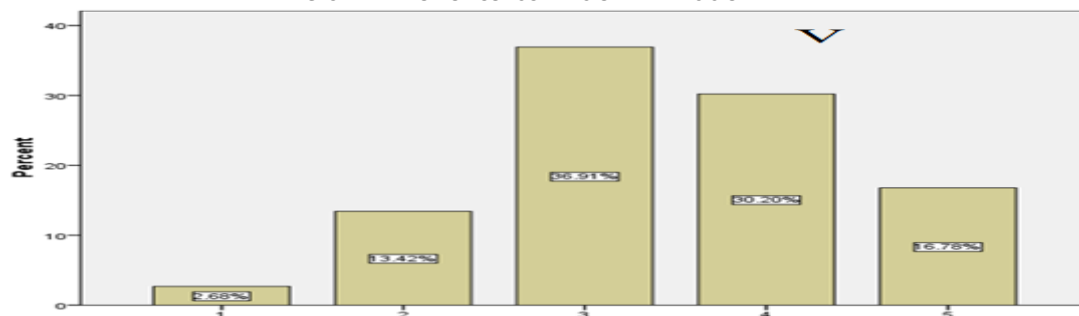
FIG. 2: BEHAVIOR OF CONSUMERS ON THE BASIS OF IMPULSIVENESS



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

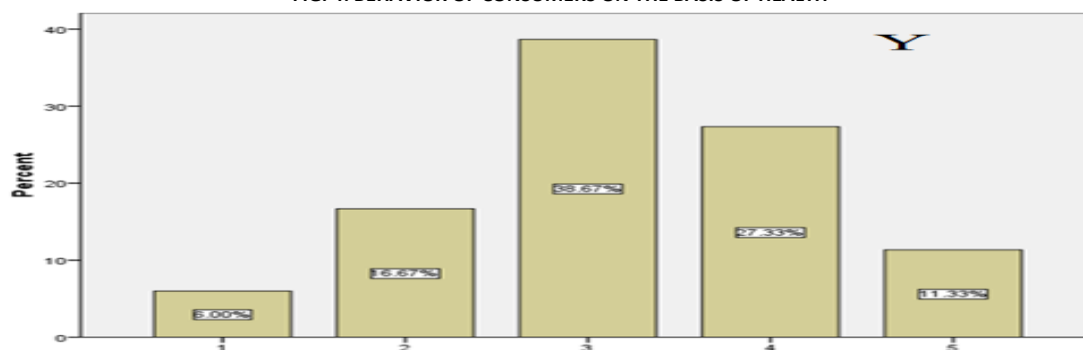
FIG. 3: BEHAVIOR OF CONSUMERS ON THE BASIS OF HEALTH



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

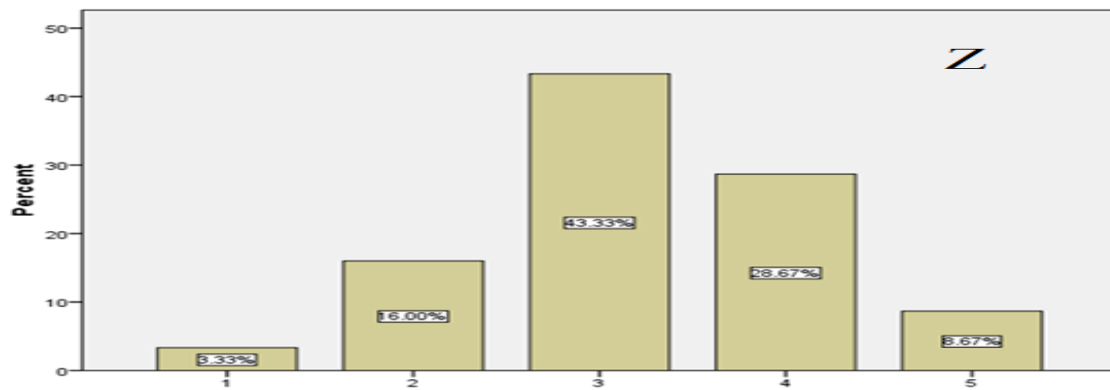
FIG. 4: BEHAVIOR OF CONSUMERS ON THE BASIS OF HEALTH



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

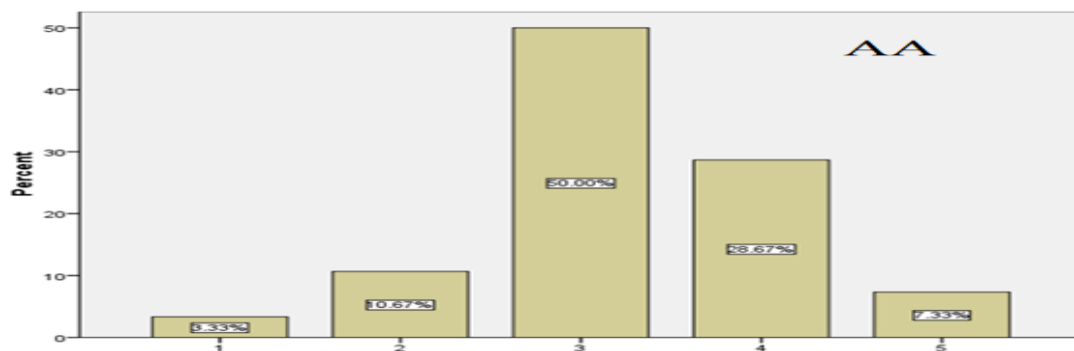
FIG. 5: BEHAVIOR OF CONSUMERS ON THE BASIS OF IMPULSIVENESS



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

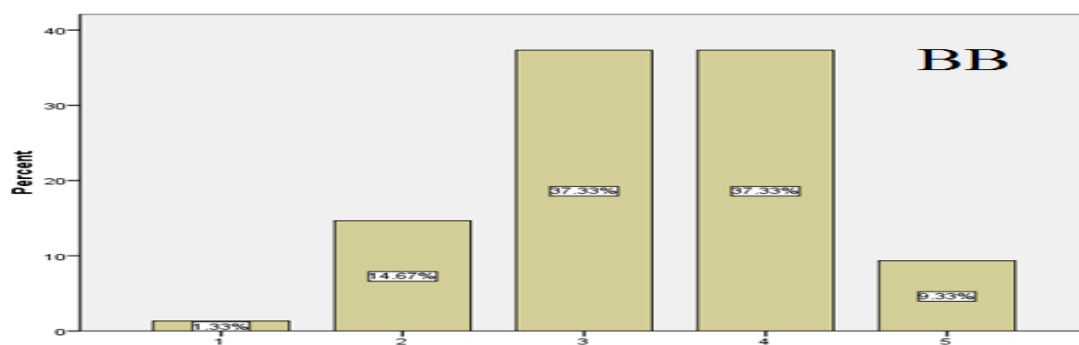
FIG. 6: BEHAVIOR OF CONSUMERS ON THE BASIS OF PRICE



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

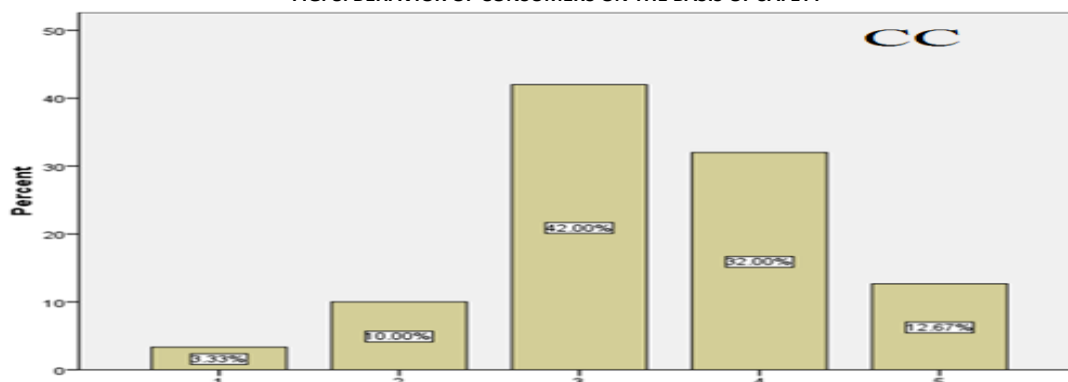
FIG. 7: BEHAVIOR OF CONSUMERS ON THE BASIS OF HEALTH



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

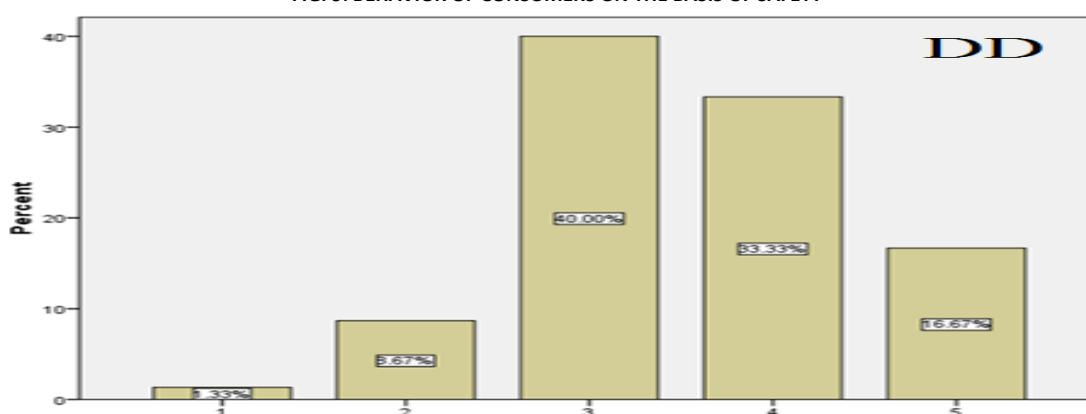
FIG. 8: BEHAVIOR OF CONSUMERS ON THE BASIS OF SAFETY



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

FIG. 9: BEHAVIOR OF CONSUMERS ON THE BASIS OF SAFETY



Note*

- *1 = Strongly agree
 2 = Agree
 3 = Neutral
 4 = Disagree
 5 = Strongly disagree

A regression analysis is done to explain the variation in one variable (dependent variable), based on variation in one or more other variables (independent variables). In case there is one independent variable to explain the variation in one dependent variable, it is known as simple regression. If there are multiple independent variables to explain the variation in single dependent variables, it is known as a multiple regression model.

The value of correlation coefficient from Table 2 came to be 0.561 indicating that the independent variables show a high level of correlation with the dependent variable. The measure of strength of association in the regression analysis is given by the coefficient of determination denoted by R^2 . This coefficient varies between 0 and 1 and represents the proportion of total variation in the dependent variable that is accounted for by the variation in the factors. From Table 2., the R^2 value is 0.314 which shows that 31.4 per cent of the variation in Consumer behavior can be explained by the four factors or independent variables in the given analysis. To test the validity of the model, the study incorporated the ANOVA or F test as shown in Table 3. It can be depicted from the statistics that the corresponding F-value appears to be 16.283, which further appears to be statistically significant at 5 per cent level of significance.

From the Table 3, the equation can be written as:

$$\text{Consumer behavior} = 1.494 + 0.004 (\text{Quality}) + -.034 (\text{Novelty}) + 0.198 (\text{Impulsiveness}) + 0.388 (\text{Price})$$

The regression model from the equation has been used to interpret the given result. From the equation it can be inferred that if focus on quality is increased by 1 unit, consumer behavior is estimated to increase by 0.004 assuming all other variables to be constant. It is further being inferred that if novelty is increased by 1 unit, consumer behavior is estimated to decrease by 0.34 assuming all other variables constant. Coming to third factor if impulsiveness is increased by 1 unit, it is estimated that there will be 0.198 increase in consumer behavior assuming all other variables to be constant. Further if price is increased by 1 unit; Consumer behavior is estimated to increase by 0.388 assuming all other variables to be constant.

We also have the *t*-test value for the significance of individual independent variables in the estimated analysis. From the Table 4, we can see that as there have been corresponding *t* values for the relevant coefficients of the estimated equation. These *t* values are used to validate the significance of the associated coefficients for the analyzed results. It can be depicted from the table that the coefficient values of price and impulsiveness the independent variables that are factors of Consumer behavior appears to be statistically significant at 5 per cent level of significance as the estimated *t* values are greater than the tabular values, whereas quality and novelty appears to be statistically insignificant thus it can be concluded that quality and novelty have significant value whereas price and impulsiveness have insignificant value. Furthermore, the *p* values from the table also confirm for the significance of estimated *t* values.

TABLE 2: DESCRIPTIVE STATISTICS OF REGRESSION ANALYSIS OF CONSUMER BEHAVIOUR

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.561 ^a	.314	.295	.47466	.314	16.283	4	142	.000

TABLE 3: ANALYSIS OF VARIANCE FOR MODEL FITNESS

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.674	4	3.669	16.283	.000 ^a
	Residual	31.993	142	.225		
	Total	46.667	146			

TABLE 4: SUMMARY STATISTICS OF THE MODEL

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.494	.312		4.794	.000
Quality	.004	.050	.005	.074	.941
Novelty	-.034	.065	-.037	-.520	.604
Price	.388	.061	.460	6.379	.000
Impulse	.198	.056	.256	3.553	.001

CONCLUSION AND RECOMMENDATIONS

The conclusion reflects that respondents neither agree nor disagree (median=3.00) to the fact that they often buy frozen foods because of health, safety, price, impulsiveness reasons. This indicates that consumer's attitude is neutral towards frozen foods. The analysis of second objective has shown that 31.4 per cent of variation in consumer behavior is explained by quality, price, novelty, impulsiveness. The results indicate that price and impulsiveness have significant impact on consumer behavior ($\beta=0.388$, p value=0.000; $\beta=0.198$, p value=0.001, respectively), whereas quality and novelty have insignificant impact on consumer behavior ($\beta=0.004$, p value=0.941; $\beta=-0.34$, p value=0.604, respectively).

RECOMMENDATIONS

- To increase the inclination towards frozen food, it has been suggested that the consumers should be provided with information specifying benefits of frozen foods and should also take measures to increase the standards of frozen food.
- To increase the impact of price on the consumer buying behavior, there should be some discounts and schemes on frozen foods items so that the consumers intend to buy more and more frozen food products.

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OPINION DIFFERENCE OF TEACHERS ON EXISTING PERFORMANCE APPRAISAL PRACTICES IN PRIVATE ENGINEERING INSTITUTIONS

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ABSTRACT

The content and pedagogy is continuously changing in higher education especially engineering study and this makes updating of engineering teachers very crucial. Teachers need to do this by themselves but there is chance of reduction of quality and standard. To overcome this, institutions must take its initiation. For this, the first step is of course the performance appraisal and later the training and development with help of knowledge management. This paper takes performance appraisal factor for study. The teaching staffs in engineering institutions are categorized gender wise and designation wise. The teachers were asked to evaluate the present performance appraisal practices in their colleges through structured and closed ended questionnaire. The proportional sample is drawn through convenient sampling. The data was collected through 5 point likert scale. The opinions of respondents were derived through the two top box scores method and later using mean value. Analysis of category wise difference in opinion was carried through t – test. The findings highlight that mostly the opinion of male and female teachers were having least variance. Further, the opinion of associate professor and assistant professor are also similar. The opinion of professor as compared to associate professor and assistant professor is different. The overall findings suggest that there is very little difference of opinion of teaching staff on the existing practices of performance appraisal in private engineering institutions.

KEYWORDS

higher education, engineering teachers, performance appraisal.

1. INTRODUCTION

Engineering colleges in Chhattisgarh is seeing its bad phase with unemployable engineering students. This is also reflected in the report of Patrika Newspaper (2017) which says that till now since 2012 around 500 engineering colleges has got permission from AICTE to close down and reasons are lack of resources and quality. Devika Singh (2016) in her report highlighted that 80 percentage of all the engineering students in India are unemployable. The reasons as put by CareerBuilder Survey (2015) are students lacking in various skills interpersonal skills, problem solving skills, creative thinking, team work, leadership, oral communication, research and analysis, project management, written communication etc.

Various teaching techniques from simple like lecture, workshop chalk and talk, assignment, industrial visit, brainstorming, case analysis, role play, group discussion, research projects, market surveys, simulation games (Saroja 2014) and little complex like ethno/phenomeno-graphy, grounded theory, narrative/ discourse analysis, action research (Case and Light 2011) has made the delivery sophisticated. Whether, the faculty members are equipped with these or not is the question to be evaluated so that the teachers can be trained on these if lacking.

VARIOUS ASPECTS OF PERFORMANCE APPRAISAL

Until and unless the evaluation of teaching staff is done how the status will be known and later if required training on pedagogy, content etc can be given. Table 1 given below shows few aspects related to performance appraisal around which the whole study is focused.

TABLE 1: VARIOUS ASPECTS OF PERFORMANCE APPRAISAL

BENEFITS OF PA		ELEMENTS OF PA
Faculty Members Present Status		Unbiased
Base for Training		Resulted Centered
Base for Promotion		Confidential
Base for New Responsibility		Encouraging Employees
	PA	
CONDUCTION OF PA		UTILIZATION OF RESULTS OF PA
Performance well informed		Result Communicated
Conducted on Regular Basis		Result Discussed
Conducted in Proper Format		Suggest Ways for Improvement
Suitable Questions Asked		Result Used for Training Purpose

NEED OF THE STUDY

As suggested by AICTE, the quality is one of the reasons for above mentioned scenario and under quality, it can be the quality of teaching staff. To maintain the standard of teaching staff in continuous manner, performance appraisal (PA) is the axis. The most important HRD tools like training and development, knowledge management etc directly responsible for quality of teaching staff revolves around PA. Due to this reason the study of status of PA practices in engineering institutions becomes very crucial as other is dependent on PA. Here it is imperative to mention that recruitment and selection is also very crucial but occurs once for any teaching staff and further these staff needs to update themselves continuously as per the requirement.

SCOPE OF THE STUDY

This paper is part of my Ph.D. work and it has its relation with its previous paper, Existing Performance Appraisal Practices in Private Engineering Institutions: Assessment through Teachers (Singh, Chandra and Sharma, 2017). For this paper the secondary data is taken from the above mentioned paper and converted into percentage. The aspects, questions and statements are also carried from previous paper. (While checking for plagiarism, the previous paper can be left) (Under publication process in Research Journal of Management Sciences so reference can be cited later)

The study has been done in self financed engineering colleges affiliated to CSVTU and located in Chhattisgarh. The population for the study was the teaching staff of these colleges and the sample is drawn category wise from this population. The whole sample is divided into two group i.e. designation wise and gender wise.

2. LITERATURE REVIEW**PA AND EMPLOYEE & ORGANIZATIONAL PERFORMANCE**

Performance appraisal acts as axis for the development of employee in any organization. It provides base for training and development thus help employee to keep themselves updated matching with dynamic changing requirements. Many researchers in their paper have shown that PA helps employee in many ways. Akinbowale and Lourens (2013) confirmed that performance appraisal policy leads to better employee performance. Performance appraisal is also responsible for employee motivation which leads to better employee performance^{7, 8, 9, 10, 11, 12}. Employees' performance improvement is the united outcome of PA as well as training^{13, 14} Femi (2013) advocated that right performance appraisal way with rational and clear approach results into improvement in performance¹⁵. Iqbal (2013) stated that strategic performance appraisal can improve the employees' inspiration, abilities and performance.¹². Thus, it can be concluded that there is benefit of PA.

Various aspects of PA to be studied and the opinion about which is to be known and later analyzed are collected through various research papers. Details of the same are as follows:

TABLE 2

Factors	Authors
Performance appraisal shows where faculty members (FM) stands on performance	Bintu, Diriba
Performance appraisal provides base for training of FM	Khanam, Bintu, Adofo
Performance appraisal provides base for incentives of FM	Bintu, Adofo
Performance appraisal provides base for new responsibilities to FM	Bintu, Decheb
Performance standard is well informed	Khanam, Daoanis, Elverfeldt
Performance appraisal is conducted on regular basis	Bintu, Adofo, Diriba, Elverfeldt
Performance appraisal is conducted in proper format	Diriba
Performance appraisal is conducted with suitable questions	Bintu, Daoanis
Performance appraisal is use to be unbiased	Bintu, Daoanis, Diriba, Decheb, Elverfeldt
Performance appraisal is use to be result centred	Daoanis, Diriba
Performance appraisal is designed to motivate/encouraging FM	Daoanis, Diriba, Decheb, Elverfeldt
Performance appraisal result is always communicated to FM	Bintu, Adofo, Daoanis, Diriba
Performance appraisal result is discussed with FM	Daoanis, Diriba, Decheb
Performance appraisal result is used to provide ways for improved performance	Khanam, Diriba, Decheb, Elverfeldt
Performance appraisal result is used for training	Khanam, Bintu, Elverfeldt

3. OBJECTIVES OF THE STUDY

Objectives provide direction to any work. The objective guides about the sample to be chosen and data to be collected. The main objective of the study is to compare the difference in opinion between the three combinations of teaching staff i.e. professor vs. associate professor, professor vs. assistant professor and between associate professor and assistant professor on various aspects of performance appraisal practices in their institutions and later see the category wise variance between their opinions. Further, the study is to be done for between male and female teaching staff.

4. RESEARCH METHODOLOGY

In this study the research design is descriptive one. Professor, associate professor and assistant professor teaching in private engineering colleges affiliated to CSVTU, Bilai makes the population. Opinion of 263 respondents was taken as primary source for data. Sample includes 11 (7M, 4F) are Professor, 30 (20M, 10F) are Associate Professor and 222 (140M, 82F) are Assistant Professor. Convenient sampling is used for data collection. Individual email is used for filling the close ended questionnaire. Incomplete were sent again for completion thus 263 fully filled questionnaires were ready for analysis. Five point likert scale with Strongly Agree (SA)= 5, Agree (A)= 4, Neutral (N)= 3, Disagree (DA)= 2 and Strongly Disagree (SDA)= 1 options was used to know the views of respondents.

Secondary source i.e. CSVTU website (seniority list) provided the details of population figure both designation and gender wise. Various aspects of PA were found through various research papers and books. Four aspects of PA is taken for study namely, benefits of PA, conduction of PA, elements of PA, and utilization of PA results. Four questions separately were asked related to each four aspects. The questions are:

Statement 1: Performance Appraisal results in various benefits (As per general perception)

Question PA1_1: Performance appraisal shows where faculty members stand on performance

Question PA1_2: Performance appraisal provides base for training of faculty members

Question PA1_3: Performance appraisal provides base for promotion of faculty members

Question PA1_4: Performance appraisal provides base for new/potential responsibility to faculty

Statement 2: Performance Appraisal is conducted in well manner

Question PA2_1: Performance standard is well informed at in beginning

Question PA2_2: Performance appraisal is conducted on regular basis

Question PA2_3: Performance appraisal is conducted in proper format

Question PA2_4: Performance appraisal is conducted with suitable questions

Statement 3: Performance appraisal has elements of good performance appraisal

Question PA3_1: Performance appraisal is use to be unbiased

Question PA3_2: Performance appraisal is use to be result-centred

Question PA3_3: Performance appraisal is kept confidential

Question PA3_4: Performance appraisal is designed for encouraging employees

Statement 4: Performance appraisal result is properly utilized

Question PA4_1: Performance appraisal result is always communicated to faculty member

Question PA4_2: Performance appraisal result is discussed with faculty member

Question PA4_3: Performance appraisal result is used to provide ways for improved performance

Question PA4_4: Performance appraisal result is used for training of faculty member

Opinions of teachers were taken about the above mentioned sixteen (16) questions and later it was reduced to four (4) final opinions each related to one aspect of PA. Four questions under each statement are combined. Designation wise twelve (12) and gender wise four (4) opinions is formed. To form opinions, top two box scores methods as well as mean values method were used. Top two box scores method in 5 point likert scale includes strongly agree and agree opinions. If the major percentage of opinions comes under this, then the questions can be taken as positive answer and can be taken as opinions. In a study by Markillie (2012), top two box scores method is used to measure the attitudes of maker of hardware innovations using multiple questions. Again, Employers Survey (2012) of Workplace Health, Safety and Compensation Commission of Newfoundland & Labrador in its final report also used Top-2 box scores to find the proportion of employers, completely or mostly satisfied analysing data collected on 5 point satisfaction scale.

Later, there was need to know whether professor, associate professor and assistant professor groups are having similar opinion or differ. Also male and female teacher's groups' opinion difference was required to find out. Thus, designation wise twelve (12) and gender wise four (4) hypotheses were formed to be tested. These hypotheses are as follows:

Statement 1: Performance Appraisal results in various benefits (As per general perception)

H1_1: Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits.

H1_2: Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits.

H1_3: Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits.

H1_4: Male teacher and female teacher do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits.

Statement 2: Performance Appraisal is conducted in well manner

H2_1: Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner.

H2_2: Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner.

H2_3: Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner.

H2_4: Male teacher and female teacher do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner.

Statement 3: Performance appraisal has elements of good performance appraisal

H3_1: Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal.

H3_2: Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal.

H3_3: Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal.

H3_4: Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal.

Statement 4: Performance appraisal result is properly utilized

H4_1: Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized.

H4_2: Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized.

H4_3: Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized.

H4_4: Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized.

The standard deviation of each question, designation and gender wise is calculated using SPSS 24 version. Later variance for two independent samples is calculated and at the last t-test is conducted through SPSS. All the hypotheses were tested at significance level of 5% i.e. 0.05.

5. FINDINGS AND DISCUSSION

First of all, the reliability of the data set is verified by calculating Cronbach's Alpha using SPSS 24 version and found to be reliable.

Below, in tables, the observed data is given in percentage separately statement wise, under this then category wise (designation and gender) and under this question wise.

Later using top two box scores method for each question and calculating mean value of all four questions, the statement are converted into either agreeing or disagreeing opinions, designation wise – professor group, associate professor group, and assistant professor and also gender wise – male teacher group and female teacher group.

The mean value of each question calculated separately by SPSS also further helps in confirming the status of opinions category wise.

Statement wise analysis is presented below one by one.

Statement 1: Performance Appraisal results in various benefits (As per general perception)

TABLE 3

PA1	Reliability Statistics	Cronbach's Alpha	.994	N of Items	4
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The value of Cronbach's Alpha shows the reliability of the data collected. Majority of authors opined that 0.70 and greater value of reliability coefficient is considered to be reliable although there is no as such predetermined standard. The value here is 0.994 which shows that data stands good on reliability.

The mean values of responses of all 263 respondents calculated by SPSS for each question of first statement are given below:

TABLE 4

Reliability Statistics			
	Mean	Std. Deviation	N
PA1_1	4.1901	.39314	263
PA1_2	4.1749	.38061	263
PA1_3	4.1901	.39314	263
PA1_4	4.1901	.39314	263
Overall	4.1863	.39001	263

Zaidatol & Bagheri (2009) suggested that the mean value of responses given in five point likert scale with strongly agree=5, agree=4, neutral=3, disagree=2 and strongly agree=1 if comes under 3.39 then it is taken as low, from 3.40 to 3.79 as moderate and more than 3.8 as high¹⁶. This criteria is used by Zaidatol and Hisyamuddin (2009), Zaidatol and Bagheri (2011), Wogari (2016) in their study^{17, 18, 19}. Here the overall mean value i.e. 4.19 being more than 3.8 is high suggesting overall response agreeing to the statement: Performance appraisal results in various benefits. The overall standard deviation value i.e. 0.39 suggests very less variance among the opinions of the entire sample.

Top two box scores and its mean values:

OVERALL

TABLE 5

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	19.01	80.99	0.00	0.00	0.00	263	100
PA1_2	17.49	82.51	0.00	0.00	0.00	263	100
PA1_3	19.01	80.99	0.00	0.00	0.00	263	100
PA1_4	19.01	80.99	0.00	0.00	0.00	263	100
Mean Value							100

The mean value of top two box scores suggests that the overall respondents as a group agree on statement: Performance appraisal results in various benefits.

PROFESSOR GROUP

TABLE 6

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	36.36	63.64	0.00	0.00	0.00	11	100
PA1_2	0.00	100.00	0.00	0.00	0.00	11	100
PA1_3	36.36	63.64	0.00	0.00	0.00	11	100
PA1_4	36.36	63.64	0.00	0.00	0.00	11	100
Mean Value							100

The mean value of top two box scores suggests that the professor group **agrees** on statement: Performance appraisal results in various benefits.

ASSOCIATE PROFESSOR GROUP

TABLE 7

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	30.00	70.00	0.00	0.00	0.00	30	100
PA1_2	30.00	70.00	0.00	0.00	0.00	30	100
PA1_3	30.00	70.00	0.00	0.00	0.00	30	100
Pa1_4	30.00	70.00	0.00	0.00	0.00	30	100
Mean Value							100

The mean value of top two box scores suggests that the associate professor group **agrees** on statement: Performance appraisal results in various benefits.

ASSISTANT PROFESSOR GROUP

TABLE 8

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	16.67	83.33	0.00	0.00	0.00	222	100
PA1_2	16.67	83.33	0.00	0.00	0.00	222	100
PA1_3	16.67	83.33	0.00	0.00	0.00	222	100
Pa1_4	16.67	83.33	0.00	0.00	0.00	222	100
Mean Value							100

The mean value of top two box scores suggests that the assistant professor group **agrees** on statement: Performance appraisal results in various benefits.

MALE TEACHERS GROUP

TABLE 9

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	17.96	82.04	0.00	0.00	0.00	167	100
PA1_2	16.77	83.23	0.00	0.00	0.00	167	100
PA1_3	17.96	82.04	0.00	0.00	0.00	167	100
Pa1_4	17.96	82.04	0.00	0.00	0.00	167	100
Mean Value							100

The mean value of top two box scores suggests that the male teacher group **agrees** on statement: Performance appraisal results in various benefits.

FEMALE TEACHERS GROUP

TABLE 10

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	20.83	79.17	0.00	0.00	0.00	96	100
PA1_2	18.75	81.25	0.00	0.00	0.00	96	100
PA1_3	20.83	79.17	0.00	0.00	0.00	96	100
Pa1_4	20.83	79.17	0.00	0.00	0.00	96	100
Mean Value							100

The mean value of top two box scores suggests that the female teacher group **agrees** on statement: Performance appraisal results in various benefits.

The data given below is of professors and associate professors.

TABLE 11

Group Statistics					TABLE 11				
	Designa- tion	N	Mean	Std. Devia- tion	Independent Samples Test				
PA1AVG	Professor	11	4.2727	.37839			Levene's Test for Equality of Var- iances		t-test for Equality of Means
	Asso. Professor	30	4.3000	.46609			F	Sig.	Sig. (2-tailed)
					PA1AVG	Equal variances as- sumed	1.497	.229	.863
						Equal variances not as- sumed			.850

As shown above, for all four statements the mean values against professor and associate professor can be considered to be high and at the same time as the mean value of professor group (4.27) is less than associate group (4.30), it can be said that professor group has little weak opinion than associate professor. The standard deviation value shows that the two groups are not very far from each other on variance.

T-test is used here to find the difference between the mean values of two independent data values with significance value.05 (5% significance level). There are two values of sig. (2-tailed) and to decide which one is applicable, the sig. value (.229) in Levene's Test for Equality Variances is compared with value.05. If the sig. value is greater than .05 then the value of upper row is taken, here it is .863 otherwise if is lower than .05 then lower row value is taken which is .850 here.

Now to accept or reject the hypothesis, the p-value i.e. sig. (2-tailed) is compared with significance level value i.e. .05. If the p-value is greater than .05 then the hypothesis is accepted else rejected. Here p-value .863 is greater than .05 so the hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of professor group and associate professor group.

The data given below is of professors and assistant professors.

TABLE 12

Group Statistics					TABLE 12				
	Designation	N	Mean	Std. Devia- tion	Independent Samples Test				
PA1AVG	Professor	11	4.2727	.37839			Levene's Test for Equality of Variances		t-test for Equality of Means
	Asstt. Pro- fessor	222	4.1667	.37352			F	Sig.	Sig. (2-tailed)
					PA1AVG	Equal variances as- sumed	.843	.360	.359
Equal variances not as- sumed			.383						

As shown above, for all four statements the mean values against professor and assistant professor can be considered to be high and at the same time as the mean value of professor (4.27) is more than assistant professor (4.17). It can be said that professor has strong opinion than assistant professor. The standard deviation value shows that the two groups are almost near to each other on variance.

Either of the p-value .359 and .383 is greater than .05 and thus hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of professor and assistant professor.

The data given below is of associate professors and assistant professors.

TABLE 13

Group Statistics					TABLE 13				
	Designation	N	Mean	Std. Devia- tion	Independent Samples Test				
PA1 AVG	Asso. Profes- sor	30	4.3000	.46609			Levene's Test for Equality of Variances		t-test for Equality of Means
							F	Sig.	Sig. (2-tailed)
	Asstt. Pro- fessor	222	4.1667	.37352	PA1AVG	Equal variances as- sumed	9.084	.003	.077
						Equal variances not as- sumed			.142

As shown above, for all four statements the mean values against associate professor and assistant professor can be considered to be high and at the same time as the mean value of associate professor (4.30) is more than assistant professor (4.17). It can be said that associate professor has strong opinion than assistant professor. The standard deviation value shows that the two groups are not far from each other on variance.

Either of the p-value .077 and .142 is greater than .05 and thus hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

The data given below is of male and female teachers.

TABLE 14

Group Statistics					TABLE 14				
	Gen-der	N	Mean	Std. Devia-tion	Independent Samples Test				
PA1 AVG	Male	167	4.1766	.37955			Levene's Test for Equality of Var-iances		t-test for Equality of Means
	Fe-male	96	4.2031	.39953			F	Sig.	Sig. (2-tailed)
					PA1AVG	Equal variances as-sumed	1.063	.303	.594
						Equal variances not as-sumed			.599

As shown above, for all four statements the mean values against male teachers group and female teachers group can be considered to be high and at the same time as the mean value of male teachers group (4.17) is less than female teachers group (4.20), it can be said that male teachers group has little weak opinion than female teachers group. The standard deviation value shows that the two groups are near to each other on variance.

Either of the p-value .594 and .599 is greater than .05 and thus hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of male teachers group and female teachers group.

Statement 2: Performance Appraisal is conducted in well manner

TABLE 15

PA2	Reliability Statistics	Cronbach's Alpha	.712	N of Items	4
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The value here is 0.712 which shows that data stands good on reliability as it is greater than 0.70.

The mean values of responses of all 263 respondents calculated by SPSS for each question of second statement are given below:

TABLE 16: RELIABILITY STATISTICS

	Mean	Std. Deviation	N
PA2_1	1.9049	.29385	263
PA2_2	2.2966	.62660	263
PA2_3	2.1673	.55478	263
PA2_4	2.1673	.55478	263
Overall	2.1340	0.50750	263

The overall mean value i.e. 2.13 which is less than 3.39 and thus is low suggesting overall response disagreeing to the statement: Performance Appraisal is conducted in well manner. The standard deviation values suggest very less variance for each statement among the overall sample.

OVERALL**TABLE 17**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	90.49	9.51	263	0.00
PA2_2	0.00	9.13	11.41	79.47	0.00	263	9.13
PA2_3	0.00	8.37	0.00	91.63	0.00	263	8.37
PA2_4	0.00	8.37	0.00	91.63	0.00	263	8.37
Mean Value							6.46

The mean value of top two box scores suggests that the overall respondents as a group agree on statement: Performance Appraisal is conducted in well manner.

PROFESSOR GROUP**TABLE 18**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	100.00	0.00	11	0.00
PA2_2	0.00	0.00	0.00	100.00	0.00	11	0.00
PA2_3	0.00	0.00	0.00	100.00	0.00	11	0.00
PA2_4	0.00	0.00	0.00	100.00	0.00	11	0.00
Mean Value							0.00

The mean value of top two box scores suggests that the professor group disagrees on statement: Performance Appraisal is conducted in well manner.

ASSOCIATE PROFESSOR GROUP**TABLE 19**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	100.00	0.00	30	0.00
PA2_2	0.00	16.67	10.00	73.33	0.00	30	16.67
PA2_3	0.00	10.00	0.00	90.00	0.00	30	10.00
PA2_4	0.00	10.00	0.00	90.00	0.00	30	10.00
Mean Value							9.17

The mean value of top two box scores suggests that the associate professor group disagrees on statement: Performance Appraisal is conducted in well manner.

ASSISTANT PROFESSOR GROUP**TABLE 20**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	88.74	11.26	222	0.00
PA2_2	0.00	8.56	12.16	79.28	0.00	222	8.56
PA2_3	0.00	8.56	0.00	91.44	0.00	222	8.56
PA2_4	0.00	8.56	0.00	91.44	0.00	222	8.56
Mean Value							6.42

The mean value of top two box scores suggests that the assistant professor group disagrees on statement: Performance Appraisal is conducted in well manner.

MALE TEACHERS GROUP**TABLE 21**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	89.82	10.18	167	0.00
PA2_2	0.00	9.58	11.38	79.04	0.00	167	9.58
PA2_3	0.00	7.19	0.00	92.81	0.00	167	7.19
PA2_4	0.00	7.19	0.00	92.81	0.00	167	7.19
Mean Value							5.99

The mean value of top two box scores suggests that the male teacher group disagrees on statement: Performance Appraisal is conducted in well manner.

FEMALE TEACHERS GROUP**TABLE 22**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA2_1	0.00	0.00	0.00	91.67	8.33	96	0.00
PA2_2	0.00	8.33	11.46	80.21	0.00	96	8.33
PA2_3	0.00	10.42	0.00	89.58	0.00	96	10.42
PA2_4	0.00	10.42	0.00	89.58	0.00	96	10.42
Mean Value							7.29

The mean value of top two box scores suggests that the female teacher group disagrees on statement: Performance Appraisal is conducted in well manner.

The data given below is of professors and associate professors.

TABLE 23

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA2 AVG	Professor	11	2.0000	.00000			F	Sig.
								Sig. (2-tailed)
	Asso. Professor	30	2.2083	.45996	PA2AVG	Equal variances assumed	8.789	.005
						Equal variances not assumed		.144
								.019

As shown above, for all four statements the mean values against professor and associate professor can be considered to be low and at the same time as the overall mean value of professor group (2.00) is less than associate group (2.20), it can be said that professor group has little weak opinion than associate professor. The standard deviation values show that the two groups are quite far from each other on variance. The professor group has no standard deviation.

Under T-test, the sig. value (.005) in Levene's Test for Equality Variances is compared with significance level value.05. The value is less than.05 and so lower row sig. (2-tailed).019 is taken. Now as the value.019 is lower than value.05 so the hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is rejected which means there is significant difference between opinion of professor group and associate group.

The data given below is of professors and assistant professors.

TABLE 24

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA2 AVG	Professor	11	2.0000	.00000			F	Sig.
								Sig. (2-tailed)
	Asstt. Professor	222	2.1306	.38029	PA2AVG	Equal variances assumed	6.322	.013
						Equal variances not assumed		.257
								.000

As shown above, for all four statements the mean values against professor and assistant professor is low and at the same time as the overall mean value of professor (2.00) is less than assistant professor (2.13). It can be said that professor has little weak opinion than assistant professor. The standard deviation values for professor in 0.00 showing that there is no deviation. There is huge variance between the opinion of professor and assistant professor.

Under T-test, the sig. value (.013) in Levene's Test for Equality Variances is compared with significance level value.05. The value is less than.05 and so lower row sig. (2-tailed).000 is taken. Now as the value.000 is lower than value.05 so the hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is rejected which means there is significant difference between opinion of professor and assistant professor.

The data given below is of associate professors and assistant professors.

TABLE 25

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA2 AVG	Asso Professor	30	2.2083	.45996			F	Sig.
								Sig. (2-tailed)
	Asstt. Professor	222	2.1306	.38029	PA2AVG	Equal variances assumed	1.607	.206
						Equal variances not assumed		.307
								.382

As shown above, for all four statements the mean values against professor and assistant professor is low and at the same time as the overall mean value of associate professor (2.21) is more than assistant professor (2.13). It can be said that associate professor has little strong opinion than assistant professor. The standard deviation values.46 for associate professor and.38 for assistant professor can be said to be near thus very less variance.

Under T-test, both sig. (2-tailed) values.307 and.382 are greater than.05 thus the hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

The data given below is of male and female teachers.

TABLE 26

Group Statistics					Independent Samples Test			
	Gender	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA2 AVG	Male	167	2.1228	.33817			F	Sig.
								Sig. (2-tailed)
	Female	96	2.1536	.45214	PA2AVG	Equal variances assumed	5.210	.023
						Equal variances not assumed		.530
								.561

As shown above, for all four statements the mean values against male and female teachers can be considered to be low and at the same time as the mean value of male group and female group are very near suggesting that their opinion is almost similar. The standard deviation value shows that the two groups are having very less variance.

0.530 and 0.561, either of the p-value i.e. sig. (2-tailed) is greater than.05 and thus hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is accepted which means there is no significant difference between opinion of male group and female group.

Statement 3: Performance appraisal has elements of good performance appraisal**TABLE 27**

PA3	Reliability Statistics	Cronbach's Alpha	.734	N of Items	4
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The value here is 0.734 which shows that data stands good on reliability as it is greater than 0.70.

The mean values of responses of all 263 respondents calculated by SPSS for each question of third statement are given below:

TABLE 28: RELIABILITY STATISTICS

	Mean	Std. Deviation	N
PA3_1	2.9430	.52475	263
PA3_2	2.9430	.52475	263
PA3_3	3.3004	.75985	263
PA3_4	2.5323	.69753	263
Overall	2.9297	0.62672	263

The overall mean value i.e. 2.93 which is less than 3.39 and thus is low suggesting overall response disagreeing to the statement: Performance appraisal has elements of good performance appraisal. The standard deviation values suggest very less variance for each statement among the overall sample.

OVERALL**TABLE 29**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	11.03	72.24	16.73	0.00	263	11.03
PA3_2	0.00	11.03	72.24	16.73	0.00	263	11.03
PA3_3	0.00	48.29	33.46	18.25	0.00	263	48.29
PA3_4	0.00	11.79	29.66	58.56	0.00	263	11.79
Mean Value							20.53

The mean value of top two box scores suggests that the overall respondents as a group agree on statement: Performance appraisal has elements of good performance appraisal.

PROFESSOR GROUP**TABLE 30**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	0.00	100.00	0.00	0.00	11	0.00
PA3_2	0.00	0.00	100.00	0.00	0.00	11	0.00
PA3_3	0.00	0.00	100.00	0.00	0.00	11	0.00
PA3_4	0.00	0.00	100.00	0.00	0.00	11	0.00
Mean Value							0.00

The mean value of top two box scores suggests that the professor group disagrees on statement: Performance appraisal has elements of good performance appraisal.

ASSOCIATE PROFESSOR GROUP**TABLE 31**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	16.67	66.67	16.67	0.00	30	16.67
PA3_2	0.00	16.67	66.67	16.67	0.00	30	16.67
PA3_3	0.00	56.67	26.67	16.67	0.00	30	56.67
PA3_4	0.00	20.00	26.67	53.33	0.00	30	20.00
Mean Value							27.50

The mean value of top two box scores suggests that the associate professor group disagrees on statement: Performance appraisal has elements of good performance appraisal.

ASSISTANT PROFESSOR GROUP**TABLE 32**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	10.81	71.62	17.57	0.00	222	10.81
PA3_2	0.00	10.81	71.62	17.57	0.00	222	10.81
PA3_3	0.00	49.55	31.08	19.37	0.00	222	49.55
PA3_4	0.00	11.26	26.58	62.16	0.00	222	11.26
Mean Value							20.61

The mean value of top two box scores suggests that the assistant professor group disagrees on statement: Performance appraisal has elements of good performance appraisal.

MALE TEACHERS GROUP**TABLE 33**

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	10.18	73.05	16.77	0.00	167	10.18
PA3_2	0.00	10.18	73.05	16.77	0.00	167	10.18
PA3_3	0.00	48.50	32.93	18.56	0.00	167	48.50
PA3_4	0.00	12.57	29.34	58.08	0.00	167	12.57
Mean Value							20.36

The mean value of top two box scores suggests that the male teacher group disagrees on statement: Performance appraisal has elements of good performance appraisal.

FEMALE TEACHERS GROUP

TABLE 34

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA3_1	0.00	12.50	70.83	16.67	0.00	96	12.50
PA3_2	0.00	12.50	70.83	16.67	0.00	96	12.50
PA3_3	0.00	47.92	34.38	17.71	0.00	96	47.92
PA3_4	0.00	10.42	30.21	59.38	0.00	96	10.42
Mean Value							20.84

The mean value of top two box scores suggests that the female teacher group disagrees on statement: Performance appraisal has elements of good performance appraisal.

The data given below is of professors and associate professors.

TABLE 35

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA3 AVG	Professor	11	3.0000	.00000			F	Sig.
								Sig. (2-tailed)
	Asso. Professor	30	3.0167	.49101	PA3 AVG	Equal variances assumed	19.659	.000
						Equal variances not assumed		.912
								.854

The mean value can be said to be low. The mean value of professor group (3.00) is almost equal to that of associate professor group (3.02) meaning by there is almost equal opinion of both. There is no deviation in professor opinion and there is large variance between the opinion of professor and associate professor.

0.912 and 0.854, both the p-value i.e. sig. (2-tailed) is greater than significance level value i.e. .05 so the hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of professor group and associate group.

The data given below is of professors and assistant professors.

TABLE 36

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA3 AVG	Professor	11	3.0000	.00000			F	Sig.
								Sig. (2-tailed)
	Asstt. Professor	222	2.9144	.48273	PA3 AVG	Equal variances assumed	12.678	.000
						Equal variances not assumed		.558
								.009

As shown above, for all four statements the mean values against professor and assistant professor are low. The mean value of professor (3.00) and assistant professor (2.91) is almost equal which means both have almost equal opinion. There is no deviation against professor group. The variance of opinion between professor and assistant professor is large.

The sig. value i.e. .000 is less than significance level value i.e. .05 and thus the lower sig. (2-tailed) value i.e. .009 is to taken to test the hypothesis. As this value i.e. 0.009 is less than .05 so the hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is rejected which means there is significant difference between opinion of professor and assistant professor.

The data given below is of associate professors and assistant professors.

TABLE 37

Group Statistics					Independent Samples Test			
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA3 AVG	Asso Professor	30	3.0167	.49101			F	Sig.
								Sig. (2-tailed)
	Asstt. Professor	222	2.9144	.48273	PA3 AVG	Equal variances assumed	.342	.559
						Equal variances not assumed		.278
								.290

As shown above, for all four statements the mean values against associate professor and assistant professor can be considered to be low and at the same time as the mean value of associate professor (3.02) is slightly more than assistant professor (2.91). It can be said that associate professor has slightly strong opinion than assistant professor. The overall standard deviation value shows that the two groups are near to each other on variance.

Either of the p-value.278 and .290 is greater than .05 and thus hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

The data given below is of male and female teachers.

TABLE 38

Group Statistics					Independent Samples Test			
	Gender	N	Mean	Std. Deviation			Levene's Test for Equality of Variances	t-test for Equality of Means
PA3 AVG	Female	96	2.5104	.68048			F	Sig.
								Sig. (2-tailed)
	Male	167	2.9281	.42785	PA3 AVG	Equal variances assumed	8.038	.005
						Equal variances not assumed		.946
								.949

As shown above, for all four statements the mean values against male and female teachers can be considered to be low and at the same time as the mean value of male group and female group is 2.93 meaning by their opinion is similar. The standard deviation value shows that the two groups are near to each other on variance.

Either of the p-value 0.946 and 0.949 is greater than .05 and thus hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of male group and female group.

Statement 4: Performance appraisal result is properly utilized

TABLE 39

PA4	Reliability Statistics	Cronbach's Alpha	.862	N of Items	4
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The value here is 0.862 which shows that data stands good on reliability as it is greater than 0.70.

The mean values of responses of all 263 respondents calculated by SPSS for each question of fourth statement are given below:

TABLE 40

Reliability Statistics			
	Mean	Std. Deviation	N
PA4_1	2.1065	.44985	263
PA4_2	2.1369	.50597	263
PA4_3	2.1369	.50597	263
PA4_4	2.0000	.00000	263
Overall	2.0951	0.36545	263

The overall mean value i.e. 2.10 which is less than 3.39 and thus is low suggesting overall response disagreeing to the statement: Performance appraisal result is properly utilized. The standard deviation values suggest very less variance for each statement among the overall sample.

OVERALL

TABLE 41

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA1_1	0.00	5.32	0.00	94.68	0.00	263	5.32
PA1_2	0.00	6.84	0.00	93.16	0.00	263	6.84
PA1_3	0.00	6.84	0.00	93.16	0.00	263	6.84
PA1_4	0.00	0.00	0.00	100.00	0.00	263	0.00
Mean Value							4.75

The mean value of top two box scores suggests that the overall respondents as a group disagree on statement: Performance appraisal result is properly utilized.

PROFESSOR GROUP

TABLE 42

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA4_1	0.00	0.00	0.00	100.00	0.00	11	0.00
PA4_2	0.00	0.00	0.00	100.00	0.00	11	0.00
PA4_3	0.00	0.00	0.00	100.00	0.00	11	0.00
PA4_4	0.00	0.00	0.00	100.00	0.00	11	0.00
Mean Value							0.00

The mean value of top two box scores suggests that the professor group disagrees on statement: Performance appraisal result is properly utilized.

ASSOCIATE PROFESSOR GROUP

TABLE 43

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA4_1	0.00	10.00	0.00	90.00	0.00	30	10.00
PA4_2	0.00	10.00	0.00	90.00	0.00	30	10.00
PA4_3	0.00	10.00	0.00	90.00	0.00	30	10.00
PA4_4	0.00	0.00	0.00	100.00	0.00	30	0.00
Mean Value							7.5

The mean value of top two box scores suggests that the associate professor group disagrees on statement: Performance appraisal result is properly utilized.

ASSISTANT PROFESSOR GROUP

TABLE 44

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA4_1	0.00	4.95	0.00	95.05	0.00	222	4.95
PA4_2	0.00	6.76	0.00	93.24	0.00	222	6.76
PA4_3	0.00	6.76	0.00	93.24	0.00	222	6.76
PA4_4	0.00	0.00	0.00	100.00	0.00	222	0.00
Mean Value							4.61

The mean value of top two box scores suggests that the assistant professor group disagrees on statement: Performance appraisal result is properly utilized.

MALE TEACHERS GROUP

TABLE 45

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA4_1	0.00	5.99	0.00	94.01	0.00	167	5.99
PA4_2	0.00	7.19	0.00	92.81	0.00	167	7.19
PA4_3	0.00	7.19	0.00	92.81	0.00	167	7.19
PA4_4	0.00	0.00	0.00	100.00	0.00	167	0.00
Mean Value							5.09

The mean value of top two box scores suggests that the male teacher group disagrees on statement: Performance appraisal result is properly utilized.

FEMALE TEACHERS GROUP

TABLE 46

Category	SA	A	N	DA	SDA	Total	Top 2 box Scores
PA4_1	0.00	4.17	0.00	95.83	0.00	96	4.17
PA4_2	0.00	6.25	0.00	93.75	0.00	96	6.25
PA4_3	0.00	6.25	0.00	93.75	0.00	96	6.25
PA4_4	0.00	0.00	0.00	100.00	0.00	96	0.00
Mean Value							4.17

The mean value of top two box scores suggests that the female teacher group disagrees on statement: Performance appraisal result is properly utilized. The data given below is of professors and associate professors.

TABLE 47

Group Statistics									
	Designation	N	Mean	Std. Deviation	Independent Samples Test				
PA4 AVG	Professor	11	2.0000	.00000			Levene's Test for Equality of Variances		t-test for Equality of Means
	Asso. Professor	30	2.2000	.61026			F	Sig.	Sig. (2-tailed)
					PA4 AVG	Equal variances assumed	5.886	.020	.288
									.083

As shown above, for all four statements the mean values against professor and associate professor can be considered to be low and at the same time as the mean value of professor group (2.00) is slightly less than associate group (2.20), it can be said that professor group has little weak opinion than associate professor. There is no deviation against professors' opinion. The standard deviation values show great variance between the two group opinions.

The sig. value (.020) in Levene's Test for Equality Variances is less than the value 0.05 so the lower row significance value i.e.0.083 taken which is still greater than 0.05 so the hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of professor group and associate group.

The data given below is of professors and assistant professors.

TABLE 48

Group Statistics					TABLE 40				
	Designation	N	Mean	Std. Deviation	Independent Samples Test				
PA4 AVG	Professor	11	2.0000	.00000			Levene's Test for Equality of Variances		t-test for Equality of Means
	Asstt. Professor	222	2.1171	0.46907			F	Sig.	Sig. (2-tailed)
					PA4 AVG	Equal variances assumed	3.541	.061	.382
						Equal variances not assumed			.000

As shown above, for all four statements the mean values against professor and assistant professor can be considered to be low and at the same time as the mean value of professor (2.00) is less than assistant professor (2.12). It can be said that professor has little less opinion than assistant professor. The standard deviation values show that the two groups are far away on variance.

As the sig. value.061 is greater than.05 so the upper row p-value is to be taken. The upper row p-value.382 is greater than.05 and thus hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of professor and assistant professor.

The data given below is of associate professors and assistant professors.

TABLE 49

Group Statistics					Independent Samples Test				
	Designation	N	Mean	Std. Deviation			Levene's Test for Equality of Variances		t-test for Equality of Means
PA4 AVG	Asso Professor	30	2.1500	.45769			F	Sig.	Sig. (2-tailed)
	Asstt. Professor	222	2.1261	.48611	PA4AVG	Equal variances assumed	2.615	.107	.415
						Equal variances not assumed			.511

As shown above, for all four statements the mean values against associate professor and assistant professor can be considered to be low and at the same time as the mean value of associate professor (2.15) is little more than assistant professor (2.12). It can be said that associate professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups are near to each other on variance.

Either of the p-value.415 and.511 is greater than.05 and thus hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

The data given below is of male and female teachers.

TABLE 50

Group Statistics					TABLE 93				
	Gen-der	N	Mean	Std. Devia-tion	Independent Samples Test				
PA4 AVG	Male	167	2.1317	.49701			Levene's Test for Equality of Vari-ances		t-test for Equality of Means
	Female	96	2.1041	.44421			F	Sig.	Sig. (2-tailed)
					PA4AVG	Equal variances assumed	.687	.408	.686
						Equal variances not as-sumed			.677

As shown above, for all four statements the mean values against male and female teachers can be considered to be low and at the same time as the mean value of male group (2.13) is little more than female group (2.10). It can be said that male group has little strong opinion than female group. The standard deviation value shows that the two groups are almost near to each other on variance.

Either of the p-value i.e. .686 and .677 is greater than .05 and thus hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of male group and female group.

6. DISCUSSION

This study was made to know the variance of opinion between the different groups of teachers in engineering colleges. These groups were divided into two categories namely, designation wise (professor, associate professor and assistant professor) and gender wise (male teachers and female teachers). The opinion was asked for various aspects of performance appraisal practices in their colleges. First of all, the reliability of data was checked by taking Cronbach's Alpha value. Later, the mean value and standard deviation was calculated. Further, to test the hypotheses, t-test were conducted. All these calculations are made through SPSS 24 version. Following are the category wise conclusions:

Data of all the groups (16) were found to be reliable as their values are more than 7.0.

Between Professor Group and Associate Professor Group

For PA1: The mean values are high. The professor group has little weak opinion than associate professor. The standard deviation values show that the two groups are near to each other on variance. The hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted.

As shown above, for all four statements the mean values against male and female teachers can be considered to be low and at the same time as the mean value of male group (2.13) is little more than female group (2.10). It can be said that male group has little strong opinion than female group. The standard deviation value shows that the two groups are almost near to each other on variance.

Either of the p-values i.e. value.686 and.677 is greater than.05 and thus hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of male group and female group.

7. CONCLUSIONS

This study was made to know the variance of opinion between the different groups of teachers in engineering colleges. These groups were divided into two categories namely, designation wise (professor, associate professor and assistant professor) and gender wise (male teachers and female teachers). The opinion was asked for various aspects of performance appraisal practices in their colleges. First of all, the reliability of data was checked by taking Cronbach's Alpha value. Later, the mean value and standard deviation was calculated. Further, to test the hypotheses, t-test were conducted. All these calculations are made through SPSS 24 version. Following are the category wise conclusions:

Data of all the groups (16) were found to be reliable as their values are more than 7.0.

Between Professor Group and Associate Professor Group

For PA1: The mean values are high. The professor group has little weak opinion than associate professor. The standard deviation values show that the two groups are near to each other on variance. The hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted.

For PA2: The mean values are low. The professor group has little weak opinion than associate professor. The standard deviation value shows that the two groups are quite far to each other on variance. The hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is rejected.

For PA3: The mean values are low. The professor and associate professor are almost equal in opinion. The standard deviation value shows that the two groups are quite far to each other on variance. The hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of professor group and associate group.

For PA4: The mean values are low. The professors' opinion is little weak than associate professor. The standard deviation value shows that the two groups are quite far to each other on variance. The hypothesis, Professor and associate professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of professor group and associate professor group.

Between Professor Group and Assistant Professor Group

For PA1: The mean values are high. The professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of professor and assistant professor.

For PA2: The mean values are low. The professor has little weak opinion than assistant professor. The standard deviation value shows that the two groups' opinions are quite far to each other on variance. The hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is rejected which means there is significant difference between opinion of professor and assistant professor.

For PA3: The mean values are low. The professor and assistant professor opinions are almost same. The standard deviation value shows that the two groups' opinions are quite far to each other on variance. The hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is rejected which means there is significant difference between opinion of professor and assistant professor.

For PA4: The mean values are low. The professor has little weak opinion than assistant professor. The standard deviation value shows that the two groups' opinions are quite far away from each other on variance. The hypothesis, Professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of professor and assistant professor.

Between Associate Professor Group and Assistant Professor Group

For PA1: The mean values are high. The associate professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

For PA2: The mean values are low. The associate professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

For PA3: The mean values are low. The associate professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

For PA4: The mean values are low. The associate professor has little strong opinion than assistant professor. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Associate professor and assistant professor do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of associate professor and assistant professor.

Between Male Teachers Group and Female Teachers Group

For PA1: The mean values are high. The opinion of male and female teachers is almost equal. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance Appraisal results in various benefits, is accepted which means there is no significant difference between opinion of male group and female group.

For PA2: The mean values are low. The male and female teacher's opinion are almost similar. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance Appraisal is conducted in well manner, is accepted which means there is no significant difference between opinion of male group and female group.

For PA3: The mean values are low. The male group and female group opinions are similar. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal has elements of good performance appraisal, is accepted which means there is no significant difference between opinion of male group and female group.

For PA4: The mean values are low. The male teachers' opinion is slightly strong than female teachers'. The standard deviation value shows that the two groups' opinions are near to each other on variance. The hypothesis, Male teacher and female teacher do not differ in their opinion regarding the statement: Performance appraisal result is properly utilized, is accepted which means there is no significant difference between opinion of male group and female group.

8. FUTURE

With reference to this paper there can be future study on training & development aspect of faculty members in same pattern and also study can be on knowledge management.

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COOPERATIVE INDUSTRIAL ESTATES: THE GOLDEN PLATFORM FOR SMALL SCALE INDUSTRIES**DR. ARVIND CHAUDHARI****PROFESSOR & HEAD****BHUSAWAL ARTS, SCIENCE & P. O. NAHATA COMMERCE COLLEGE****BHUSAWAL****ABSTRACT**

In India like other developing nations, the business climate is more informal in nature. The entrepreneurs are not interested to register their businesses, the society is conservative and never "doing business" had been seen with a great value, though culturally we had been rich for several hundred years with many intellectual capabilities. We always preferred doing jobs over businesses, India is burgeoning as the neo youth power which needs lots of job opportunities. By 2020 the median of the age of India would be 27, hence young India needs enough jobs to feed this aspiring youth to maintain their living as well as a healthy family life. To take the advantage of the age dividend, India needs to promote a better business climate. To evolve the businesses as part of culture, Indian Government already has taken many steps, including giving many incentives and subsidies to encourage youth to opt for business. Entrepreneurs are to be given information that would facilitate to take best advantage of the schemes. Development of enterprises in terms of establishment, expansion, modernisation, acquisitions and mergers can take place. Organisation structure in terms of proprietary, partnership, cooperatives, corporations, etc., can be planned. Issues like state development, infrastructure, fiscal issues, export prospects, etc., paves way for economic prospects. To establish cooperative industrial estate at anywhere by the people, to the people and for the people is one of the best opportunity to develop industrial sector. Actually this is golden platform for small scale entrepreneurs through this study researcher want to search the status of cooperative industrial estates and to check perception of small scale owners about cooperative industrial estates.

KEYWORDS

cooperative industrial estate, development, entrepreneurs.

INTRODUCTION

Over the various Five Year Plans employment has been identified as one of the key issues to be tackled with. The Ninth Plan (1997-2002) like the Eighth Plan made a detailed analysis of trends in employment and scenario during the Plan period. The Eleventh Plan (2007-12) too reveal that growth of GDP is higher than the growth rate of employment. Treatment of employment as a goal of development planning in India clearly indicated that its importance, and sometimes its centrality for reducing poverty and inequality, has been recognised. Various approaches and strategies have been tried in order to accelerate the pace of employment generation so as to see that the unemployed get productively absorbed in growing economic activities.

The government machinery is not very well equipped to fulfill the needs of the industries through industrial estates. It encourages establishment of cooperative industrial estates. A cooperative (also co-operative or co-op) is an autonomous association of persons who voluntarily cooperate for their mutual social, economic, and cultural benefit. Cooperatives include non-profit community organizations and businesses that are owned and managed by the people who use its services (a consumer cooperative) and/or by the people who work there (a worker cooperative). Through cooperation small entrepreneurs get an opportunity to start their own industrial estate. The financial requirements for starting cooperative industrial estates too is not much, thanks to the help given by the government directly or indirectly. Minimum 10 entrepreneurs are required to form Society to promote Cooperative Industrial Society and just 2 acres of land is sufficient to start a cooperative industrial estate. Members of the cooperative society have to raise only 20% from amongst themselves through shareholding. Government makes available equal contribution (i.e., 20%) as Govt. share contribution and remaining 60% of the project cost is available from Financial Institution / Banks as long term loan on Govt. Guarantee. Thus, such industrial estates provide opportunity for self-employment and also employment per se to people living in and around that area.

REVIEW OF LITERATURE

"Impact Of Co-Operative Industrial Estate In Growth Of Small Scale Industries In Sivakasi" (Ms.G.Pooranam, 2016) In the new millennium, the Indian Economy continues to be in the throes of constant change; the progressive reduction of barriers to capital flows and international trade, the spread of market-based economics in key sectors and the exciting possibilities of beneficial change brought by transformative technology. So the millennium has opened up many a opportunities to entrepreneurs and accelerated the process of wealth creation. This globalization process has also touched small scale industries as well. This study focus with the major role of industrial estate in growth of small scale sector in Sivakasi. Mainly it deals the small scale sector, viz, employment created, production, export, capacity utilization and ownership structure, etc

The small scale industry sector as an important segment of the Indian Economy and 95 percent of the Industrial units, 40 percent of output of the manufacturing sector, 35 percent of the total exports and it provides employment more million people. The Industrial Estate is one of the institutional approaches of the government to develop small scale industries of various places. This idea behind the construction of Industrial Estates is to enable the entrepreneurs to start new and novel industries in India

The sector covers a wide spectrum of industries categorised under small, tiny, ancillary segments. In fact, it encompasses the continuum of the artisans / hand-crafts units at one end and modern production units with significant investments, on the other, producing a wide range of products. The small scale has been receiving special attention from the policy makers in addressing its requirements, be it credit, marketing, technology, entrepreneurship development, fiscal or infrastructural support. Thus it acts as prime mover in pushing up the industrial growth

and gives boost to overall economic growth for the rapid economic growth and expansion of opportunities for employment as well as self-employment have been possible only through a planned policy of promotion of small-scale industries. The promotion of small scale industries at the macro level would be possible only if their problems at the micro level are analysed. So, it is clear that the industrial estate is helped to the growth and development of small industries and all the required and relevant assistances will be made available to the entrepreneurs under one roof

"The Co-operative Difference: Impact and Role of Research in Building Sustainable Co-operative Enterprises" (Dr. Esther Gicheru, 2012): Co-operatives are social and economic enterprises that owned and managed democratically by their members for their own benefit and their communities. Irrespective of the type enterprise, the Co-operative business model operates on the same values and principles that confer to their members the triple benefits of ownership, control and utility. Co-operatives seek to build good society guided by mutual cooperation, not competition; motivated by need to build moral character, not profits; creating human dignity, not wealth. The role of Co-operatives is to cater for the social and economic needs of society that the state, the private sector, big capitalist enterprises and small family businesses may not be able to satisfy. To be successful, Co-operatives must combine the desirable approaches of other enterprises such as the service spirit of the state, the efficiency of the capitalist enterprises, the entrepreneurial culture and independence of the private sector, and the proximity and social touch of family business. The Co-operative difference / advantage is the ability to contribute, simultaneously, towards the social and economic needs of their members and the society in general. Although the Co-operative form of enterprise and their success in many areas, the Co-operatives landscape in Africa is dotted with mountains of successful Co-operatives, underneath which, lie thousands of Co-operatives that have died with hopes of people with many others limping along between life and death hanging on lifelines held by their Governments, donors and NGOs. Therefore, Governments, development partners, private sector and civil society are called upon to accelerate their support towards the promotion of Co-operatives as sustainable enterprises that balance their

development on social, economic and environmental pillars that characterized by responsible use of resources to meet the needs of the present without compromising the ability of future generations to meet their needs. Despite the many setbacks faced over time, Co-operatives remain the enterprises of choice in many countries for the majority of people who want to satisfy their common needs by maximizing on economies of scale and the synergy that arises from joint action. However, further continuous research is a pre-requisite for the promotion and support of sustainable Co-operative enterprises around the world and particularly in Africa

OBJECTIVES OF THE STUDY

1. To study the functioning of Cooperative Industrial Estate
2. To find out perception about the role of Cooperative Industrial Estate in small scale industries' development

HYPOTHESES OF THE STUDY

Ho- There is no significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor

H1- There is significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor

RESEARCH METHODOLOGY OF THE STUDY

DATA COLLECTION

The study is based on critical evaluation and analysis of basically Primary Data. The primary sources include owner/proprietor of small scale industries. A study is undertaken in the sampled regions to see its impact for which a detailed questionnaire is prepared to collect relevant information from the primary source for the guidance of the researchers. With the help of the questionnaire, detailed discussions were made with the certain sources of primary data to understand their views, thinking and attitude which would help to give the researchers useful recommendations, if any. The questionnaire is processed with the help of statistical tools like tabulations, grouping, percentages, averages, testing of hypothesis etc. Questionnaire is used mainly to analyze the opinion of the owner/proprietor of small scale industries

RESEARCH AREA

Researchers selected owner/proprietor of small scale industries from Jalgaon city. Researcher collects data through Primary and Secondary sources. Researcher distributed over 200 questionnaires among the respondents.

SCOPE OF THE STUDY

Nowadays small scale industries are very vital part of Indian industrial sector. Customers are the end users of the product/services provided by the small scale industries, if the facilities / infrastructure provided to them is proper, the development will be easy and continual which helps to government for achieving target.

DATA ANALYSIS

Researcher prepared the questionnaire for customers and distributes it among the customers in Jalgaon city. There are 185 questionnaire received, before starting analysis, researcher rejected incomplete questionnaires. Finally, it is 179

TESTING OF HYPOTHESIS

Ho- There is no significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor.

H1- There is significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor

In order to test the hypothesis, researcher studied following aspects:

TABLE 1: RESPONSES ABOUT INDUSTRY TYPE

OBSERVED FREQUENCIES		Industry Type				
		Manufacturing	Service	Chemical	Other	TOTAL
Perception about Cooperative Indl Estate	Very Good	5	9	2	3	19
	Good	36	1	18	1	56
	Neutral	34	1	17	1	53
	Bad	27	1	13	4	45
	Very Bad	4	0	1	1	6
	TOTAL	106	12	51	10	179

Source: Primary Data

Whereas the expected frequencies are as per following:

TABLE 2: INFORMATION OF EXPECTED FREQUENCIES

EXPECTED FREQUENCIES		Industry Type				
		Manufacturing	Service	Chemical	Other	TOTAL
Perception about Cooperative Indl Estate	Very Good	11.25	1.27	5.41	1.06	19
	Good	33.16	3.75	15.96	3.13	56
	Neutral	31.39	3.55	15.10	2.96	53
	Bad	26.65	3.02	12.82	2.51	45
	Very Bad	3.55	0.40	1.71	0.34	6
	TOTAL	106	12	51	10	179

Source: Primary Data

Also the test statistics values are as per following:

TABLE 3: INFORMATION OF STATISTICS

TEST STATISTICS		Industry Type				
		Manufacturing	Service	Chemical	Other	TOTAL
Perception about Cooperative Indl Estate	Very Good	3.47	46.87	2.15	3.54	56.03
	Good	0.24	2.02	0.26	1.45	3.97
	Neutral	0.22	1.83	0.24	1.30	3.59
	Bad	0.00	1.35	0.00	0.88	2.23
	Very Bad	0.06	0.40	0.29	1.32	2.07
	TOTAL	3.99	52.47	2.95	8.48	67.90

Source: Primary Data

RESULT

TABLE 4: RESULT OF HYPOTHESIS

Sr No	H ₀	H ₁	χ_{cal}	χ_{table}	p_value	Decision
1	There is no significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor.	There is significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor.	67.90	21.03	0.0000	Reject H ₀ (i.e. There is significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor)

FINDINGS

1. The most preferred response about Cooperative Industrial Estate is from service sector
2. As far as respondents' opinions are concerned, "**Availability of hassle free procedure**" will be the most impactful factor in this regard.

RECOMMENDATIONS /SUGGESTIONS

1. Cooperative department of Maharashtra State should create awareness among small entrepreneurs by organizing seminars in selected villages for formation of cooperative Industrial estates.
2. Government should have prepared master plan and decide the time bound target of establishment of Cooperative industrial estates.
3. Educated and experienced small entrepreneurs should study the aim, objectives of cooperative and benefits to entrepreneurs and should take initiative to form cooperative industrial estates.

CONCLUSION

There is significant impact of Cooperative Industrial Estate on development of the small scale industries as per the perception of owner/proprietor. There is a golden platform for small scale entrepreneurs, if establish cooperative industrial estates at least at taluka level.

LIMITATIONS OF THE STUDY

1. The study is based on limited geographical area.
2. Further variables could be added for the purposes of detail study.

SCOPE FOR FURTHER RESEARCH

- 1) Once the resources provided, the coverage of research could be extended upto Maharashtra state.
- 2) This project could be used as a pilot testing while studying various aspects of Cooperative Industrial Estates.
- 3) Maintaining the Cooperative Industrial Estates is the first step/ initiative towards employment generation.
- 4) The same study could be indicator before estimating parameters about industrial estates projects by MSME.

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ECONOMIC GROWTH, EDUCATION EXPENDITURE AND INCOME INEQUALITY IN INDIA**ANIRUDDHA KAYET****RESEARCH SCHOLAR****DEPARTMENT OF ECONOMICS WITH RURAL DEVELOPMENT****VIDYASAGAR UNIVERSITY****MIDNAPORE****DEBASISH MONDAL****PROFESSOR****DEPARTMENT OF ECONOMICS WITH RURAL DEVELOPMENT****VIDYASAGAR UNIVERSITY****MIDNAPORE****ABSTRACT**

Many researchers report a negative association between economic growth and economic inequality. If it is true, what are the considerations for this relation? What are the expected reasons for linking these two? Using the data across 15 major states of India from 1983 to 2011-12 this paper explores one such mechanism; growth rate of output raises public expenditure on education and it decreases inequality with growth of public education expenditure in India. Economic inequality can be measured by both a singular measure of inequality (either relative measure or absolute measure of inequality) and plural measure of inequality (both relative measure and absolute measure of inequality) that can be captured by different families of inequality measures; a measure from the Lorenz-Gini family or from any other family. To check the robustness of the results, in this paper we consider the plural measure of inequality from the Lorenz-Gini family as well as from another family, viz., the SD-CV family.

KEYWORDS

public education expenditure, economic growth, combined income inequality, relative inequality, absolute inequality, index of inequality.

JEL CODES

D63, F43, H52.

1. INTRODUCTION

The term economic growth refers to the increase in nation's capacity to produce the goods and services to fulfill the needs of the people. Many people define economic growth as the increase in per capita income of a country at constant price. People can enjoy a higher living standard by higher per capita income that is the main goal of economic development. Economic growth i.e., an increase in national income especially, per capita income is therefore necessary for economic development. Literally, the term economic growth refers to an increase in the country's net national product (NNP). This improvement in income leads to the transformation of an economy from a state of under-development to a state of development, from an agrarian to highly industrialized society, from a low saver to a high saver and from rural to urban. This transformation is mainly reflected in a sustained and steady rise in national and per capita income. Public expenditures are the expenditures incurred by the public authorities; central government, state government and local government either for protecting citizens or for promoting their economic or social welfare. According to Wagner's law, there is a causal relationship between public expenditure and economic development. According to the law, in the time of economic development the rate of increase of public expenditure is greater than the rate of increase of per capita community output. The growth of the economy leads to the increase of demand for various needs of people and government has to raise the expenditure to fulfill it.

Wagner distinguishes three types of activities that cause an increase in government expenditure.

1. Maintenance and enforcement of law and order, internally and externally
2. Participation in material production
3. Provision of social services

There is a positive relation between economic growth and public expenditure for social services. The governments of a state/country provide many types of social services. Education facilities are one of them. There exists a mixed education system in India in which both private and public sector co-exists. Two types of expenditures; private expenditure and public expenditure can divide total expenditure on education in India. However, we consider only public expenditure on education because per pupil private expenditure on education has more variability than per pupil public expenditure on education. Total public expenditure on education is the sum of expenditures incurred by the state governments and the central government as education falls under the concurrent list in India.

By economic inequality in a society, we mean the gap between rich and poor in the distribution of stock economic variables like asset or wealth or of flow economic variables like income or expenditure. The term typically refers to inequality among individuals or groups within a society, but can also refer to inequality among countries. In macroeconomic context, income distribution is defined by how a nation's total GDP/GNP/GNI is distributed amongst its population. The issue of economic inequality is also related to the issue of equity – equality of outcome given equality of need and opportunity.

There is a strong relation between education expenditure and income inequality in the existing literature. Sylwester (2002a) argues that expenditure on education is one of the important factors for reducing income inequality. Public education expenditure has a vital role to decrease inequality in India (Kayet and Mondal, 2015). In addition, many researchers argue a negative relation between economic growth and income inequality. Sylwester (2000) develops the link among economic growth, education expenditure and income inequality.

However, this paper develops a link among education expenditure, economic growth and income inequality in Indian context. Using cross section data of major states of India from the period 1983 to 2011-2012, this paper explores that growth rate of output raises public expenditures on education and it decreases income inequality with a certain level of public expenditure for education in India.

This paper is constructed as follows. Section 2 presents a brief review of literatures related to this field, some methodological issues are briefly discussed in section 3, section 4 presents the theoretical model which formalizes some of the assumptions underlying the empirical specification, the results of some popular and convenient testing procedures of panel data estimation which gives the information regarding the selection of best fitted model are discussed in section 5, in section 6 the empirical results are discussed. A conclusion and some policy measures follow.

2. BRIEF REVIEW OF LITERATURE

Some authors try to estimate the correlation of two facts viz., relation between education expenditure and economic growth. The correlation is however estimated by Jorgenson and Fraumeni, (1992) for USA, Jung and Thorbecke, (2001) for Tanzania and Zambia, Oguijuba and Adeniyi, (2005) for Nigeria, Aziz, Khan and Aziz,

(2008) for Pakistan and Chandra, (2010) for India. The results of the studies show that there is a direct relation between education expenditure and economic growth; especially education expenditures directly affect economic growth. Fiszbain and Psacharopoulos, (1993) show an interesting fact Venezuela in their paper which indicates that primary education expenditures have maximum effects on economic growth whereas higher education expenditures have minimum effects. This happens because the opportunity cost of higher education is too high that reduces the benefits from higher education. However, the outcomes of the overall studies are quite mixed which indicates that, some studies give the direct relationship between these two whereas others give the inverse relationship. Education expenditure negatively affects economic growth, Nurudeen and Usman (2010). According to A M Nalla Gounden (1967) the rate of return of education expenditures are lower than that of physical capital so it is not an effective forms of investment for economic growth. But the year 1967 is not a perfect time to examine it. *Which factors do affect economic growth in India?* Bosworth, Collins and Virmani (2007) estimate and suggest that education has very negligible effects on economic growth. By ECM Pradhan (2009) tests the causal relationship between government education expenditure and economic growth in India for the period 1951 to 2001. He suggests that, there is unidirectional causality between these two in India; from economic growth to education expenditure. A similar work by Chandra, (2010) by using linear and non-linear Granger causality methods for India from 1951 to 2009 and concludes that there is bi-directional causality between education expenditure and gross domestic product in India. However, Fernandez and Rogerson (1997) test the effects of growth in income and enrolled pupils on government elementary and secondary education expenditure and they suggest that the ratio of the per student education expenditure to per student personal income is constant.

Economic inequality continues to be a very serious problem for community. Benabou (1996) and Barro (1999) give various studies and theoretically argue that economic inequality may be one of the important factors of economic growth. Two papers by Alesina & Rodrik (1994) and Persson & Tabellini (1994) say that, income inequality can able to reduce growth though some authors cannot agree with them. Education is one of the important factors for explaining economic inequalities. There are some theoretical models, which determine the relation between education and income inequality and predict that public education can able to reduce income inequality. A model developed by Glomm and Ravi Kumar (1992) whether students can choose the public education or private education and concludes, income inequality obviously falls under public education system. Saint Paul & Verdier (1992), Eckstein & Zilcha (1994) and Zhang (1996) construct theoretical models and conclude that, expenditures for education are very effective for reducing income inequality over time. Kayet and Mondal (2015), Sylwester (2002a) argues that expenditure on education is one of the important factors for reducing income inequality. Moreover, Kayet A and Mondal D (2016) state that government expenditure for education can able to reduce food inequality in India. In addition, by constructing a theoretical model Sylwester (2002b) says that public education can able to reduce income inequality as students have sufficient income and go to school. Tax is a compulsory levy and people are bound to pay it whether they are rich or poor. Since the opportunity cost of attaining school is higher for poor people than rich people then they are too poor to attend school. The poor people have to pay tax but they may not enjoy the opportunities of public education. To prove this Jimenez (1986) intrudes an important paper and states that sometimes government expenditures on education do not give the benefit to the poor and, so do not reduces inequality. Fields (1980) states that, though in many countries, governments expend a large amount for education but they fail to reduce income inequality. By reviewing many studies Ram (1989) is not agreed the view of previous studies that there is very strong relation between education and income inequality.

3. METHODOLOGICAL ISSUES

The central theme of this paper is how does growth rate of output affect the expenditure for public education and inequality in India?

The study uses panel data consisting of all major states (15 states) of India from the year 1983 to 2012 for examining these issues. The advantages of using panel regression are that, panel data are much heterogeneous in nature as it captures both cross section and time series data. The combination of both cross section and time series data gives more information, more variability of data, less co-linearity among variables, more degrees of freedom and more efficiency. There may or may not be the actual effects of exogenous/explanatory variables on endogenous/dependent variable by using only cross section data or only time series data. The model with panel data can be estimated by three very popular and convenient techniques viz., the fixed effect model (FEM), the random effect model (REM) and the pooled regression technique (OLS). However, first we estimate all models by three techniques of panel data analysis, later only the best fitted model is selected according to Breusch-Pagan LM test and Hausman specification test. Random effect model is better fitted than ordinary least square technique if the χ^2 -value of Breusch-Pagan LM test for random effect is statistically significant or the probability value of χ^2 is less than a specified level of significance. Hausman specification test also indicates that, if there is no systematic difference in coefficients i.e., a statistically significant χ^2 -value or the probability value is less than a specified level of significance then fixed effect model is better fitted than random effect model. On the other hand, if there is a systematic difference in coefficients i.e., there is not a statistically significant χ^2 -value or the probability value is greater than a specified level of significance then random effect model is better fitted than fixed effect.

There are two views of income inequalities, viz., the rightist view of inequality and the leftist view of inequality. The rightist view of inequality may be called the relative measure of inequality and the leftist view of inequality may be called the absolute measure of inequality for positive growth in income. There are very strong debates for using these two views of inequality. The debate between these two types of inequalities is strongly explained by Kolm (1976). He is also agreed with the view that inequalities can be measured by both relative as well as absolute measure of inequality. Kolm calls the relative measure of inequality as the 'rightist' measure because the richer sections of the community accept this measure for positive growth in income and the absolute measure of inequality as the 'leftist' measure because the poorer section of the community accept this measure for positive growth in income. But it is always not true because for the opposite case i.e., for negative growth in income or when income falls the richer section accept an absolute measure whether the poorer section accept a relative measure. Nevertheless, these are two well-accepted views and thus we consider both the views for explaining rural inequality in India.

In this paper, we consider two families – the Lorenz-Gini family as well as another family viz., the SD-CV family and use the plural measures of inequality. Lorenz curve is nothing but the graphical representation of Gini ratio and so these two belong in the same family; the Lorenz-Gini family. Gini coefficient is used for measuring relative inequality in the Lorenz-Gini family and absolute Gini is used for measuring absolute inequality in the same family. Similarly, standard deviation (SD) and Coefficient of variation (CV) are used as a measure of absolute inequality and relative inequality respectively in the SD-CV family. An index measure of inequality in both families is also considered. The Gini index is nothing but the Gini coefficient for large population and so it is unnecessary to calculate Gini index separately for India, where population size is very large.

4. THE MODEL

Let us consider two equations for determining the public education expenditure, denoted by EE , and the income inequality, denoted by Inq :

$$EE = f[mfce(+), wpr(+), snae(+), hdi(?), X] + \alpha GrOtp \dots (1)$$

$$Inq = \phi[mfce(+), wpr(+), snae(?), EE(-), Z] + \beta GrOtp \dots (2)$$

Both $f[*]$ and $\phi[*]$ are assumed to be linear function. In equation (1) and (2) $mpce$ denotes monthly per capita consumption expenditure, wpr denotes work participation rate, $snae$ denotes share of non-agricultural employment, hdi denotes human development index. X and Z of respective equations denote other factors that are associated with education expenditure and income inequality besides those listed and $GrOtp$ denotes the growth rate of output. The signs '+', '-', '?', '?' in parentheses indicate the positive, negative and ambiguous effect of the respective variables.

In equation (1), it is assumed that states with higher income can allocate more resources towards education. A higher level of monthly per capita consumption expenditure and work participation rate implying the high level of income of the consumer leading to increases in national income and, hence, faster growth. Thus monthly per capita consumption expenditure and work participation rate are expected to be positively associated with public expenditure on education. Increase in share of non-agricultural employment means transfer of labourers from agricultural sector to non-agricultural sector leading to increases in income of the people. Thus, it is expected to be positively associated with public expenditure on education. The effect of human development index upon public education expenditure is ambiguous. States with low human capital may invest more on education in order to more quickly increase human capital but states with high human capital are willing to continue to fund a high level of expenditure due to more increase human capital. It is also assumed that states with higher growth rate of output can afford to allocate more resources towards education.

However, the share of non-agricultural employment is expected to be positively related to the education expenditure but it has an ambiguous effect on income inequality. It is already mentioned above that the share of non-agricultural employment increases in income of the people especially poor people leads to decreases in income inequality. On the other hand, an increase in share of non-agricultural employment may imply the development of the capitalist sector leading to a larger increase in non-wage income than wage income and so increase in inequality. It is assumed that public education expenditure is expected to be negatively associated with income inequality. Education, especially in an area where there is a high demand for workers, creates high wages for those having education. As a result, those who are unable to afford education, or choose not to pursue optional education, generally receive much lower wages leading to higher inequality. If there is no significant variation in access to education, then increase in education expenditure leads to decrease in inequality. It is also assumed that states with higher growth rate of output can reduce income inequality.

The character (sign) of α & β in these two equations are very important as there are many possibilities.

- (i) Let, $\alpha \neq 0$ and $\beta = 0$, then growth rate of output helps to determine education expenditures, but it does not otherwise affect income inequality and so the growth rate of output can be used as an instrumental variable for education expenditure in an inequality regression (along with other variables).
- (ii) If $\alpha \neq 0$ and $\beta \neq 0$, then growth rate of output would not only directly influence public education expenditures, but would also have a direct effect upon income inequality given some level of education expenditure.
- (iii) If $\alpha = 0$ and $\beta \neq 0$, then growth rate of output affects income inequality but not through public education expenditures.
- (iv) If $\alpha = 0$ and $\beta = 0$, then growth rate of output neither affects public education expenditure nor affects income inequality.

4.1 EMPIRICAL SPECIFICATION

Let us consider two basic linear models. Let PCEE denotes per capita public education expenditure and Clnq denotes the combined income inequality¹ in 15 major states of India for the period 1983 to 2012. The matrix **C** contains exogenous control variables including a constant term, Combined monthly per capita consumption expenditure (CMPCE), combined work participation rate (CWPR) and combined share of non-agricultural employment (CSNAE). Matrix **D** contains human development index (HDI) which is also an exogenous control variable that determines the level of education expenditure but it does not determine the income inequality. Also let the growth rate of output (GrNSDP) is assumed to be exogenous variable.

Specification 1: $PCEE_{it} = \alpha_0 C_{it} + \alpha_1 GrNSDP_{it} + \alpha_2 D_{it} + U_{it}$

Specification 2: $Clnq_{it} = \beta_0 C_{it} + \beta_1 PCEE_{it} + \beta_2 GrNSDP_{it} + V_{it}$

$i = 1, 2, 3, \dots, 15$ (15 major states of India)

$t = 1, 2, 3, \dots, 7$ (1983-2012)

Monthly per capita consumption expenditure, work participation rate and share of non-agricultural employment are included in both equations and these variables are used as control variables for both public expenditures on education and income inequality in India.

5. THE FITTEST MODEL FOR EMPIRICAL TEST

Though the panel data set is estimated by three popular techniques/models, but the question is, what model do we select for the data set –Random Effect Model (REM), Fixed Effect Model (FEM), or Ordinary Least Square (OLS) technique? The answer of this question can simply be given by very popular and convenient two tests viz., Breusch-Pagan LM test for random effect and Hausman specification test.

TABLE 1: SELECTED MODEL OF EMPIRICAL SPECIFICATION 1 AND SPECIFICATION 2

I	II	III	IV	V	VI	VII
Dependent Variables	P-value of Chi ² (Whether REM is significant or not)	P-value of Chi bar ² (Whether REM is more significant than OLS or not) (Breusch-Pagan LM test)	P-value of F (Whether FEM is significant or not)	P-value of F (Whether FEM is more significant than OLS or not)	P-value of Chi ² (Whether FEM is more significant than REM or not) (Hausman specification test)	Best fitted model
Per capita public expenditure on education	0	0	0	0	0.1686	REM
Relative inequality in Lorenz-Gini family	0	0	0	0	0.2602	REM
Relative inequality in SD-CV family	0	0	0	0	0.0017	FEM
Index of inequality in SD-CV family	0	0	0	0	0.8808	REM
Absolute inequality in Lorenz-Gini family	0	0	0	0	0.1123	REM
Absolute inequality in SD-CV family	0	0	0	0	0.0000	FEM

The estimated results for testing the appropriate technique applied for the two specifications are given in table (1). From table (1) it is seen that REM is itself a significant model (P-value of $\chi^2 = 0$) and the χ^2 -value of Breusch-Pagan LM test for random effect is significant at the 0% level for testing the first empirical specification indicating that REM is better fitted than OLS. FEM is itself a significant model (P-value of $\chi^2 = 0$). Finally, from the Hausman specification test it is seen that there is a systematic difference in coefficients i.e., there is not a statistically significant χ^2 -value (P-value of $\chi^2 = 0.1686$) implying that the random effect model is better fitted than fixed effect model.

In the same way it can conclude that, random effect model is the best model for explaining relative inequality and absolute inequality in Lorenz-Gini family and index of inequality in SD-CV family (P-values of χ^2 of Hausman specification test are 0.2602, 0.1123 and 0.8808 respectively). For explaining relative and absolute inequality in SD-CV family, the fixed effect model is the best model (P-values of χ^2 of Hausman specification test are 0.0017 and 0.00 respectively).

6. EMPIRICAL FINDINGS

From the estimated results given in table (2) it is seen that, the overall explanatory power (R^2) of the specification 1 is 74.79%, the within state or inter-temporal explanatory power (R^2) is 81.91% and the between state or inter-state explanatory power (R^2) is 58.81% suggesting that specification 1 is significantly explained by these explanatory variables.

¹ In India NSSO published the raw data of consumption expenditure for rural and urban areas separately and based on these data NSSO itself calculate inequality for rural and urban areas separately. However, the overall inequality (or better named as combined inequality) for India and its major states can be calculated by combining the raw data of consumption expenditure for rural and urban areas with their corresponding population.

TABLE 2: PANEL REGRESSION: SPECIFICATION 1

PCEE	Coefficient	Standard error	P> z
CMPCE	1.276059	0.1844643	0
CWPR	-9.932539	7.620083	0.192
CSNAE	16.38776	5.163911	0.002
HDI	-6.868673	2.404874	0.004
GrNSDP	1194.086	734.8682	0.074
Cons	-432.8549	356.9968	0.225
R-Square	Within = 0.8191		
	Between = 0.5881		
	Overall = 0.7479		

From table 2, it is also seen that, the coefficient of combined monthly per capita consumption expenditure (CMPCE) is positive (1.276059) and significant at the 0% level in explaining per capita public expenditure on education in India suggesting that states with more monthly per capita consumption expenditure is associated with rising per capita public expenditure on education. One rupee increase in combined monthly per capita consumption expenditure per capita public expenditure on education will rise by Rs. 1.28. The coefficient of combined share of non-agricultural employment (CSNAE) is positive (16.38776) and significant at the 0.2% level in explaining per capita public expenditure on education in India suggesting that states with more share of non-agricultural employment is associated with rising per capita public expenditure on education. One rupee increase in combined share of non-agricultural employment per capita public expenditure on education will rise by Rs. 16.39. The coefficient of human development index (HDI) is negative (-6.868673) and significant at the 0.4% level in explaining per capita public expenditure on education in India suggesting that states with less human development index is associated with rising per capita public expenditure on education. One percent decrease in human development index per capita public expenditure on education might increase by Rs. 6.87 in order to more quickly increase human capital. The coefficient of growth rate of net state domestic product (GrNSDP) is positive (1194.086) and significant at the 7.4% level in explaining per capita public expenditure on education in India suggesting that states with more growth rate of net state domestic product is associated with rising per capita public expenditure on education. One percent increase in growth rate of net state domestic product per capita public expenditure on education will rise by Rs. 1194.09. However, the coefficient of combined work participation rate becomes insignificant implying that it has no role in determining the per capita public expenditure on education in India.

TABLE 3: PANEL REGRESSION: SPECIFICATION 2

De-pen- dent Varia- ble	$\beta_2 = 0$					$\beta_2 \neq 0$				
	Relative ine- quality in Lorenz-Gini Family	Relative inequality in SD-CV Family	Index of inequality in SD-CV Family	Absolute ine- quality in Lorenz-Gini Family	Absolute inequality in SD-CV Family	Relative ine- quality in Lorenz-Gini Family	Relative inequality in SD-CV Family	Index of inequality in SD-CV Family	Absolute ine- quality in Lorenz-Gini Family	Absolute inequality in SD-CV Family
CMPC E	0.00010 (0.00)	0.00043 (0.00)	8.1E-08 (0.00)	0.54 (0.00)	1.65 (0.00)	0.00010 (0.00)	0.00042 (0.00)	8.0E-08 (0.00)	0.54 (0.00)	1.65 (0.00)
CWPR	0.00425 (0.00)	0.01396 (0.004)	1.5E-06 (0.023)	4.14 (0.001)	18.08 (0.005)	0.00387 (0.00)	0.00947 (0.056)	1.1E-06 (0.047)	3.57 (0.005)	12.52 (0.062)
CSNA E	0.00101 (0.058)	0.00349 (0.139)	-3.6E-07 (0.346)	-0.13 (0.862)	-0.44 (0.889)	0.00102 (0.053)	0.00321 (0.162)	-3.6E-07 (0.336)	-0.12 (0.866)	-0.80 (0.796)
PCEE	-0.00002 (0.016)	-0.00010 (0.012)	-2.4E-08 (0.00)	-0.04 (0.001)	-0.19 (0.001)	-0.00002 (0.033)	-0.00009 (0.03)	-2.2E-08 (0.001)	-0.04 (0.003)	-0.17 (0.002)
GrNS DP	-	-	-	-	-	-0.09300 (0.169)	-0.68454 (0.014)	-1.2E-04 (0.009)	-162.15 (0.081)	-847.55 (0.024)
Cons	0.01618 (0.707)	-0.34911 (0.128)	-2.7E-06 (0.933)	-349.49 (0.00)	-1484.58 (0.00)	0.03734 (0.392)	-0.11773 (0.624)	2.1E-05 (0.521)	-317.94 (0.00)	-1198.10 (0.00)
Withi n R ²	0.5269	0.5067	0.2964	0.9456	0.8842	0.5315	0.4701	0.3397	0.9469	0.8910
Be- twee n R ²	0.5696	0.3228	0.2163	0.9084	0.8271	0.5744	0.3507	0.2659	0.9111	0.8337
Over- all R ²	0.5328	0.3625	0.2357	0.9139	0.8025	0.5423	0.3425	0.2867	0.9171	0.8173

Probability values are in parentheses

Table 3 presents the empirical results in specification 2, first $\beta_2 = 0$ and then without this assumption. The coefficient of CMPCE and CWPR are positive and significant in explaining all types of income inequality in India whether the restriction ($\beta_2 = 0$) is imposed or not. This suggests that these two variables are associated with rising income inequality in India. The coefficient of CSNAE is positive and significant in explaining relative income inequality in Lorenz-Gini family in India whether the restriction ($\beta_2 = 0$) is imposed or not. This implies that this variable is associated with rising income inequality in India. However, the coefficient of CSNAE becomes insignificant for explaining other types of income inequality suggesting that it has no role in explaining the other types of income inequality in India. The coefficient of per capita public expenditure on education (PCEE) is negative (-0.00002) and significant at the 1.6% level with the restriction and is also negative (-0.00002) and significant at the 3.3% level without the restriction in explaining the relative inequality in Lorenz-Gini family suggesting that it is associated with falling relative income inequality in this family in India. The coefficient of growth rate of net state domestic product (GrNSDP) becomes insignificant indicating that it has no role for explaining the relative inequality in Lorenz-Gini family in India. This suggests that the growth rate of output helps to determine education expenditures, but it does not otherwise affect relative income inequality in Lorenz-Gini family and so the growth rate of output can be used as an instrumental variable for education expenditure in an inequality regression (along with other variables).

The coefficient of per capita public expenditure on education (PCEE) is negative (-0.00010) and significant at the 1.2% level with the restriction and is also negative (-0.00009) and significant at the 3% level without the restriction in explaining the relative inequality in SD-CV family suggesting that it is associated with falling income inequality in this family in India. The coefficient of GrNSDP is negative (-0.68454) and significant at the 1.4% suggesting that it is associated with falling relative income inequality in SD-CV family in India. This suggests that the growth rate of output would directly not only influences public education expenditures, but would also have a direct effect upon relative income inequality in SD-CV family given some level of education expenditure.

The coefficient of per capita public expenditure on education (PCEE) is negative (-2.4E-08) and significant at the 0% level with the restriction and is also negative (-2.2E-08) and significant at the 0.1% level without the restriction in explaining the index of inequality in SD-CV family suggesting that it is associated with falling income inequality in this family in India. The coefficient of GrNSDP is negative (-1.2E-04) and significant at the 0.9% suggesting that it is associated with falling

index of income inequality in SD-CV family in India. This suggests that the growth rate of output would directly not only influences public education expenditures, but would also have a direct effect upon index of income inequality in SD-CV family given some level of education expenditure.

The coefficient of per capita public expenditure on education (PCEE) is negative (-0.04) and significant at the 0.1% level with the restriction and is also negative (-0.04) and significant at the 0.3% level without the restriction in explaining the absolute inequality in Lorenz-Gini family suggesting that it is associated with falling absolute income inequality in this family in India. The coefficient of GrNSDP is negative (-162.15) and significant at the 8.1% suggesting that it is associated with falling absolute income inequality in Lorenz-Gini family in India. This suggests that the growth rate of output would directly not only influences public education expenditures, but would also have a direct effect upon absolute income inequality in Lorenz-Gini family given some level of education expenditure.

The coefficient of per capita public expenditure on education (PCEE) is negative (-0.19) and significant at the 0.1% level with the restriction and is also negative (-0.17) and significant at the 0.2% level without the restriction in explaining the absolute inequality in SD-CV family suggesting that it is associated with falling absolute income inequality in this family in India. The coefficient of GrNSDP is negative (-847.55) and significant at the 2.4% suggesting that it is associated with falling absolute income inequality in SD-CV family in India. This suggests that the growth rate of output would directly not only influences public education expenditures, but would also have a direct effect upon absolute income inequality in SD-CV family given some level of education expenditure.

7. CONCLUDING REMARKS

This paper tries to discuss the link among economic growth, education expenditure and inequality in Indian context. Can the growth rate of output play the significant role for explaining the public expenditures on education in India? The results give that there is a positive correlation between these two suggesting that the growth rate of output should speed up public expenditures on education in India. On the other hand, growth rate of output has not only direct effect on public education expenditures, but also has an inverse effect upon inequality in majority of the cases. However, the growth rate of output helps to determine education expenditures, but it does not otherwise affect relative income inequality in Lorenz-Gini family and so the growth rate of output can be used as an instrumental variable for education expenditure in an inequality regression

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APPENDIX

TABLE 1: SUMMERY STATISTICS OF VARIABLES

Variable	Mean	Median	Standard Deviation	Minimum	Maximum	No of observations
PCEE	1060.37	919.82	580.32	282.08	2787.91	105
CINQ (Gini coefficient)	0.316933	0.315000	0.046435	0.205181	0.469172	105
CINQ (CV)	0.721362	0.709508	0.145010	0.430688	1.193170	105
CINQ (CV-index)	0.000104	0.000098	0.000031	0.000049	0.000207	105
CINQ (Absolute Gini)	345.37	305.94	157.25	138.88	1029.94	105
CINQ (SD)	790.18	686.71	404.23	291.52	2749.87	105
GrNSDP	0.0657	0.0620	0.0381	-0.0406	0.2463	105
CMPCE	1061.20	982.37	345.55	578.36	2333.44	105
CWPR	41.12	41.36	5.13	27.25	52.25	105
CSNAE	43.50	42.52	12.07	22.11	79.61	105
HDI	35.50	32.60	21.91	2.40	100.00	105

LEADER MEMBER EXCHANGE QUALITY INFLUENCING COMMITMENT AND TRUST AMONG EMPLOYEES**OWAIS AHMED****Ph. D. RESEARCH SCHOLAR****I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY****JALANDHAR****DR. MUSHTAQ AHMED SIDDIQI****PROFESSOR****THE BUSINESS SCHOOL****UNIVERSITY OF KASHMIR****HAZRATBAL****ABSTRACT**

Leader-Member Exchange refers to relationships between immediate supervisor and subordinate. Supervisors form high quality and low quality relationships with their subordinates. High quality relationships are characterized by mutual sharing of resources, responsibility, access to confidential information, participation in decision making etc while as low quality are characterized by contractual commitments and obligations. LMX influences employee trust and commitment, besides other favourable job attitudes and outcomes. The study examined relationship between LMX, organizational commitment and employee trust.

KEYWORDS

leader member exchange, organizational commitment and employee trust.

INTRODUCTION

Leader Member Exchange Theory explains that there exists a relationship between supervisor and his immediate subordinate based on the principle of reciprocity that each party exchange favours for one another (Martin, et al., 2005). Relationships that may be established between leader and his members may vary from high quality to low quality relationships. High quality relationships are characterised by more trust, autonomy, responsibility, resources, assistance, feedback, etc. given by supervisors to their close or chosen few subordinates and in turn subordinates reciprocate by fulfilling their assigned tasks, delivering on their promises, performing extra role tasks in addition to their formal inrole tasks, imbibing sportsmanship characteristics like helping their colleagues, performing tasks of other colleagues when they are not present, showing courtesy to their colleagues as well as to their customers not mentioned in their formal job contracts etc. Low quality relationships, on the other hand include the features like low trust, less responsibility, no autonomy, less or no feedback, no assistance, etc. exhibited by supervisors towards their subordinates, who in turn reciprocate by performing tasks mentioned in their formal contracts restricting activities to inrole only thereby not performing any extra role task, less innovative, less motivated, less engaged, etc. Members who are involved in high quality relationships form 'in-group' while as members in low quality relationships form 'out-group'. In-group and out-group members, are usually selected by their supervisors on the basis of merit, competence, skills, personality, education, gender, race, ethnicity etc. Members whom their supervisors found performing challenging tasks, able to take responsibility, performing innovative tasks or suggesting innovative solutions, establishing better interpersonal relationships, managing their time well, showing competence while performing their day to day tasks at work, etc. usually are considered to be in-group members while as members who lack all these attributes may form out-group members. Lack of Time and scarcity of resources may also form the essential ingredients for low quality relationships, narrowing the scope for supervisors to expand the reach of high quality relationships beyond the existing in-group circles.

REVIEW OF LITERATURE

Leader Member Exchange theory (Dansereau, Graen and Haga, 1975; Graen and Cashman, 1975), is based on the principle of reciprocity i.e leaders and members share mutual understanding and responsibility of each other's needs and authority (Graen and Cashman), i.e both parties exchange favours for each other either simultaneously or expectation of receiving in future. LMX suggests that leaders form different relationships with their subordinates in the form of high and low quality relationships. High quality relationships are characterized by more leader attention, loyalty (Dansereau, Graen and Haga, 1975), trust, autonomy, resources, respect, etc (Graen and Scandura, 1987; Liden, Wayne and Stillwell, 1993) given by leader to his immediate subordinate. Cooperation, compliance etc, is exchanged by subordinate (Graen and Scandura; Sparrowe and Liden, 1997) in return and thus form in-groups. Low quality relationships are controlled by formal contracts and economic exchanges (Graen and Scandura; Sparrowe and Liden, 1997) like routine tasks, role defined, etc (Liden, 1993) and thus form out-groups. In-groups are preferred by leaders by finding personality identification match in terms of characteristics like aggression, extroversion, agreeableness, emotional stability etc. Out-groups are being perceived as lacking competence, abilities, skills, responsibility, decision making etc. Also, constraints like time, scarce resources, personality clash etc, limits the scope for forming high quality relationships.

Organizational commitment refers to an employee's emotional attachment with an organization. Organizational commitment comprises of affective, continuance and normative components. Affective commitment is based on emotions that binds an employee to an organization, continuance commitment refers to the binding based on costs and benefits approach for leaving an organization, while as normative commitment refers to the binding based on feeling of obligation perceived by an employee towards an organization (Boehman, 2006; Canipe, 2006; Meyer and Allen, 1991; Allen and Meyer, 1996; Karrasch, 2003).

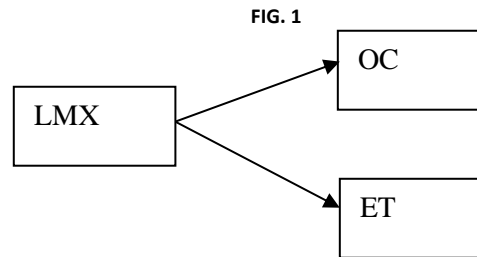
Employee Trust refers to the expectation of an individual that the words or promises of another individual can be relied upon. Trust is a multidimensional construct and include dimensions like integrity, competence, benevolence, affective, cognitive (McEvily and Tortoriello, 2010), loyalty, fairness, reliability, openness. Integrity involves honesty, ethics, and faithfulness. Affective represents emotions for others like taking care. Cognitive include rational dimensions like ability, competence. LMX and OC relationship has been well documented in the literature. Research study by L. K. Loong in Malaysian Institute of Accounts, examined the impact of LMX and mentoring on organizational commitment of employees. The results revealed significant relationship between LMX and affective as well as normative organizational commitment, while as partial positive relationship exists between LMX and continuance organizational commitment. Another study by Simon Tagger (2008) in Institute of Public Administration in Canada, examined the impact of job characteristics like autonomy, task identity, task significance, skill variety, feedback etc on LMX and OC. The results revealed positive relationships between job characteristics and LMX. LMX in return found positively influencing organizational commitment of employees. Therefore, taking cognizance of the above literature review, we, hypothesize that LMX positively influence organizational commitment of employees.

H1: LMX positively influences employee organizational commitment.

Research study by Scandura and Pelligrini, 2008 examined the relationship between LMX and trust (calculus and identification based trust). The results revealed significant relationship between them. Also, high quality LMX relationships tend to have economic element as well besides social, due to high demands and responsibilities on subordinates. Another study by Yuntao and Heping, 2013 examined the impact of leadership behavior on trust and service performance of

employees. The results revealed positive relationship between leader honesty, LMX and service performance of employees. Therefore, after taking into consideration the above discussion, we, hypothesize that LMX positively influence trust between employees.

H2: LMX positively influences employee trust.



*LMX- Leader Member Exchange, OC- Organizational Commitment and ET- Employee trust

METHODOLOGY

Sample size

A sample size of 100 respondents includes employees from different hierarchies like middle management, frontline and lower level staff, customers.

Data Collection Method

Survey method was used as data collection method where in techniques like structured questionnaires and interviews were used for data collection purposes.

Research Instruments

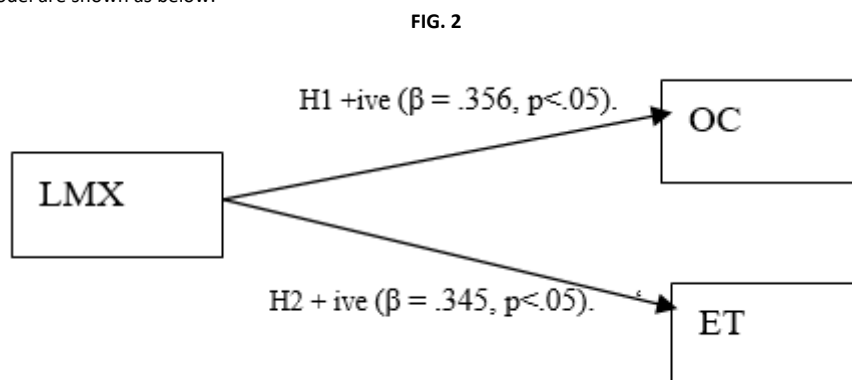
LMX was measured using 7-item scale to ascertain the quality of LMX between subordinates and supervisors. Responses were recorded on Likert 5 point scale, ranging from 1- rarely to 5- very often. Cronbach's alpha as reliability estimate was at 0.68 for current study. Also, the standardized estimate of its constituent items ranged from 0.42 to 0.81.

Organizational Commitment was measured by using Porter et al., (1974) Organizational Commitment Questionnaire. The scale consists of 9- items. Likert 5-point scale is used to record responses ranging from (1) - strongly disagree to (5) - strongly agree. Reliability and validity has been proved by Porter et al., (1974), Steers (1977) and Stone and Porter (1975). The Coefficient of alpha ranges from .81 to .87 in these studies. Coefficient of alpha for the present study is .66

Employee Trust between supervisor and subordinate was measured by using Tzafrir and Dolan, 2004 multi-item scale. Three dimensions of trust that are benevolence, competence and integrity were measured by 9-items, 3 from each. Likert 5 point scale was used to measure responses ranging from 1- strongly disagree to 5- strongly agree. Cronbach alpha for Tzafrir and Dolan study was at .92. However, for current study it is estimated at .65.

DATA ANALYSIS AND RESULTS

Data were analysed through various techniques in order to test the hypothesized model. The path model depicting the impact of LMX on employee trust and organizational commitment is examined through structural equation modelling. SEM enable to test the extent to which variables in the hypothesized model is consistent with the data. The maximum likelihood estimation technique is used to estimate the model as the given technique generates reliable results. Measurement model was first confirmed using factor analysis, and then SEM was performed based on the measurement model to estimate the fit of the hypothesized model to the data. The structural modeling suggest that the hypothesized model fit the data well with χ^2 statistically significant ($\chi^2 = 913.1$, $df = 391$, $p < 0.05$, $RMR = 0.043$, $GFI = 0.831$, $AGFI = 0.787$, $CFI = 0.913$). The goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) were 0.812 and 0.795, respectively. The CFI showed a high value of 0.923. Each and every hypothetical relationship of present study is well supported by structural modelling results. The path coefficients for the hypothesized model are shown as below:



*LMX- Leader Member Exchange, OC- Organizational Commitment and ET- Employee trust

LIMITATIONS AND FUTURE RESEARCH

The current study may be vulnerable to various discrepancies that may include issues like, data collection techniques, geographic reach, etc. Although, data is collected from different companies like banking, insurance and postal sectors. But, lack of representation from other fields like health, tourism, hospitality, education, may limit the scope of application to these sectors of service economy. Data collection techniques apart from structured questionnaires and interviews, like observations, could add subjective dimension, besides having objective results. Future researchers can contribute to the LMX construct by exploring LMX across different sectors of service economy like, hospitality, health, non-banking, travel, utility services, fire services, etc. Also, service organizations operating in different countries should be made part of the research study. The different geographical, cultural, political and demographic factors may influence the results in a different way.

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EFFECTIVENESS OF TECHNOLOGY ENABLED LEARNING (TEL) IN LEARNING SCIENCE AT D.T.Ed. LEVEL

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ABSTRACT

The main objective of the study is to find out the effectiveness of technology enabled learning (TEL) in learning science at D.T.Ed level. The sample consists of 60 students of second year Teacher Training Programme (D.T.Ed.) in and around Chennai. The tool namely "Attitude of students towards technology in education" has been developed by the investigator used for collecting data. The major finding is that there is a significant difference between the students of control and experimental group - exposed to Technology based learning.

KEYWORDS

D.T.Ed. Level, technology enabled learning (TEL).

INTRODUCTION

Education and technology are two key elements having an important role in human's life. The aim of education is to help the people know and find themselves (Basaran, 1994) technology helps individuals to take advantages of its knowledge and skills more effectively and efficiently. Technology is the discipline which consists of gathering machine, process, method, system, management, control system and bridges between science and applications. (Alkan, 1998). Education systems are changing at a great speed and the technology is changing rapidly. Older technology is replaced by new technological phenomena and the new ones are being adopted and these are affecting the education systems. Technology can refer to material objects of use to humanity, such as machines or hardware, but it can also encompass broader themes, including systems, methods of organizations, and techniques. Some modern tools include but are not limited to overhead projectors, laptop, computers.

Technology based learning are being widely adopted and have become an integral part of teaching and learning in teacher education system to realign quality education. Technology is growing rapidly and gaining more supports within the educational community. The richness, flexibility, offers valuable support to the approach of teaching-learning. Technology as powerful as the way it is used. The techniques of technology are adopted in various formats to enhance the process of teaching-learning. Correct usage of resources enables the elements of success to be planted within the students teachers of today and beyond. The education should believe empowered to change the world all the way through our student's teachers that is through our teaching roles in the classroom. These days, the teaching should really be facilitating and the classroom could very well be both the physical and virtual classrooms. The student teachers prefer their instructors to move away from traditional ways to more inventive, active and technology based learning approaches.

NEED FOR THE STUDY

Today, many countries around the world use some form of technologies in education. Most of the technological devices and programmes, are structured around the need of the teacher and are employed as teaching aids in the classroom. Hence, it is needed to study the effectiveness of some selected technological input in learning science at teacher training programme.

Educational technology is the result of the impact of scientific and technological development during the present century. Thus use of such technology in the instructions will motivate the teaching student teachers community and create better learning conditions. The outcome of this study will throw more light on the use of technology based instruction at teacher training programme level in teaching science.

OBJECTIVES

The following are the major objectives of the study:

1. To find out the effectiveness of technology enabled learning (TEL) in learning science at D.T.Ed Level.
2. To find out the student – teacher's attitude towards using the TEL at D.T.Ed. Level.

RESEARCH DESIGN

Research design determines what statistic techniques should be employed. The present study involves the application of an experimental factor (Technology Enabled Learning) to a group of individuals in such a way that certain changes in the outcome can be determined.

This design was tested with the following experimental procedure,

$$\frac{R_1 A \times_b C}{R_2 A \times_a C}$$

Where,

R_1 and R_2	=	The sample chosen of the experimental and control groups.
A	=	Pre-test measure of the performance in Science.
C	=	Post-test measure of the performance in Science.
X_a	=	Technology enabled learning is used to teach the basic principles of science
X_b	=	Text based self study is used to teach the basic principles of science

DELIMITATIONS OF THE STUDY

1. This study intends to find out only the effectiveness of some selected technological inputs in learning science in teacher training programmes. All technological inputs are not considered.

2. In the process of establishing the effectiveness of the technology based instruction; the technology based instruction was compared only with the traditional method of teaching.
3. The present study was confined to the Teacher Trainees of student teachers studying in 2nd year at the Teacher Training Institutions in and around Chennai. The sample was taken from Government and self-finance institution.

TOOL USED

The investigator used the tool on "Attitude of students towards Technology in Education". The tool prepared by investigator, were used to find out the level of the impact of technology based learning. It was designed on the five point scale. And also, this part deals with the construction of a test to assess pre-test and post-test achievement in science. Content validity, face validity was also established for the tool. Reliability of the technology based learning was established by using the split-half method. Statistical techniques like mean, SD, t-test were used properly.

ANALYSIS AND REPORT

HYPOTHESIS 1

There will be significant difference between control group and experimental group in the pre-test performance in Achievement in Science

TABLE 1.1: PERFORMANCE ON THE PRE-TEST BETWEEN CONTROL GROUP AND EXPERIMENTAL GROUP

Group	N	Mean	SD	"t" value	Significance
Control	30	27.35	4.38	0.72	NS
Experimental	30	26.58	3.90		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There is no significant difference between control group and experimental group in the pre-test performance in Achievement in Science

HYPOTHESIS 2

There exists no significant difference in the mean scores on the attitude towards using new technology among the students in terms of gender.

TABLE 1.2

Gender	N	Mean	SD	"t" value	Significance
Male	70	189.92	10.07	2.92	S
Female	70	184.64	11.37		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There exists significant difference in the mean scores on the attitude towards using new technology among the students in terms of gender.

HYPOTHESIS 3

There exists no significant difference in the mean scores on the attitude towards using new technology among the students in terms of locality of the institution.

TABLE 1.3

Locality	N	Mean	SD	"t" value	Significance
Urban	62	191.61	11.68	1.66	NS
Rural	78	188.15	12.87		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There exists no significant difference in the mean scores on the attitude towards using new technology among the students in terms of locality of the institution.

HYPOTHESIS 4

There will be no significant difference between pre-test and post test performance of control group on the achievement in Science.

TABLE 1.4: PRE - TEST & POST – TEST PERFORMANCE OF CONTROL GROUP

Type of Test	N	Mean	SD	"t" value	Significance
Pre – test	30	27.35	4.38	1.41	NS
Post - test	30	29.06	5.00		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There is no significant difference between pre-test and post test performance of control group on the achievement in Science.

HYPOTHESIS 5

There will be no significant difference between pre-test and post test performance of experimental group on the achievement in Science

TABLE 1.5: PRE - TEST & POST – TEST PERFORMANCE OF EXPERIMENTAL GROUP

Type of Test	N	Mean	SD	"t" value	Significance
Pre – test	30	26.58	3.90	11.59	S
Post - test	30	39.67	4.83		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There is significant difference between pre-test and post test performance of experimental group on the achievement in Science.

Hypothesis 6

There will be no significant difference between control group and experimental group in the post-test performance on the Achievement in Science

TABLE 1.6: POST - TEST PERFORMANCE BETWEEN CONTROL GROUP AND EXPERIMENTAL GROUP

Group	N	Mean	SD	"t" value	Significance
Control	30	29.06	5.00	8.32	S
Experimental	30	39.57	4.83		

df = 98 t_(0.05) = 1.96 t_(0.01) = 2.58

Report: There is significant difference between control group and experimental group in the post-test performance on the Achievement in Science

HYPOTHESIS 7

There will be no significant difference between the post - test and retention test on the achievement in science by the Experimental group.

TABLE 1.7: POST - TEST AND RETENTION TEST - EXPERIMENTAL GROUP

Test	N	Mean	SD	"t" value	Significance
Post-test	30	39.57	4.83	1.78	NS
Retention test	30	37.23	5.34		

df = 98

 $t_{(0.05)} = 1.96$ $t_{(0.01)} = 2.58$

Report: There is no significant difference between the post - test and retention test on the achievement in science by the Experimental group.

MAJOR FINDINGS

A. ATTITUDE TOWARDS USING NEW TECHNOLOGY

1. There exists significant difference in the mean scores on the attitude towards using new technology among the D.T.Ed students in terms of gender.
2. There exists no significant difference in the mean scores on the attitude towards using new technology among the students in terms of locality of the institution.

B. IMPACT OF USING NEW TECHNOLOGY IN LEARNING SCIENCE AMONG D.T.ED STUDENTS

1. There is no significant difference between control group and experimental group in the pre-test performance in Achievement in Science.
2. There is no significant difference between pre-test and post test performance of control group on the achievement in Science.
3. There is significant difference between pre-test and post test performance of experimental group on the achievement in Science.
4. There is significant difference between control group and experimental group in the post-test performance on the Achievement in Science
5. There is no significant difference between the post - test and retention test on the achievement in science by the Experimental group.

IMPLICATIONS OF THE STUDY

The result of the study has indicated that introduction on the use of new technology was beneficial in enhancing the achievement in the science subject. The use of new technology shall be very much helpful in accelerating the learning rate of slow learners, if the D.T.Ed trainees get themselves acquainted in technology, it would bring about a overall change in the class room teaching situation.

CONCLUSION

Technology based learning skills are important for teaching professions, it's crucial for teachers. Technology provides a new mythology for teaching and learning. The smart classroom puts more responsibility of students' and gives them greater inputs in the process of learning, which allows more creative and independent learning. The development of technology is placing new demands on expertise and also it is leading to the increasing use of technology in teaching and learning. Mass media, electronic media, CD, PowerPoint etc. promotes cognitive as well as the affective development on the students they, transmit knowledge very economically and interestingly. Therefore, we can use telecommunication and networking technologies in education to enhance teaching and learning across the nation and the world. Hence this technique should be incorporated among the teacher training students.

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ROLE OF FIXED ASSETS MANAGEMENT

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ABSTRACT

The study finds out that F.A.M. is an accounting process that seeks to track fixed assets for the purposes of financial accounting, preventive maintenance, and theft deterrence. F.A.M. is useful for many organizations face a significant challenge to track the location, quantity, condition, maintenance and depreciation status of their fixed assets. F.A.M. is useful for Some Enterprise Resource Planning systems are available with fixed assets modules. Some tracking methods automate the process, such as by using fixed scanners to read bar codes on railway freight cars or by attaching radio-frequency identification (RFID) tag to an asset.

KEYWORDS

fixed assets management, financial accounting, preventive maintenance & theft deterrence.

INTRODUCTION

Fixed assets are those assets which are required and held permanently for a pretty longtime in the business and are used for the purpose of earning profits. The successful continuance of the business depends upon the maintenance of such assets. They are not meant for resale in the ordinary course or business and the utility of these remains so long as they are in working order, so they are also known as capital assets. Land and buildings, plant and machinery, motor vans, furniture and fixture are some examples of these assets.

Financial transactions are recorded in the books keeping in view the going concern aspect of the business unit. It is assumed the business unit has a reasonable expectation of continuing business at a profit for an indefinite period of time. It will continue to operate in the future. This assumption provides much of the justification for recording fixed assets at original cost and depreciating them in a systematic manner without reference to their current realizable value. It is useless to show fixed assets in the balance sheet at their estimated realizable values if there is no immediate expectation of selling them, so they are shown at their book values and not at their current realizable values.

OBJECTIVES OF THE PAPER

1. The study is to evaluate accounting methods which give adequate returns to the company
2. The study is made to known the amount of capital expenditure made by the company during study period.
3. The study is conducted to known the amount of finance made by long term liabilities and owner funds towards fixed assets.

SCOPE OF THE PAPER

The scope of the study was restricted to the procedure of analysis of Fixed Assets Management. The information is drawn from annual reports of the company. Ratio analysis is used for evaluating fixed assets performance of company.

USAGE OF F.A.M.

The cost concept of accounting, deprecation calculated on the basis of historical costs of old assets is usually lower than that of those calculated at current values or replacement value. This results in more profits on paper which if distributed in full, will lead to reduction of capital

BENEFITS OF F.A.M.

- Save time and money
- Reduce theft and losses;
- Prevent the over-payment of depreciation taxes and insurance;
- Reduce the risk of regulatory non-compliance with legislation such as IFRS;
- Improve planning and budgeting functions;
- Establish an accurate baseline of fixed assets;
- Eliminate 'ghost' assets;
- Provide an interface with a bar code scanner and thus enable the printing of labels with bar codes;
- Add new assets on the fly and update any asset status and location;
- Track asset assignment and returns with an employee;
- Schedule asset assignment to the responsible parties; and
- Integrate capex purchases via the accounts payable facility to the assets register.

THREATS OF F.A.M.

Well-designed AIS should provide adequate controls to meet the following production cycle objectives:

1. All production activities and fixed asset acquisitions are properly authorized.
 2. Work-in-process inventories and fixed assets are safeguarded.
 3. All valid, authorized production cycle transactions are recorded.
 4. All production cycle transactions are recorded accurately.
 5. Accurate records are maintained and protected from loss.
 6. Production cycle activities are performed efficiently and effectively. Wherever feasible, use of RFID tags or bar codes can further improve data entry accuracy.
- Product Design Threat 1—Poor Product Design Poor product design drives up costs in several ways to include using too many unique components and poorly designed products. Product design can be improved with accurate data about the relationship between components and finished goods. Planning and Scheduling Threat 2—Over- or Underproduction two related threats in the planning and scheduling process are overproduction and underproduction. Overproduction can result in a supply of goods in excess of short-run demands; thereby creating potential cash flow problems. There is also a risk of carrying inventory items that become obsolete. Underproduction can result in lost sales and dissatisfied customers. More accurate production planning can prevent over- and underproduction. Improvement requires accurate and current sales forecasts from the revenue cycle systems, and data about inventory stocks from the expenditure cycle. Proper approval and authorization of production orders is another control to prevent overproduction of specific items.

Threat 3—Suboptimal Investment in Fixed Assets overinvesting in fixed assets can create excess costs and underinvestment can impair productivity. Both problems reduce profitability. Proper authorization of fixed-asset transactions is important. Holding managers accountable for their department's return on the fixed assets provides additional incentive to control such expenditures. Due to the size of fixed-asset purchases, companies should invite several competing suppliers to provide bids. A document called a request for proposal (RFP), which specifies the desired properties of the asset, is sent to each vendor. Production Operations

Threat 4—Theft of Inventories and Fixed Assets To reduce the risk of inventory loss, physical access to inventories should be restricted and all internal movements of inventory should be documented. Proper segregation of duties is important to safeguard inventory. Maintaining physical custody of the raw materials and finished goods inventories is the responsibility of the inventory stores department. Department of factory supervisors have primary responsibility for work-in-process inventories. Internal controls are also needed to safeguard fixed assets. Managers should be assigned responsibility and accountability for fixed assets under their control. Finally, inventories and fixed assets are also subject to loss due to fire or other disasters. Therefore, adequate insurance covered should be maintained to cover such losses and provide for the replacement costs of these assets.

Threat 5—Disruption of Operations The high level of automation in production cycle activities means that disasters that disrupt the functioning of information systems can also disrupt manufacturing activities. Backup power sources and uninterruptible power supply devices are required to ensure that critical equipment and machinery is not damaged during a power loss. This will ensure that the production process can continue on schedule. Not only do companies need to have a disaster plan, but companies need to check on their suppliers plan and come up with alternate sources for critical components. General Threats

Threat 6—Loss, Alteration, or Unauthorized Disclosure of Data Loss or alteration of production data hinders the monitoring of inventory and fixed assets and makes it difficult to ensure that manufacturing activities are being performed efficiently and effectively. Inventory and work-in-process records must be protected from both intentional and accidental losses and damages. Regular back-up of all data files is important. Access controls are also necessary to protect production data because of the potential losses of production trade secrets. Unauthorized access also increases the risk of damage to important data files. Passwords and user IDs can limit access to sensitive files. It is important to enforce proper access controls and segregation of duties which requires the controller or CFO to review and suggest appropriate configuration of user rights in integrated AIS packages and ERP systems. Access and processing integrity controls are also needed to ensure the confidentiality and accuracy of production cycle data transmissions among different factories.

Threat 7—Poor Performance Inefficiencies in production operations result in increased expenses. Thus, manufacturing activities must be closely monitored and prompt action taken to correct any deviations from standards.

SUMMARY & CONCLUSION

Asset management, broadly defined, refers to any system that monitors and maintains things of value to an entity or group. It may apply to both tangible assets (such as buildings) and to intangible assets such as human capital, intellectual property, goodwill and/or financial assets). Asset management is a systematic process of deploying, operating, maintaining, upgrading, and disposing of assets cost-effectively.

The term is most commonly used in the financial sector to describe people and companies that manage investments on behalf of others. These include, for example, investment managers that manage the assets of a pension fund

Alternative views of asset management in the engineering environment are: the practice of managing assets to achieve the greatest return (particularly useful for productive assets such as plant and equipment), and the process of monitoring and maintaining facilities systems, with the objective of providing the best possible service to users in all dimensions (appropriate for public infrastructure assets).

The most common usage of the term "asset manager" refers to investment management, the sector of the financial services industry that manages investment funds and segregated client accounts. Asset management is part of a financial company which employs experts who manage money and handle the investments of clients. From studying the client's assets to planning and looking after the investments, all things are looked after by the asset managers and recommendations are provided based on the financial health of each client.

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A REVIEW OF LITERATURE ON THE INTER-LINKAGES OF STOCK MARKET DEVELOPMENT WITH ECONOMIC GROWTH

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ABSTRACT

Stock markets play a pivotal role in the growth and development of an economy. With the continuous rise in stock market operations worldwide, it is impossible to imagine a world without stock markets. Over the past two decades, stock markets have seen significant growths in market capitalisation globally. The relationship between the development of stock markets and economic growth has been an issue of debate for long. There have been studies defining the relationships between financial development and economic growth, but empirical and theoretical evidence pertaining to the clearly defining the relationship between stock market and economic growth is still limited. Growth-finance controversy is confined only to the examination of relationship between financial development (represented by only banking sector development) and real economy. It ignored the role of stock market in economic growth and development process of the country. The present paper seeks to assess the relationship between stock market development and economic growth, summarising the study conducted based on theory as well as empirical work. The present study tries to include around 118 papers which have been taken from various referred journals and reports covering different economies and countries world over. 89 studies conclude that stock market development positively impacts and accelerates the process of economic development, while 29 studies claim that development of stock market has negative or no impact whatsoever on economic growth. Based on extensive literature review, variables for measuring stock market development and economic growth have also been identified. The study also highlights and classifies studies based on positive and negative impact of stock market development on economic growth.

KEYWORDS

economic growth, financial development, market capitalisation, stock market development

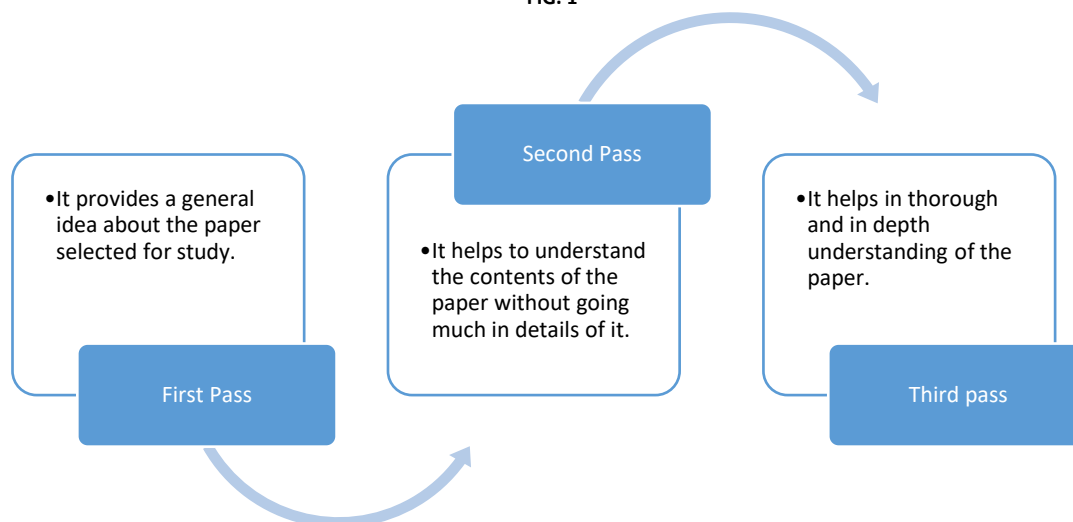
1. INTRODUCTION

 Stock market is an important ingredient of economic growth. It can be considered as a barometer to measure the economic growth of any country. In recent years decision makers and academicians have been inquisitive to assess the nature of relationship existing between economic growth and stock market, owing to dynamic and dramatic changes in stock market. Liua and Sinclair (2008). It has always been a debatable issue as to whether stock market can be used as a predictor of future economic growth or not. Some authors opine that considerable increase or decrease in stock market is indicative of future growth or recession in economic respectively. Mun.et.al. (2008). In another similar study conducted by Owusu and Odhiambo (2014) in Ghana using ARDL and Wald Statistics concluded that neither stock market developments nor capital account liberalisations have any positive effect on economic growth in long run. Matadeen and Seetanah (2015) in their study using VECM found that stock markets play an important role in accelerating gains in economic growth in the long run in Mauritius but fail to significantly boost economic growth in short run. Masoud and Hardaker (2015) conducted a study on 42 emerging economies and suggested that stock market development has a significant impact on economic growth and also supported the fact that there exists a stable and long term equilibrium relationship between evolution of stock market and evolution of economy. Naik and Padhi (2015) on the basis of their study based on panel data of 27 emerging economies using Panel regression and Granger causality method concluded that stock market development has significant contribution in boosting economic growth and further added that there exists a unidirectional causality running from stock market to economic growth. The world recession due to the 1987 stock market crash and the 1997 Asian crisis raised doubts regarding the credibility of stock market to predict economic growth. Similar studies in the past have emphasised primarily on contribution of financial development in promoting economic growth, neglecting role of stock market. As per Garcio and Liu (1989) causal relationship between financial development and economic growth exists along three lines firstly financial deepening stimulates economic growth; secondly economic growth promotes the development of the financial sector and finally a circular relationship that financial development and economic growth simultaneously affect each other. Patrick (1966) highlighted direction of causality between economic growth and financial development through supply leading and demand following hypotheses. The supply leading hypotheses results in intentional creation of financial services leading to growth in economy whereas demand following hypotheses stated demand for financial services increases because of growth in economy leading to financial development. In emerging economy like India, since the inception of stock market its role in economic growth has increased manifold. Academic interest in role and importance of stock market has increased considerably in the last decade as activities of stock market have a direct bearing on several other sectors of the economy. Stock markets have assumed increased importance in policy formulation and transmission. It therefore, becomes important to investigate the causal linkage between stock market development and economic growth. The present paper seeks to assess the kind of relationship that exists between stock market and economic growth as empirical research investigations about the causal relationship between stock market development and economic growth is limited and requires further assessment. The paper is basically divided into four sections. The first section deals with methods and materials used, followed by literature review, third section is about discussion and findings and finally last section talks about conclusion of the study.

2. METHODS AND MATERIALS USED

For conducting the present study, the three pass approach of literature review developed by Keshav has been followed. This methodology of doing literature review not only helps to save by eliminating unnecessary and inferior studies in the first two passes, but also helps in conducting a detailed analysis of potential studies in the third pass. The process of conducting the three pass approach can be diagrammatically as:

FIG. 1



Each pass has unique goals to accomplish and paves the path for the next pass. In the first pass it is decided whether we want to proceed with the paper by just having a bird's eye view of the paper. The title, abstract, introduction, headings of section and sub section and finally conclusions are read. After this, paper is analysed on the basis of category, context, correctness such as assumptions, clarity and finally the contributions made in the paper.

In the second pass attempt is made to summarise the paper by highlighting its key points in such a way that it can be explained to anyone using supporting evidence. The background of paper is analysed based on evidences and methods used. In this step the diagrams, graphs, figures and references are also carefully analysed. Finally, if it is found suitable, we proceed ahead with the third pass.

In the third pass an attempt is made to virtually recreate the paper by putting our self in the place of author. We take the same assumptions, question and challenge them and try to reconstruct the paper in our own way. At the end of this step we should be able to highlight the strong, weak and missing aspects of the selected paper in detail. So in order to conduct the three pass approach firstly five recent papers were selected. Then papers with repeated citations in bibliography and key papers and researchers in the area were identified to conduct the literature review. Finally, the websites and conferences where key researchers published their papers were also identified.

3. LITERATURE REVIEW

There have always been two crucial viewpoints that arise as a result of extensive research done to measure the impact of changes in stock market on economic activity. Firstly, are the current or changes in price of stock, a result of economic fundamentals or speculation bubbles? Secondly does development of stock market act as an important macroeconomic indicator for growth of economy? (Liua and Sinclair, 2008). Studies to assess relationship between development of stock market and economic growth through financial intermediation have shown ambiguous results. (Schumpeter, 1932 and McKinnon, 1973). On the basis of results of studies, the impact of stock market development on economic growth can be summarised as:

1. Positive impact of development of stock market on economic growth.
2. Negative impact on economic growth.
3. No impact of development of stock market on economic growth.

On basis of direction of causality between economic growth and stock market development, the results can be classified as

1. Unidirectional causality arising from stock market development to economic growth.
2. Unidirectional causality arising from economic growth towards development of stock market.
3. Bidirectional causality existing between stock market development and economic growth.

The relationship existing between growth and finance is primarily classified into four schools of thought. The first is supply leading hypotheses advocating that financial development leads to economic growth. Many theoretical and empirical studies conducted support the above fact. (Levine, 1991; Levine and Zervos, 1996; Demirguc Kunt and Levine, 1996; Levine and Zervos, 1998; Atje and Jovanovic, 1993; King and Levine, 1993b; Beck and Levine, 2004; Chakraborty and Ray, 2006). On the contrary, some researchers doubt the ability of financial markets in promoting growth of economy. The volatile and arbitrary nature of stock market, macroeconomic instability due to sudden economic shocks negatively impact economic growth. (Lucas, 1988 and Singh, 1998).

The second school of thought is demand following hypothesis. It says that demand for financial services increases as the economic growth of the country increases. In order to meet the increasing demand of financial services, new financial institutions emerge. Therefore, economic growth promotes stock market development. (Robinson, 1952; Patrick, 1966; Apergis et al. 2007 and Pradhan et al. 2013).

Third is a feedback hypothesis which combines features of both supply leading and demand following hypotheses. It believes financial development induces growth of economy which in turn accelerates the pace of financial development. (Greenwood and Smith, 1997; Demetriades and Hussein, 1996; Greenwood and Jovanovic, 1990).

Fourthly few studies even suggest of no causal relationship between development of stock market and economic growth. Further some researchers even opine of stock market negligible effect of development of stock market on economic growth. (Rioja and Valev, 2004; Naceur et al., 2008; Anwar and Sun, 2011; Mukhopadhyay et al., 2011; Seetanah et al., 2012; Rioja and Valev, 2014)

3.1. POSITIVE IMPACT OF STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH

In his study conducted in Sub Saharan African countries (Spears, 1991) concluded that financial intermediation boosts economic growth only in the initial phase. Ikkii & Nzomoi (2013) in their study on Kenya used VAR and Granger Causality test. The measures for development of stock market are market capitalisation and turnover ratio and GDP for growth of economy. They concluded stock market development is correlated positively to economic growth in Kenya.

Levine and Zervos (1996) in their study on a sample of 41 countries using time series regression considered variables like market capitalisation, turnover ratio, liquidity, GDP, secondary school enrolment, income level and political instability to empirically check the relationship existing between the two in long run. They also had similar view that stock market development positively impacts economic growth through various channels like acquisition of information about firms, corporate governance risk diversifications, liquidity and savings mobilization in long run.

Antonios (2010) conducted a study on Germany to find of a possible causal relationship between economic growth and stock market development for a period spanning from 1965 to 2007. He used Vector Error Correction Model taking Stock Market Index and GDP as variables concluded of a unidirectional causality existing between the two.

Jefferis & Okeahalam (2000) conducted a study on South Africa, Botswana and Zimbabwe based on quarterly data. Using Vector Error Correction Model and taking stock market index, consumer price index, GDP and interest rates concluded with a positive and long term relationship between GDP and stock market index.

Agrawalla and Tuteja (2007) used monthly data for period for 1990 to 2002 and considered market capitalisation, Index of industrial production, turnover ratio and bank credit to commercial sector as variables of a study conducted on India. They found of long run causality running from stock market development to

economic growth in India. As stock market becomes more sophisticated, it positively impacts economic growth. They also found bidirectional causality between banking development and economic growth. In the long run development of stock market induces development of banking sector.

Stock market has direct impact on economic growth through mobilisation of domestic and foreign savings for investments and efficient productive investments by firms. (Berthelemy and Varoudaks, 1996; Mishkin, 2001; Gerald, 2006 and Shahbaz et al., 2008).

To understand linkage between development of stock market and economic growth, many theoretical and empirical studies have been undertaken contrary to the traditional views. In their study on Indian economy using Granger non causality test (Deb and Mukherjee, 2008) in their study on India have concluded of a bi-directional causality between real GDP growth rate and market capitalization ratio and also of a positive nexus between the two.

Adjasi and Biekpe (2005) in their study on 14 African countries used Generalised model of moments modelling approach. The variables considered by them were market capitalisation, turnover ratio, and value of shares traded, investment and GDP. They concluded of a positive and significant impact of stock market development on economic growth in upper middle economies. Jahfer and Inoue (2014) in their study on Japan using quarterly data from 1957-2001 and applying Vector error correction model concluded of equilibrium and long term relationship among financial development, development of stock market and economic growth. Further stock market development positively influences economic growth. The variables considered for study were GDP per capita, market capitalisation and money supply.

The studies conducted on various developed and developing countries show of a strong positive association between economic growth and financial development. (Spears, 1991; King and Levine, 1993; Atje and Jovanovic, 1993; Comincioli, 1996; Demircug and Maksimovic, 1996). The neo classical economists had a view that due to inflow of funds from foreign countries, capital market liberalization will have a positive impact on economic growth. Due to market trade openness and access to larger markets, competition increases thus stimulating economic growth. (Bonfiglioli, 2005).

Bahadur G.C. and Neupane (2006) conducted a study on Nepal using Granger Causality test and taking market capitalisation, turnover ratio and GDP as variables concluded of a long term causality between development of stock market and economic growth, even in small economy like Nepal. Liua and Sinclair (2008) conducted a study on Greater China to study the association between stock prices and growth of the economy. Results showed that in short run causality flows one way from stock prices to economic growth whereas direction of causality is reversed in the long run, from growth to stock prices. Studies have emphasised on the fact that prices of stock reflect economic growth and other macroeconomic variables. (Ritter, 2004; Mauro, 2003; Cheung and Ng, 1998; Ferson and Harvey, 1993; Fama, 1990)

Hossain and Kamal (2010) conducted a study to test of existing causality between stock market development and economic growth in Bangladesh taking GDP per capita and market capitalisation as variables. By applying VECM they found of unidirectional causality from development of stock market to economic growth. To measure development of stock market (Beck et al., 1999) used size, activity and efficiency as three key indicators and found stock market development accelerates economic growth. Other researchers including (Bencivenga et al. 1995) believe that through efficient resource allocation the pace of economic growth can be accelerated.

Mishkin (2001) states that a well developed stock market attracts investment opportunities through implementation of productive projects which promotes economic growth, mobilises savings and also helps in diversification of risk and efficient allocation of capital. Amaral and Quintin (2007) stated that efficient stock market leads to economic growth through efficient and productive utilisation of capital.

Ahmad et al (2011) in their study on Pakistan and Bangladesh stock exchanges post liberalisation (1990) found that stock market development had positive impact on the economic growth of these countries. Further they found that market capitalisation had strong influence on Pakistan whereas liquidity and small size were responsible for influencing the economic growth positively in Bangladesh.

Demircug-Kunt and Levine (1996) researched various features of stock markets contributing towards economic growth. They found that stock markets which are internationally diversified promote economic growth through risk diversification and channelizing investments towards productive uses. Ranjan and Zingales (1998) in their panel regression analysis performed on 24 countries and 36 industries concluded that externally financed industries flourish more in countries where the level of financial development is high.

The stock market generated liquidity resulting in capital generation, allocation and investment to firms. (Paudel, 2005). The domestic savings in the developing countries promotes economic growth through stock market. This has been well explained by the detailed literature review done by (Lean and Song, 2009) especially in context of developing countries. Greenwood and Smith (1997) opined large stock markets help to increase investment in productive technologies by decreasing the cost of mobilising savings. Beck and Levine (2003) and Rousseau and Wachtel (2000) state stock market development and real GDP per capita growth are highly correlated. They further concluded that stock market and banking development both contribute towards predicting economic growth but in different ways. There are various arguments which favour the fact that growth of equity market leads to growth of the economy. Firstly, a developed equity market promotes economic development through increase in domestic savings by lowering the cost of foreign capital and increase in liquidity. (Benchivenga et al, 1996 and Neusser and Kugler, 1998). Secondly, incentives given to managers for promoting investments of the firm through equity market also help in economic growth. (Dow and Gorton, 1997). Thirdly according to (Acemoglu and Zilibotti, 1997) developed equity market provides the opportunity to firms to diversify their portfolios and increase their productive efficiency. Lastly through generation of information regarding technology (Greenwood and Jovanovic, 1990) and entrepreneurs' innovative ability (King and Levine, 1993), developed equity markets aid in rapid economic growth.

Savings and efficient allocation of capital is encouraged through well developed stock market. The stock market provides altogether a different set of services than banking to provide a boost to growth and savings. (Levine and Zervos, 1996).

The traditional models have emphasised on nexus between prices of stock and economic growth. (Comincioli and Wesleyan, 1996) give the theoretical basis to support this nexus through traditional valuation models of stock prices and 'wealth effect'. They emphasise that stock prices are reflective of people's expectations towards future economic activities. The wealth effect further suggests that variations in the real economy are due to changes in stock prices. In the lesser developed economies, the stock market helps in mobilising domestic savings which promote efficient capital allocation and economic growth. It is expected that stock market would accelerate economic growth by diversifying the risk of investors globally. They also promote wiser investment decisions by investors and force corporate managers to work in the interest of shareholders.

Benchivenga, Smith and Starr (1996) and Levine (1991) pointed out liquidity provided by stock exchanges increased the investments in new real estate in positively. Investors prefer to invest in common stocks due to their easy marketability which in turn motivates the corporate also to raise their funds through public. This ultimately leads to economic growth. Kyle (1984) and (Holmstrom and Tirole, 1998) stated that liquidity in stock markets help to increase the incentives for investors by providing information to them about firm and corporate governance.

Greenwood and Jovanovic (1990) and King and Levine (1993) stated that new stock exchange by providing information about the future growth prospects of the firm channelizes capital to investments with return, thereby increasing the productivity and economic growth.

North (1991) and Bencivenga and Smith (1992) said that by lowering the cost of exchanging ownership and holding assets physically leads to economic growth. A well developed stock market helps to mobilise domestic savings by making available a wide variety of financial instruments to investors. These savings are efficiently allocated for productive uses thereby promoting economic growth at relatively less cost. (Dailami & Aktin, 1990). Stock market also reduces the risk due to lack of liquidity faced by investors. Investors can freely sell off their holdings whenever they face a liquidity crisis. The liquidity risk is considerably reduced due to the shared ownership. This helps in efficient allocation of capital to corporate through the stock markets.

Tachiwou (2009) studied the West African monetary Union to find the relationship between the development of stock market and economic growth. He concluded a positive and strong relationship exists between stock market development and economic growth. The demand stock market services are a derived demand and there should be efforts to promote productivity both in public and private sectors. He also found a unidirectional causality running from stock market to economic growth.

Deb and Mukherjee (2008) conducted a time series analysis in India using liquidity, volatility and volume of transactions as indicators of stock market. They concluded that there existed a bidirectional causality between market capitalisation and real GDP growth but unidirectional causality between real GDP growth

and stock market activity. They further added that liquidity in stock market if backed by a sound financial system would surely accelerate the process of economic growth.

Atje and Jovanovic (1993) found correlation between economic growth and stock market. They also identified factors like risk diversification, liquidity, acquisition of information and corporate governance, which have impact on the economic growth. Enisan and Olufisayo (2008) in their study on sub Saharan Africa countries found stock market development has significant influence on South Africa and Egypt. Nowbutsing and Odit (2009) conducted a time series analysis in Mauritius considering liquidity and size as stock market indicators GDP. A positive correlation between the stock market development and economic growth was found in short as well as long run.

Athapathu and Prabhath (2012) in their study based on time series data in Srilanka considered market capitalisation, all share Price Index, value of shares traded as variables for stock market development and GDP to measure economic growth and a positive correlation was seen between the two. Carp (2012) in his study based on annual data in Romania found that increase in real investment helps to promote economic growth, thereby affecting the stock market development indicators positively. He used turnover ratio, market capitalisation, value of shares traded for measuring stock market performance and growth of GDP for economic growth.

Kyle (1984) and Bamba (2001) in their respective studies found a positive correlation between stock market development and economic growth. Stock market boosts economic growth by providing alternative channels of investment to mobilise domestic savings. Saint-Paul (1992) found in his study that developed financial markets accelerate process of economic growth. They have a positive impact on the productivity and greater utilisation of resources thereby helping in growth of economy.

Beck and Levine (2004) conducted a study across 40 countries for examining effect of stock market and banks on economic growth. Using OLS panel regression analysis, considering market capitalisation, value of shares traded and liquidity as stock market indicators and GDP per capita as indicator of economic growth, found stock markets and banks help in promoting economic growth positively and also that the financial services provided by stock market are different from that of a bank.

Naik and Padhi (2015) in their study on 27 emerging economies used turnover ratio, market capitalisation and value of shares traded as stock market indicators and GDP as economic growth indicator. Using dynamic panel regression and granger causality concluded a positive and significant influence of stock market on economic growth. Ibrahim (2011) conducted a study in Thailand using VAR and considering capitalisation, aggregate price level, investment rate and GDP as variables for stock market development and economic growth respectively. He found a strong and long term relationship between the two. N'Zu'e (2006) found that stock markets help in creation of jobs directly and indirectly. For a well developed stock market good telecommunication systems, developed banks and financial institutions are important elements.

3.2. NEGATIVE IMPACT OF STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH

The traditional growth theorists denied of any correlation between stock market development and economic growth. Studies were unclear regarding direction of causality between financial sector development and economic growth. (Robinson, 1952 and Lucas, 1988). Some studies believe that the volatile nature of stock market often results in market failure and thus harming the economic development in developing countries. Stock market development does not have much impact on the economic growth.

Singh (1997) in his study argues that expansion in the activities of stock market prevents the growth of economic development rather than accelerating it. He further adds that high volatility and arbitrariness in prices of stock hinder efficient allocation of resources for investment. Further the prevailing economic conditions and unfavourable economic shocks cause macroeconomic instability hindering the process of long term growth. As a result, risk fearing investors and firms are discouraged to invest further thereby negatively affecting the economic growth. Akyuz (1993) in his paper concluded that financial deepening always does not lead to economic growth. According to him the markets do not channelize the resources only towards productive uses. Therefore, it leads to increase in speculation in the economy. He further adds that beyond a certain extent, financial deepening may have negative impact, thereby retarding the process of economic growth. Owusu and Odhiambo (2014) conducted a study in Ghana. For stock market development market capitalisation, stock market development index, value of shares traded and stock turnover were used as variables while real GDP per capita was chosen to measure economic growth. Using ARDL and Wald statistics, no positive effect of stock market development was found on economic growth in the long run. Ake and Ognaligui (2010) in their study based on time series data considered turnover ratio, value of shares traded, and stock market trade value as indicators of stock market and GDP for economic growth. Using Granger Causality test, he found that the Cameroon stock exchange in no way influences or affects its economic growth.

Sarkar (2006) in his study on India covering a period of over half a century took stock price Index, Wholesale price Index, GDP and gross fixed capital formation as variables for study. He concluded that there is no long term relationship existing between total gross capital formation expressed as percentage of GDP and share prices both in real and nominal terms. Nagaraj (1996) conducted a comprehensive empirical study in Indian context. The results of his study show that increase in the stock market activity is not correlated to either the increase in gross domestic savings or financial savings. He further added that post 1980s the corporate profitability declined and that the small firms which did not have access to stock market performed better than large firms having access to the stock market.

4. DISCUSSION AND FINDINGS

It is evident from extant literature review that several variables are used to measure stock market development. From literature review it is found that most commonly used variable for stock market development is stock market capitalisation. Stock market capitalisation is the total market value of all listed shares divided by GDP. (Demirguc-Kunt & Levine, 1996). The reason for choosing market capitalisation as a variable is that it has the ability to not only diversify risk but also mobilise capital positively. (Felix, 2006). Several authors like (Ikikii & Nzomoi, 2013; Levine and Zervos, 1996; Agrawalla and Tuteja, 2007; Adjasi and Biekpe, 2005; Jahfer and Inoue, 2014; Bahadur G.C. and Neupane, 2006; Hossain and Kamal, 2010; Ahmad et al, 2011; Nowbutsing and Odit, 2009; Athapathu and Prabhath, 2008; Carp, 2012 and Beck and Levine, 2004) have used this as an indicator of market capitalisation or size.

The second major variable considered in the study is liquidity to measure the development to stock market. Liquidity can be defined as the speed and ease with which investors can buy and sell securities. (Levine and Zervos, 1996). Liquidity is strongly correlated with development of stock market. (Agrawalla and Tuteja, 2007). It can be measured in two ways.

- Total value of shares traded- As per (Ahmad et al, 2011) it is the total number of shares traded in stock market multiplied by their respective prices. The justification for selecting it as a measure of liquidity is that it is representative of the size of the stock market transactions in relation to economy as a whole. (Cavenaile et al, 2014). It measures the organised trading of equities as share in the total national output and therefore represents the liquidity on an economy wide basis positively. (Bismal and Kamaiah, 2000)
- Turnover ratio. – It is arrived by dividing the total value of shares traded by market capitalisation (Athapathu and Prabhath, 2012). It represents the level of transaction costs and also used as an index to compare market liquidity. It measures the size of securities market in relation to the stock market (Ake and Ognaligui, 2010). High turnover ratio represents low transaction cost. Turnover ratio complements the total value of shares total value of shares traded represents the trading in relation to the size of economy whereas trading in relation to size of the stock market is represented by turnover. It is therefore possible that a small liquid market may have high turnover ratio but a small value of shares traded. So the turnover ratio is a better representative of liquidity of stock market as compared to total value of shares traded. (Bismal and Kamaiah, 2000)

Some of the authors who have used liquidity as a measure of stock market development are (Levine and Zervos, 1996; Agrawalla and Tuteja, 2007; Adjasi and Biekpe, 2005; Bahadur G.C. and Neupane, 2006; Ahmad et al, 2011; Paudel, 2005; Levine 1991; Benchiwenga, Smith and Starr 1996; Kyle 1984; Holmstrom and Tirole, 1998; Deb and Mukherjee, 2008; Atje and Jovanovic, 1993; Nowbutsing and Odit, 2009; Athapathu and Prabhath, 2012; Carp 2012; Beck and Levine, 2004; Naik and Padhi, 2015). Holmstrom and Tirole (1993) and Kyle (1994) state that higher liquidity of stock market provides incentives to investors to get more information about firms. Benceiwenga et al, (1995) and Levine (1991) state that liquidity in stock market motivates investor to invest in projects with term duration as they can easily sell off their investments if need arises even before maturity. This boosts the economic growth productively in the long term. However, Shleifer and Vishny (1986); and Bhide (1993) argue that increased liquidity reduces the incentives for investors as they have to bear the increased cost of paying portfolio managers.

Few authors have also used Stock Market Index as a variable for stock market development. (Liua and Sinclair, 2008 and Athapathu and Prabhath, 2012). The stock market index represents listing of stocks and it is a statistic representing the composite value of its components. (Tetty, 2008). The justification for choosing this as an indicator of stock market development is that it represents stock market in better way than any other financial indices. It shows that the characteristics of all the component stocks have some commonality between them. (Tetty, 2008).

Volatility is another variable used by some of the researchers to measure the development of stock market. It is measured by fluctuations in the stock prices. The reason for considering it as a variable is that increasing volatility in the market discourages investors and firms to invest in the stock market. Few researchers like (Deb and Mukherjee, 2008; Singh, 1997) used volatility as an indicator for measuring stock market development. The increased liquidity causes volatility which prevents investment thereby reducing growth. The higher volatility increases the risk and causes upward pressure on prevailing interest rates. (Delong.et.al (1989) and Federer (1993)

For measuring the economic growth, the variable which is commonly used by most of the researchers is GDP. GDP growth rate is nothing but the annual growth in GDP at market prices which in turn is based on local currency. (Carp,2012). The reason for considering GDP as an indicator of economic growth is that, the annual growth in standard of living of people of a country is measured by it. Few researchers who have used GDP as an indicator for economic growth are (Bahadur G.C.and Neupane, 2006; Jahfer and Inoue,2014; Adjasi and Biekpe, 2005; Deb and Mukherjee, 2008; Jefferis & Okeahalam, 2000; Antonios,2010; Liua and Sinclair, 2008; Rousseau and Wachtel, 2000; Beck and Levine, 2003; Atje and Jovanovic,1993; Nowbusting and Odit,2009; Athapathu and Prabhath, 2012; Carp, 2012; Beck and Levine, 2004 and Naik and Padhi, 2015).

Some of the researchers have also used Index of Industrial Production as a measure of economic growth wherein the data of GDP was not available. (Gupta and Paramati, 2011; Laopodis, 2009; Hussainey and Ngoc, 2009; Ahmad 2008; Agrawalla and Tuteja 2007; Padhan, 2007; Dritsaki and Bargiota, 2005; Chen et al 2003) Out of 118 papers considered for the present study, to assess the relationship and causality between development of stock market and economic growth researchers have mostly employed Granger causality test. (Ikiki & Nzomoi, 2013; Ake and Ognaligui,2010; Dritsaki and Bargiota, 2005; Athanasios and Antonios (2010); Filer.et.al.,2000; Ahmad,2008 ; Bahadur G.C.and Neupane 2006; Lean and Song, 2009; Liua and Sinclair,2008 ; Agrawalla and Tuteja,2007; Hossain and Kamal,2010; Carp,2012; Felix,2006; Naik and Padhi,2015; Mun.et.al,2008; Paramati and Gupta,2011) The procedure for testing statistical causality between stock prices and the economy is the direct "Granger-causality" test proposed by C. J. Granger in 1969. According to Granger, X causes Y if the past values of X can be used to predict Y more accurately than simply using the past values of Y. In other words, if past values of X statistically improve the prediction of Y, then we can conclude that X "Granger-causes" Y. (Comoncioli, 1995).

The error correction mechanism (ECM) developed by Engle and Granger is a means of reconciling the short-run behavior of an economic variable with its long-run behavior. (Gujrati, 2009). If a certain pair of variables is co integrated, then the long-run relationship between such variables can be modelled using the error correction mechanism. (Atapathu and Prabhath, 2012). Co integration means that despite being individually non stationary, a linear combination of two or more-time series can be stationary. Economically speaking, two variables will be co integrated if they have a long-term, or equilibrium, relationship between them. (Gujrati, 2003). So study the long term or equilibrium relationship researchers have also used VECM and Co integration to test the nature of relationship. (Paramati and Gupta,2011; Odhiambo,2014; Matadeen and Seetanah,2015; Lean and Song, 2009; Cavenaile.et.al., 2014; Nyasha and Odhiambo,2014; Felix, 2006; Carp, 2012; Hossain and Kamal, 2010; Agrawalla and Tuteja, 2007; Liua and Sinclair,2008; Lean and Song, 2009; Jahfer and Inoue,2014; Jefferis & Okeahalam, 2000). Panel regression analysis have also been used by some of the researchers for finding the nature of relationship between stock market development and economic growth.

From the above literature it can be concluded that several studies have been conducted to study the causal nexus between financial development and economic growth. In India the contribution of stock market in the process of economic development has increased manifold, especially after the New Economic Policy of 1991. This has given rise to the debate as to whether development of stock market promotes economic growth or vice versa. Some studies conducted to study the causal relationship conclude stock market development has positive impact on economic growth while few studies conclude that stock market negatively impacts economic growth.

TABLE I: STUDIES ON IMPACT OF STOCK MARKET DEVELOPMENT ON ECONOMIC GROWTH

Impact of Stock market development on Economic growth	Literature Support
Stock Market development has a Positive Impact on economic growth.	Naik and Padhi (2015); Matadeen and Seetanah (2015); Cavenaile, Gengenbach and Palm (2014); Kagochi, Nasser and Kebede (2013); Uddin et al. (2013) ;Ikiki & Nzomoi (2013); Masoud and Hardaker (2012); Kim.et.al (2012); Ibrahim (2011); Ahmad et al (2011); Anyamele (2010); Aboudou(2009); Vazakidis and Adamopoulos(2009); Brasoveanu.et al (2008); Deb and Mukherjee (2008); Amaral and Quintin (2007); Naceur (2007); Shahbaz (2007); Capasso (2006); Corporale, Howello and Soliman (2005); Dritsaki and Bargiota (2005); Paudel(2005); Blackburn et. al (2005); Mohtadi and Agarwal (2004); Beck and Levine (2004); Carlin and Mayer(2003); Calderon and Liu (2003); Creane et al (2003) ; Arestis et al. (2001); Rousseau andWachtel (2000), Tsuru (2000); Rajan and Zingales (1998); Boyd and Smith (1998); Levine and Zervos (1998); Greenwood and Smith (1997); Bencivenga, Smith and Starr (1996); Levine and Zervos (1996); Fry (1995); Japillo and Pagano (1994); Atje and Jovanic (1993) ;King and Levine (1993); Greenwood and Jovanovic (1990) ; Gelb (1989); Boyd and Prescott (1986); Friedman and Schwartz (1963)
Stock Market development has a Negative Impact on economic growth.	Owusu and Odhiambo (2014) ; Ake and Ognaligui (2010); Halkos and Trigoni (2010); Sarkar (2007); He (2006); Ram (1999); Singh (1997); Fry (1997); Corbett and Jenkinson (1994) ; Stiglitz (1994); Jappeli and Pagano(1994); Bhide (1993); Bencivenga and Smith (1991); Lucas (1988); Mayer (1988) ; Shleifer and Vishny (1986); Pearce (1983); Stiglitz and Weiss (1981); McKinnon (1973); Shaw (1973)

5. CONCLUSION

There is still a lack of consensus among researchers regarding the impact of stock market development on economic growth of different countries. The majority of papers considered for study show a positive impact of development of stock market on economic growth. Gurley and Shaw (1955) opine that well developed stock markets promote capital accumulation thus improving financial capacity and efficiency of trade of investors thereby enhancing economic growth. The development of stock market results in creation of financial services and markets which induce investment and promote efficient allocation of resources thereby accelerating the process of economic growth. On the other hand, as the economy grows, there is an increased demand for financial services and institutions which in turn promote the development of financial markets including the stock markets. The review of literature also suggests a different view regarding the relationship between stock market development and economic growth. Some researchers argue that development of stock market has a negative or no affect whatsoever on the economic growth of the country. As Singh (1997) states that arbitrariness and high volatility in prices of stock in developing countries do not boost the long term economic growth as it prevents efficient allocation of resources. Moreover Morck.et.al (1990) believe that stock market development has a negative effect on economic growth as it promotes counterproductive corporate takeovers. Further excessive liquidity and volatility of stock market discourages investment and growth, thereby reducing the incentives available for investors. (DeLong.et.al. 1989)

As suggested by empirical literature, direction of causality between development of stock market and economic growth has not been clearly defined. The results vary depending on the methods applied, context and data used for the study. Results also differ on basis of time period considered and the country chosen. (Odhiambo, 2008). So further studies can be conducted to find the direction of causality between development of stock market and economic growth as it would be of great help to policymakers for decision making. Further the rapid increase in stock market capitalisation in emerging economies as compared to developed economies has garnered the attention of researchers and academia towards this relationship. El-Wassal (2005) states that stock market capitalisation have increased by over 32 times in emerging economies as compared to only 11 times in developed economies between periods of 1980-2000. With the rapid increase in the activities of stock market in last two decades, it is impossible to imagine a world without stock markets. Therefore, studies need to be conducted to study

the causal relationship between stock market and economic growth especially in emerging economies like India. The econometric evidence pertaining to the causality between the two is limited in India, so empirical studies can be conducted to study the same. (Agrawalla and Tuteja, 2007).

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A STUDY ON EMPLOYEE ATTRITION AND RETENTION IN BPO SECTOR**DR. SHAMSHER SINGH****ASSOCIATE PROFESSOR****BANARSIDAS CHANDIWALA INSTITUTE OF PROFESSIONAL STUDIES****DWARKA****RAVEENA RANA****STUDENT****LADY SHRI RAM COLLEGE FOR WOMEN****DELHI UNIVERSITY****NEW DELHI****ABSTRACT**

The objective of this research is to identify the causes of attrition in BPOs. Employee retention is more than just keeping employees on the job. It is also about sustaining employees, primarily by enhancing their job satisfaction. Failings to retain a key employee is a costly proposition for any organization. Employee retention is commonly considered to mean the ability to maintain a stable workforce. Business process outsourcing (BPO) offered opportunities for employment to a large number of persons with diverse skill sets in India. The industry is plagued by high employee attrition which gives sleepless nights to Human Resources managers (HR). This study is conducted to find out the predominate factors that causes high employee attrition in BPO sector and to find out the ways to control attrition. This study was carried out in BPO companies in Delhi NCR by obtaining response of 100 employees. ANOVA and frequency analysis were employed to analyze the responses. Study found that employees are not satisfied with reward & recognition of achievement system and welfare measure followed by these organisations. Bonus and games & cultural events have positive impact and leads to higher level of motivation and increased performance. Implementation of three R's (respect, recognition and reward) will increase employee retention.

KEYWORDS

attrition, bpo, employee problems, outsourcing, retention.

INTRODUCTION

The term "employee retention" was first used in the business scene in the early '80s. It was usual for people who entered the job market as late as the 1950s and '60s to remain with one employer for a very long time—sometimes for the duration of their working life. If they changed jobs, it was usually a major career and life decision, and someone who made many and frequent job changes was seen as somewhat out of the ordinary. As a natural result, an employee leaving his or her job voluntarily was seen as an aberration, something that shouldn't really have happened.

In today's context the perception of having a job for life in a public or private sector no longer exists. The trend for the younger generation of workers is to shift from one job to another job and this is becoming a norm of society. Companies that can recruit the best talent and retain them will have an edge in the long run. There are number of changes taking place in the work force and the workplace which to radically altering the way companies relate to their employees. Retaining good employees is an important concern of every company in industries. Companies which make a proactive and strategic decision are able to retain their employees.

Employee retention is more than just keeping employees on the job. It is also about sustaining employees, primarily by enhancing their job satisfaction. Job satisfaction, in turn, can increase productivity and keep employees energized and motivated to give their best. Job satisfaction can equate to employees who stick with their current employer and strive to perform at or above expectations and standards. Employee retention is commonly considered to mean the ability to maintain a stable workforce. It is often linked to morale and to organizational productivity.

Outsourcing the non-core processes in order to concentrate on the core process is how the companies prefer to work now, thus BPO has become the obvious strategic choice of the organizations to outsource their noncore process. With the rising number of opportunities, the Indian Business Process Outsourcing sector seems to be on growth trajectory and its exports have grown from \$565 million in 2000 to about \$7.3 billion in 2005. India has become the most sought after destination for outsourcing globally.

REVIEW OF LITERATURE

BPO or Business Process Outsourcing refers to the outsourcing of some non core business functions to some other service providers, primarily in low cost locations. The service provider may be either self owned or a third party. Generally following services are provided by the BPOs: accounting services such as receivables & payables, cash flow analysis, financial statement preparation & reconciliation, inventory management services such as order processing, data entry etc. There are number of facilitators which have helped in the growth of BPOs. These are reduced international trade barriers and improved telecommunication and IT capability. This has led to a situation where business organizations across the world are increasingly interlinked with each other.

The recent trend of high employee turnover in BPO is due to the various reasons such as employees not being happy with the kind of work they do, lack of investments in training and development, lack of career growth and development opportunities, unfair and misleading performance appraisals, etc. Kumar (2013) found that night shifts, money, inability to handle various types of stress, monotonous work; company policies, lack of career growth, problems with those in senior positions etc are the major reason of employee attrition of employee in BPOs in India.

Various reasons cited for employee attrition are dissatisfaction with internal job postings, work profile, personal causes and finally dissatisfaction with compensation/ salary (Bhatnagar 2007). So for better retention of talent organizations must improve pay/compensation and benefits and also factors like good working conditions, flexible work timings, cooperative teams, good bosses, culture and values of the organisation (Devi 2009). Other ways to improve employee retention and commitment include- providing flexible work hours, on the job training opportunities, providing adequate resources for the staff, health and insurance benefits, perks like gyms, health centers, rewarding best employees for not only getting the task done on time but also doing it efficiently (Deery 2008).

Gupta (2013) in her study found that better remuneration & career prospects, perceptions of training & resources, shift timings & week-offs and organizational culture are the factor which lead to employee retention in BPO in India. If the employee are not heard and valued, they are likely to leave because of stress and frustration where as the sense of achievement and belongingness helps in retaining the employee. In a transparent environment they can best utilize their potential and realize their skills and organisation is benefited with a stronger, reliable work-force bring new ideas for its growth. (Singh & Dixit 2011).

Hagargi (2011), found that retention is a key challenge for the BPO industry. With the help of retention, the company can save investment on recruitment and can turn it as cost effectiveness but retention has become a tough job for the sector as attrition is on the rise due to various reasons. Flexible shift and weekend off can make employees comfortable is one of the important strategy for retention. Also the BPO sector should plan the career path of people and provide them rewards and promotions on time and keep them satisfied so that employees should not think about alternative employer. Gayathri (2012) found that most of the

employees leave an organization because of frustration and constant disputes with their superiors or with other team members. Also low salary, lack of growth prospects and motivation compel are some of the reasons behind quitting their jobs. The study of Gayathri (2012) also found that encouragement & recognition, competitive compensation, safe environment and prospective roles are the factors which help in the employee retention.

Kaur & Gupta (2012) undertook the study of women employees of BPO in Chandigarh. Women constitute about one-third of the total workforce in Call Centre and BPOs in India. They found that women employee is satisfied with the safety & security measures, infrastructure, supervision, employee-employer relationships but they are not satisfied with the salary, perks, promotion prospects and grievance redressal system. The opportunities of promotion to higher level are few which leads to frustration and dissatisfaction which reinforce the propensity of leaving BPO industry and becoming the major cause of employee attrition (Singh & Jayashankar, 2002). Ranganathan & Kuruvilla (2008) found that in BPO employees are overqualified for the kind of jobs that they do which leads high turnover. They suggested that BPO may recruit employees with lower qualifications and provide them long-term careers prospects. This is likely to reduce turnover and retain employee for longer period of time.

NEED/IMPORTANCE OF THE STUDY

Attrition in BPOs has terrible effects on the organization. The high attrition costs increase the costs to the organization considerably. The more the people leave an organization, the more it is a drain on the company's resources like recruitment expenses, training and orientation resources and the time. The high attrition rate also affects the productivity of the organization. Therefore, it is extremely important to curb attrition not only for an individual firm but also for the industry as a whole. The present study is an attempt to understand the issue related to employee retention in BPO industry.

OBJECTIVE OF THE STUDY

The study has been undertaken to analyze employee attrition & retention of BPO sector and influence of demographic factors on perception of BPO employee.

HYPOTHESES

The following hypotheses were formulated for the study:

- **H₀₁**: There is no significant differences in perception of BPO employee regarding employee retention on the basis of age of the employee.
- **H₀₂**: There is no significant differences in perception of BPO employee regarding employee retention on the basis of gender of the employee.
- **H₀₃**: There is no significant differences in perception of BPO employee regarding employee retention on the basis of education of the employee.
- **H₀₄**: There is no significant differences in perception of BPO employee regarding employee retention on the basis of income of the employee.

RESEARCH METHODOLOGY

The research involved the in-depth study of previous literature to understand the concept. A number of research article were studied in depth to understand different issue related to attrition and retention in BPO industry and to formulate the questionnaire. The study is a descriptive study involving the collection of primary data from 100 respondents using structured questionnaire as research instrument. Simple random sampling was adopted to select respondents. Survey method was used for collecting the primary data by face to face interview of BPO employee. Data has been analyzed using SPSS software. ANOVA, and frequency analysis has been carried out on the primary data. Reliability of the data has been tested using Cronbach alpha method.

RESULT AND DISCUSSION

DEMOGRAPHIC ANALYSIS

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

Variable	Characteristics	Frequency	Percentage
Age group	36 yrs & above	19	19
	26-35 yrs	57	57
	18-25 yrs	24	24
Gender	Female	54	54
	Male	46	46
Education Level	10+2	23	23
	Graduation	58	58
	Post Graduation	19	19
Income per month	Less than Rs 20000	17	17
	Rs 20000 to Rs 50000	52	52
	Rs 50000 to 100000	23	23
	Above Rs 100000	08	08

Source: Primary Data

The above table shows the respondent profile. Majority of the respondents are in the age group of 26-35 years (57%), 54% are female, 58% are graduate and they are having monthly income in the range of Rs 20000 to Rs 50000 (52%). This demographic profile can be assumed to be representative of BPO employee. This profile is ideally suited for carrying out research.

RELIABILITY ANALYSIS

Reliability is the indicator of internal consistency. It can be measured by different scale however most of the researcher uses Cronbach's alpha scale. If the score is 1 it indicates 100 percent reliability which is generally not found hence a score of 0.7 or above is considered as reliable score (Nunnally's (1978). The Cronbach Alpha score is given in table 2. The test score of 0.709 indicates good internal consistency.

TABLE 2: VALIDITY AND RELIABILITY STATISTICS

Cronbach's Alpha	N of Items
.709	15

Source: Primary Data

HYPOTHESIS TESTING: ANOVA COMPUTATION

In order to test the hypothesis ANOVA has been employed. The results are given below. Table 3 gives the result of ANOVA computation on the basis of age, gender education and income of the respondents.

TABLE 3: COMPUTATION OF ANOVA

Statements	Age		Gender		Education		Income	
	F	Sig	F	Sig.	F	Sig.	F	Sig.
Preference of employees to move for a new job	.459	.633	1.207	.275	3.210	.026	.398	.755
Satisfaction of employees towards current job	1.000	.372	.249	.619	.794	.500	.861	.464
Satisfaction obtained in quitting the existing job	.832	.438	1.486	.226	.754	.523	.557	.645
Rewards and recognition for your achievements	.389	.679	2.281	.134	.299	.826	.606	.612
Appreciation for work from co-workers & supervisors	.870	.422	.275	.602	1.567	.203	2.029	.115
Satisfaction gained from facilities provided by organization	1.215	.301	.028	.866	2.229	.090	2.683	.051
Infrastructure and equipment provided in the organization	5.054	.008	6.821	.010	2.243	.088	.425	.735
Bonus has an impact on the motivation levels and performance of an employee	.493	.613	.030	.864	.102	.959	.830	.480
Games and Cultural Events at work have an impact on motivation levels of employees	.810	.448	.445	.506	2.123	.102	.402	.752
Company provides opportunities for growth and development for employees	.580	.562	.190	.663	.212	.888	.952	.419
Company policies and procedures restricting your ability to work	.096	.909	.502	.480	.455	.714	.145	.933
Importance given towards implementation of three R's (respect, recognition, reward) will increase employee retention	1.424	.246	.428	.514	.784	.506	.210	.889
Opinion towards working environment	.961	.386	.084	.773	.452	.716	.917	.436
Satisfaction regarding the welfare measures	.288	.750	2.899	.092	.275	.843	1.575	.201
To plan your further career in BPO sector	4.394	.015	2.736	.101	.478	.698	1.909	.133

Source: Primary Data

Table 3 gives the result of ANOVA computation on the basis of age, gender, education and income of the respondents. The result shows that no significant differences is perceived by respondents on the basis of age except for "infrastructure & equipment provided in the organization" and "plan your further career in BPO sector". Hence we accept the H_{01} . This indicates that there is no significant differences in perception of BPO employee regarding employee retention on the basis of age of the employee.

The result shows that no significant differences is perceived by male and female respondents for any characteristics. Hence we accept the H_{02} . This indicates that both male and female customer perceive that BPO services in similar way. The result also shows that no significant differences is perceived by respondents for any characteristics on the basis of education level. Hence we accept the H_{03} . This indicates that there is no significant differences in perception of BPO employee regarding employee retention on the basis of education of the employee.

The result indicates that no significant differences is perceived by respondents for any characteristics on the basis of income level except for "satisfaction gained from facilities provided by organization". Hence we accept the H_{04} . This indicates that there is no significant differences in perception of BPO employee regarding employee retention on the basis of income of the employee.

TABLE 4: FREQUENCY ANALYSIS

Statements	Strongly Agree	Agree	Neither Agree nor disagree	Disagree	Strongly disagree
Satisfaction of employees towards current job	11	27	12	44	06
Satisfaction obtained in quitting the existing job	17	35	03	22	13
Rewards and recognition for your achievements	16	17	11	31	25
Appreciation for work from co-workers & supervisors	23	43	09	18	7
Satisfaction from facilities provided by organization	21	44	16	11	8
Infrastructure and equipment provided in the organization	36	42	12	08	2
Bonus has an impact on the motivation levels and performance of an employee	21	46	11	10	2
Games and Cultural Events at work have an impact on motivation levels of employees	29	41	5	13	12
Company provides opportunities for growth and development for employees	19	46	12	19	04
Company policies and procedures restricting your ability to work	16	42	27	11	04
Importance given towards implementation of three R's (respect, recognition, reward) will increase employee retention	26	49	19	04	02
Working environment is conducive and cordial	15	28	09	32	13
Satisfaction regarding the welfare measures	13	18	18	33	18
Preference of employees to move for a new job	36	28	20	12	04
Further planning for your career growth in BPO sector	17	25	03	31	24

Source: Primary Data

FINDINGS

Frequency analysis has been carried out to find the level of satisfaction of BOP employee on various parameter / characteristics of BPOs. The responses have been collected on Likert scale having strongly agree as highest level to strongly disagree as no lowest level. In order to understand the positive response- strongly agree & agree responses have been clubbed together similarly to find negative responses strongly disagree & disagree responses have been clubbed together.

It was found that only 38% employee are satisfied and 50% are not satisfied from their current job which is really alarming situation and need attention from organisation to change this situation. This is further supported by when we found that 52% will find satisfaction in quitting their existing job and 55% employee are not satisfied with reward and recognition of achievement system followed by the organisation. The study found that employee is satisfied with the appreciation from co-worker and supervisors (66%), facilities provided by the organisation (65%) and infrastructure and equipment provided by the organisation (78%). Also the bonus (67%) and games & cultural events (70%) have positive impact and leads to higher level of motivation and increased performance (67%).

Although BPO organisation provides opportunities for growth and development for employees (65%) but policies and procedures of organisation restricts the ability to work of employees (58%). 75% employee feel that importance given towards implementation of three R's (respect, recognition and reward) will increase employee retention. Almost half the employee feels that working environment is conducive and cordial where as other half think otherwise. Only 31% employee are satisfied with welfare measure and 51% are not satisfied with welfare measure. Therefore, it is natural that majority of employee (64%) will prefer to move/look for a new job and will not plan their career growth in BPO sector (55%).

RECOMMENDATION AND CONCLUSION

Indian BPO industry is expanding at very rapid pace and with the growth, there are number of issue associated with it. There are odd hours of working to suit the foreign clients. There is shift in the biological rhythm of body, loss of personal life which leads to stressful life. Due to all such issues these organisations face one of the prominent problem of the employee attrition and retention. The present paper attempted to find the satisfaction of BPO employee and what leads attrition of employee and how the employees can be retained.

ANOVA was used to find if there is any significant difference in BPO employee responses. ANOVA computation on the basis of age, gender, education and income of the respondents shows no significant differences was perceived by respondents for most of the characteristics. However, there was significant difference was perceived by them for "infrastructure & equipment provided in the organization" and "plan your further career in BPO sector".

The studies found that majority of employee are not satisfied from their current job and will find satisfaction in quitting their existing job, which is really alarming situation and need attention from organisation to change this situation. Also employees are not satisfied with reward and recognition of achievement system followed by these organisations. However, they are satisfied with the appreciation from co-worker and supervisors, facilities provided by the organisation and infrastructure and equipment provided by the organisation. Also the bonus and games & cultural events have positive impact and leads to higher level of motivation and increased performance. Our finding is similar to the previous researches of Bhatnagar (2007) Devi (2009), Kaur & Gupta (2012) and Kumar (2013).

Although BPO organisation provides opportunities for growth and development for employees but policies and procedures of organisation restricts the ability to work of employees. Employee felt that importance given to implementation of three R's (respect, recognition and reward) will increase employee retention. Almost half the employee feels that working environment is conducive and cordial where as other half think otherwise. Employee are not satisfied with welfare measure. Therefore, it is natural that majority of employee will prefer to move/look for a new job and will not plan their career growth in BPO sector. The previous study of Singh & Dixit (2011). Hagargi (2011), Gayathri (2012) and Gupta (2013) also found similar results.

It is essential that the BPO organisations must retain the employees who are really important for them. The supervisors and employers should ensure that the employees are satisfied with their roles and responsibilities and they are offered rewarding remuneration along with the recognition of their contribution. The other factor which will contribute in retention are well equipped, safe & secure work environment to women employees, prospective roles and protection and equality at work. These organisation are taking proactive steps accordance with various laws and legislations enacted in Indian for security, protection and equality at work of women employee in particular. These steps are proving quite useful in helping the organisation in retaining the employees.

LIMITATIONS

The study has been carried out in metropolitan city covering the geographical area of National Capital Region (NCR) Delhi where the demographical factors are different from other urban area of county especially Tier II & III cities where new BOPs are established. Due to this limitation the finding of the study cannot be generalised for whole country.

SCOPE FOR FURTHER RESEARCH

Similar study can be carried out in Tier II & III cities where new BOPs are established and their finding can be compared to find out whether similar issues are there which affects the operation of BOPs.

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A STUDY ON THE INFLUENCE OF ATTITUDINAL AND ENVIRONMENTAL FACTORS ON ENTREPRENEURIAL INTENTION

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ABSTRACT

The main purpose of this paper was to understand the influence of attitudes and the external environmental factors on students entrepreneurial intentions. To study the attitudinal factors, students general attitude i.e. their (attitude towards money, attitude towards change, and attitude towards competitiveness) and the attitude toward entrepreneurship is taken in the study. To study the influence of external environmental factors the study employed variables like university environment, environment support and environment barriers of the students. A questionnaire form was developed with statements related to attitudes and external environment conditions. Convenience sampling method was used to collect the data. A total of 300 students were taken for the study. Factor analysis and regression analysis was used to test the hypotheses. The findings of the study proved that in case of general attitude - attitude towards money had significant influence on student's entrepreneurial intention. But attitude towards competitiveness and attitude towards change did not show significant influence on entrepreneurial intention. Attitude of students towards entrepreneurship also had significant influence on entrepreneurial intention. Pertaining to the external environment conditions, university environment, environment support and environment barriers showed an impact on entrepreneurial intention among students in Kerala.

KEYWORDS

entrepreneurial intention, attitudes, external environment.

1. INTRODUCTION TO THE STUDY

Today, the idea of entrepreneurship as an attractive alternative to wage employment among students in Kerala and all over India is escalating. There are a number of reasons for this tendency. Firstly, it is noticed that ventures started by well-educated entrepreneurs are growing quicker than the enterprises of their counterparts. Hence the importance of education for the successful performance of new ventures is well recognized by management practitioners and researchers. Second, due to the job stress, less job security and less opportunity, people are interested towards self-employment. Finally, the unemployment among graduates in Kerala has been growing during recent years.

Few universities in Kerala have responded to the changing framework conditions and new social demand on entrepreneurship education. Hence they offer a wide range of educational activities at graduation and post graduation level. Some of the affiliated private colleges are also offering entrepreneurial courses. Many good colleges in Kerala offer entrepreneurial training programs for engineering students and management students. Incubators are well functioning in some colleges as well. Kerala government is also taking number of initiatives like the start-up villages, TBI (incubator) in different parts of the state and making budgetary provisions in its annual budget for encouraging potential young entrepreneurs.

According to Krueger et al., (2000) entrepreneurial intention is one of the main predictor of future entrepreneurial behavior. Hence, investigating the factors determining entrepreneurial intention is an important issue in entrepreneurship research. In general, intention can be defined as "a state of mind directing a person's attention toward a specific object or a path in order to achieve something" (Vesalainen and Pihkala, 1999). Theory of planned behavior (Fishbein and Ajzen, 1975) is one of the common theoretical frameworks which explain pre start up processes. According to this theory behavioural intention is an immediate determinant of planned behaviour (Fishbein and Ajzen, 1975). According to Krueger et al., (2000) theory of planned behaviour can be applied when once behaviour is rare, hard to observe, or involves unpredictable time lags (Krueger et al., 2000). According to Autio et al., (1997), Krueger et al., (2000), entrepreneurship can also be viewed as a type of planned behaviour, for which intention models are appropriate. Some of the previous researches conducted by Begley et al., 1997; Davidsson, 1995; Franke and Luthje, 2004; Robinson et al., 1991; discussed the influence of personal and environment-based determinants on entrepreneurial intent such as personality traits, attitudes toward entrepreneurship, or social environment. However, it is noticed that only limited studies are addressing students' entrepreneurial intention (Luthje and Franke, 2003; Wang and Wong, 2004). Hence, the main objective of this paper was to understand the influence of attitudes and the external environmental factors on students entrepreneurial intentions. To study the attitudinal factors, students general attitude i.e. their (attitude towards money, attitude towards change, and attitude towards competitiveness) and the attitude toward entrepreneurship is taken in the study. To study the influence of external environmental factors the study employed variables like university environment, environment support and environment barriers of the students. A questionnaire form was developed with statements related to attitudes and external environment conditions. Convenience sampling method was used to collect the data. A total of 300 students were taken for the study. Factor analysis and regression analysis was used to test the hypotheses.

2. ENTREPRENEURIAL INTENTION: LITERATURE REVIEW

In previous research regarding entrepreneurship and factors influencing the entrepreneurial intention personality characteristics of individuals were incorporated. A number of personality factors like need for achievement, risk taking propensity, internal locus of control, or innovativeness were considered for understanding entrepreneurial intention and success (Brockhaus and Horwitz, 1986). However, the personality approaches had drawbacks (Robinson et al., 1991). As an alternative to the personality theories, in 1990s the attitude approach become popular for predicting entrepreneurial intention (Douglas, 1999; Robinson et al., 1991). The present study continues along these lines.

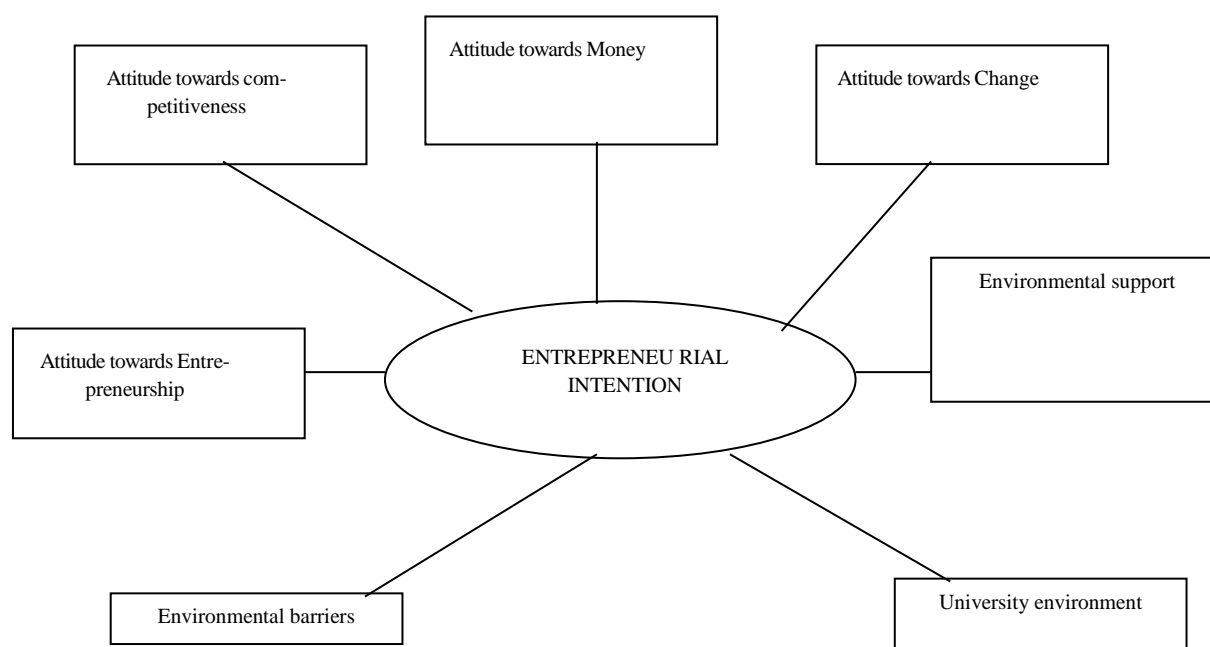
Theory of planned behaviour, explains the impact of individual's attitudes on behaviour via intention. According to this theory, attitude has three fundamental antecedents of intention mainly personal attitude toward outcomes of the behaviour, perceived social norm, and perceived behavioural control. These three antecedents have proven to account variance in intentions (Fishbein and Ajzen, 1975). In general, attitudes can be defined as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object" (Fishbein and Ajzen, 1975). Attitudes are relatively less stable than personality traits and hence can be changed both across time and situations in benefit of the individual's interaction with the environment (Robinson et al., 1991). For this good reason, entrepreneurial attitudes are influenced by educators and practitioners. The previous studies conducted by Autio et al., (1997); Douglas, (1999); Krueger et al., (2000); Robinson et al., (1991) empirically confirmed the importance of attitudes, both in general and toward entrepreneurship, in explaining people's aspiration to create a new venture.

Douglas in (1999) conducted a study to find out the relationship between the intention to start one's own business and individual's attitudes toward income, independence, risk, and work effort. The results of his empirical study suggested that individuals with a more positive attitude toward independence and risk are more likely to become entrepreneurs. But people's attitudes to work efforts and attitude toward income (money) correlated negatively with the entrepreneurial intention. The results of Wang and Wong (2004) study contradicted to the findings of Douglas's study i.e. the study reported that risk-averse attitude do not influence entrepreneurial intention. Autio et al. (1997) examined the influence of attitudes toward achievement, autonomy, money, change, and competitiveness upon entrepreneurial intention and viewed it as the primary factors of entrepreneurial intention. Krueger et al. (2000) study found out attitude towards entrepreneurship and self-efficiency, are significant predictors of entrepreneurial intention. But they reported a non-significant impact of the remaining attitudinal variable, i.e. perceived social norm, on entrepreneurial intent. Study conducted by Franke and Luthje (2004) found a strong positive relationship between the attitude toward self-employment and the intention to become an entrepreneur. Luthje and Franke (2003) conducted another study among students of technical disciplines at the Massachusetts Institute of Technology and they examined the impact of personal dispositions and of perceived environmental conditions for founding a new venture on entrepreneurial intention. The results of their study revealed that the attitude toward entrepreneurship is the most important determinant of entrepreneurial intention. Some few studies in the entrepreneurship discipline focused on environmental conditions as determinants of people's aspiration to start a company. According to Aldrich and Zimmer (1986) individuals cannot be viewed as atomized decision-makers who operate as autonomous entities and according to Robinson et al., (1991) the attitudes do not exist "in isolation". Therefore, it is important to focus on the entrepreneurial process as an embedded process in a social, cultural and economic context which are considered as external environmental factors. Previous studies conducted by Autio et al., (1997); Begley et al., (1997) and Luthje and Franke, (2003) have also recognized the influence of external factors on an individual's interest to become an entrepreneur. Luthje and Franke (2003) study revealed that the student's entrepreneurial intention is also affected by perceived entrepreneurship-related barriers and support factors. Their study revealed that when students realized an unfriendly environment for new business start ups, e.g. credit conditions as being too restrictive, they were less likely to become entrepreneurs irrespective of their positive attitude towards self-employment. In another study conducted by Franke and Luthje (2004), they examined the influence of university environment on entrepreneurial intent. Results of their study revealed that the lower level of student's entrepreneurial intention is due to the negative approach of the university's to provide students with the knowledge required to start a business and to support the process of new venture creation actively. But studies conducted by Franke and Luthje (2004) and Autio et al. (1997) founded that the positive support provided by the university environment had a negative impact on entrepreneurial intention. The inconsistency in the findings of previous research indicates that there is still a necessity to improve our understanding of the preconditions of entrepreneurial intention and moreover such kind of studies is not conducted among students of Kerala. Hence a study is being developed in this direction.

3. CONCEPTUAL FRAME WORK AND HYPOTHESIS DEVELOPMENT FOR THE STUDY

This study has developed a conceptual frame work of entrepreneurial intention by incorporating both attitudes and external environmental factors based on prior research. The general attitudes (attitude towards money, attitude towards change, and attitude towards competitiveness), the attitude toward entrepreneurship, and the external environment conditions were the main factors used in the study to predict the entrepreneurial intention (Figure 1).

FIG. 1



On the basis of the above figure-1, the following hypotheses were developed:

- H1: Positive attitude towards change in individuals can influence their intention to become entrepreneurs.
- H2: Positive attitude towards money in individuals can influence their intention to become entrepreneurs.
- H3: Positive attitude towards competitiveness in individuals can influence their intention to become entrepreneurs.
- H4: Positive attitude towards entrepreneurship in individuals can influence their intention to become entrepreneurs.
- H5: Individuals who perceive entrepreneurship-related support positively can have stronger intention to become entrepreneurs.
- H6: Individuals who perceive entrepreneurship-related barriers negatively can have weaker intention to become entrepreneur
- H7: Individuals who perceive university environment as entrepreneurship supportive can have stronger intention to become entrepreneurs.

4. RESULTS AND METHODOLOGY OF THE STUDY

Engineering and business students from ten colleges from state of Kerala were taken as samples. Convenience sampling method was used to collect the data. A total of 300 students were considered in the study. Factor analysis and regression analysis is used in the study. The sample consists of 78 business students between the age group of 18-21 years and 72 business students between the age group of 21-23 years, were as 64 engineering students were between the age group of 18-21 years and 86 engineering students were between the age group of 21-23 years. A total 142 students (from both engineering and business studies) were between the age group of 18-21 and 158 students (from both engineering and business studies) were between the age group of 21-23. Among business students 78 were males and 72 were females were as 82 students among engineering students were males and 68 students were females. A total of 160 students in the study were males and 140 students were females (Table- 1).

TABLE 1: DEMOGRAPHIC PROFILE

	Business	Engineering	Total
Age 18 — 21	78	64	142
21- 23	72	86	158
Total	150	150	300
Male	78	82	160
Female	72	68	140
Total	150	150	300

Source: survey data

4.1 METHOD AND MEASUREMENT USED IN THE STUDY

The dependent variable of the study is entrepreneurial intention and independent variables of the study are general attitudes, attitude toward entrepreneurship, and perception of the external environment conditions. Few statements are taken from Autio et al. (1997) scale and it is modified according to the study. Five point Likert scale is used in the study were 1 = "strongly disagree" to 5 = "strongly agree". A total of 25 statements were incorporated in the questionnaire. All items used in the study are listed in Table -2.

4.2 RESULTS OF FACTOR ANALYSIS AND RELIABILITY

Principal component factor analysis was performed on independent variables (i.e. general attitudes (towards money, change, and competitiveness), the attitude toward entrepreneurship and perception of the external environment condition) and on dependent variable (i.e. entrepreneurial intention) to define the underlying structure among the variables in the analysis (Table 3). Table 2 shows the finalized number of items included for each variable. For the purpose of the hypothesis testing only statements with factor loadings more than 0.60 were taken (Table 3). The reliability tests based on Cronbach's alpha measurements were conducted. The Cronbach Alpha for all measures is above 0.7. Thus, the results of the reliability of constructs can be considered to be satisfying (Table 3). In conclusion this study measured entrepreneurial intention with three items. General attitudes comprise three constructs, i.e. attitude toward competitiveness (two items), attitude toward money (two items), and attitude toward change (two items). The attitude toward entrepreneurship was also measured using two items. The perception of the college environment refers to the degree to which the college the students are studying is perceived as a supporting organization to start a new venture. The construct was measured by a set of four items. The perception of entrepreneurship-related support relates to the degree to which external conditions to start a business, particularly financing factors, are perceived positively. This construct includes two items and the perception of entrepreneurship-related barriers consists of three items.

TABLE 2: CONSTRUCTS USED IN ANALYSIS

Items	Construct
Are you interested in setting up your own business? Are you planning to set up a business during the next two years? I am prepared to do anything to be an entrepreneur	Entrepreneurial intention
In my college, people are encouraged to pursue their own ideas The courses offered students with the knowledge required to start a new company The incubator in our college supports the start-up of new firms The creative atmosphere in our college inspires us to develop ideas for new businesses	College environment
Banks do not readily give credit to start up companies It is hard to find capital providers in our place	Environment support
The sufficient subsidies are not available for new companies Qualified consultants as well as service support for new companies are not available in our place.	Environment barriers
I work harder in circumstances where my performance is compared with others It annoys me when others perform better than I do	General attitude toward competitiveness
Do you believe having high income is an indicator of success in your life Is it important for you to make a lot of money	General attitude toward money
Are you bored working in a stable environment I need constant change to remain stimulated, even if this would mean higher uncertainty	General attitude toward change
I'd rather be my own boss than have a secure job I'd rather found a new company than be the manager of an existing one	Attitude toward entrepreneurship

TABLE 3: FACTOR LOADINGS AND RELIABILITY OF SCALES

Constructs	No of items	Factor loading	Indicator reliability	Cronbach Alpha	Factor reliability	Average variance explained
Entrepreneurial intent	3	0.764	0.593	0.746	0.860	0.673
		0.745	0.642			
		0.897	0.825			
University environment	4	0.897	0.665	0.811	0.873	0.633
		0.884	0.625			
		0.843	0.641			
		0.888	0.652			
Environmental support	2	0.834	0.629	0.703	0.805	0.674
		0.818	0.620			
Environmental barriers	3	0.873	0.463	0.774	0.802	0.577
		0.824	0.690			
		0.873	0.588			
General attitude toward Competitiveness	2	0.887	0.708	0.738	0.792	0.656
		0.780	0.504			
General attitude toward money	2	0.877	0.762	0.760	0.877	0.781
		0.878	0.779			
General attitude toward change	2	0.875	0.763	0.736	0.866	0.763
		0.852	0.754			
Attitude toward entrepreneurship	2	0.847	0.725	0.799	0.850	0.739
		0.852	0.713			

Source: survey data

4.3 RESULTS OF REGRESSION ANALYSIS AND DISCUSSION

Table -5, presents the regression estimation for entrepreneurial intention. From the table, it is understood that R^2 (=0.230) which implies that 23.0 percent of entrepreneurial intention can be explained by the seven independent variables. The proposed model was adequate as the F-statistic (= 62.630) was significant at the 5 percent level. This indicated that the overall model provides a statistically significant relationship between attitudes, perceived environment conditions and entrepreneurial intention. From Table-4 attitude towards money and attitude towards entrepreneurship were found to have a significant relationship with entrepreneurial intention. Therefore, hypothesis H2 and H4 is accepted. However, attitude toward change and attitude towards competitiveness was found to have no significant relationship with entrepreneurial intention. Hence, H1 and H3 were not statistically supported. But all the environmental factors i.e. university environment, environmental support and environmental barrier were found to have a significant relationship with entrepreneurial intention. Hence H5, H6 and H7 were accepted.

TABLE 4: REGRESSION RESULTS

Model	coefficient	t-statistic
(Constant)	3.666	
Attitude toward Competitiveness	0.079	0.959
Attitude toward money	0.103	1.246*
Attitude toward change	0.051	0.534
Attitude toward entrepreneurship	0.113	1.981*
University environment	0.152	2.327*
Environmental support	0.119	2.227*
Environmental barriers	0.226	4.051*

TABLE 5

R ²	Adjusted R ²	F	Sig F
0.230	0.226	62.630	0.00

Note: *significant at 5 per cent level/ Dependent Variable: entrepreneurial intention Source: SPSS generated result out of authors' data

5. CONCLUSION OF THE STUDY

The result of the study indicates that student's attitude towards money and attitude towards entrepreneurship have a significant relationship with their entrepreneurial intention. However, student's attitude toward change and attitude towards competitiveness was found to have no significant relationship with their entrepreneurial intention. But all the environmental factors i.e. students college environment, environmental support and environmental barrier were found to have a significant relationship with their entrepreneurial intention. Hence this study concludes by recommending universities and colleges in Kerala to start more entrepreneurial educational programs for students. Apart from theoretical subjects entrepreneurial education should give importance to practical sessions. It is also recommended to have interactive sessions with entrepreneurs, which will help the students to clear their queries regarding small start ups. Incubators in colleges can play an important role in developing student's interest in venture ownership. Students with innovative ideas should be encouraged at school level itself. Autonomy should be given to students for free thinking and for decision making. Schools in Kerala should promote role models and should organize business idea competitions with attractive awards. This can develop entrepreneurial intention and competitiveness attitude in young people. Attitude towards money also showed a significant relationship with entrepreneurial intention; this finding shows that students are motivated by having good standard of living. Environmental support and environmental barriers also have a significant relationship with entrepreneurial intention, this findings shows the importance of environmental factors on entrepreneurial intention. This finding clearly mentions that if environmental support is less and environmental barriers are more than it will be very difficult for students to start an enterprise of their own.

Future career of students is a complex process. Most of the entrepreneurial intention studies addresses personal related perspectives but neglects various external circumstances that might influence students' career choice to start-up a business. Hence it is recommended that future research should place more emphasis on both human and environmental factors.

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E-GOVERNANCE: A BOON OR BLISS TO SOCIETY: A RESEARCH

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ABSTRACT

The “e” in e-Governance stands for ‘electronic’. Thus, e-Governance is basically associated with carrying out the functions and achieving the results of governance through the utilization of ICT (Information and Communications Technology). While Governance relates to safeguarding the legal rights of all citizens, an equally important aspect is concerned with ensuring equitable access to public services and the benefits of economic growth to all. It also ensures government to be transparent in its dealings, accountable for its activities and faster in its responses as part of good governance. However, this would require the government to change itself – its processes, its outlook, laws, rules and regulations and also its way of interacting with the citizens. It would also require capacity building within the government and creation of general awareness about e-Governance among the citizens. ICT provides efficient storing and retrieval of data, instantaneous transmission of information, processing information and data faster than the earlier manual systems, speeding up governmental processes, taking decisions expeditiously and judiciously, increasing transparency and enforcing accountability. It also helps in increasing the reach of government – both geographically and demographically.

KEYWORDS

e- governance, ICT, tele connectivity, Bhoomi, Satellite based network.

INTRODUCTION

In India, the main thrust for e-Governance was provided by the launching of NICNET in 1987 – the national satellite-based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software was offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990. In the ensuing years, with ongoing computerization, tele-connectivity and internet connectivity established a large number of e-Governance initiatives, both at the Union and State levels.

1. Recognising the increasing importance of electronics, the Government of India established the Department of Electronics in 1970. The subsequent establishment of the National Informatics Centre (NIC) in 1977 was the first major step towards e-Governance in India as it brought ‘information’ and its communication in focus. In the early 1980s, use of computers was confined to very few organizations. The advent of personal computers brought the storage, retrieval and processing capacities of computers to Government offices.

By the late 1980s, a large number of government officers had computers but they were mostly used for ‘word processing’. Gradually, with the introduction of better softwares, computers were put to other uses like managing databases and processing information. Advances in communications technology further improved the versatility and reach of computers, and many Government departments started using ICT for a number of applications like tracking movement of papers and files, monitoring of development programmes, processing of employees’ pay rolls, generation of reports etc.

E- GOVERNANCE INITIATIVES IN INDIA

1. Bhoomi Project in Karnataka: Online Delivery of Land Records

Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc.

2. Gyandoot (Madhya Pradesh) 28 4.2.3.1 Gyandoot is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people. The basic idea behind this project was to establish and foster a technologically innovative initiative which is owned and operated by the community itself.

3. Lokvani Project in Uttar Pradesh 32 4.2.4.1 Lokvani is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services.

MODI’S THRUST ON M-GOVERNANCE

Prime Minister Narendra Modi has recently urged the relevant stakeholders to think about ‘mobiles first’, which, he thinks, is a must for successful implementation of e-governance. His emphasis on mobile governance is to be seen as a major push for the Digital India initiative. Further, Modi recently launched ‘Twitter Samvad’ – a new service that will deliver government’s tweets to registered mobile users every day. As per the initiative, tweets related to government services and developments will be delivered to those who sign up for the service.

e-KRANTI: ELECTRONIC DELIVERY OF SERVICES

In order to make the use of IT more pervasive, the NDA government plans to introduce interactive voice response systems to integrate buyer-seller platforms through mobile apps. This is a step towards making mobile phones an enabler for agriculture governance. Besides e-Kranti, there are eight other pillars that Digital India initiative focusses on, including Broadband Highways, Public Internet Access Programme and Digital Wallet.

LITERATURE REVIEW

The named "ICT revolution", as noted and debated by scholars, politicians, and policy-makers, has had an inordinate effect on economies and societies, leading to what has been termed a "global shift" (Cerny 1995). Erwin Alampay, in his introduction to *Living the Information Society in Asia* (2009) looks at Cerny's ideas of the 'global shift' as marking two fundamental alterations to the global political economy.

1. Ch. Radha Kumari has published her article on "Impact of e-Seva in Andhra Pradesh: A Study" The results of the study indicate that the implementation of e-governance through the mechanism of e-Seva has been received wholeheartedly by the citizens of AP state.

Since the electronically delivered services have aided the convenience and comfort of all sections of the society irrespective of age, educational background and technical awareness, citizens are willing to pay the nominal extra charges for improved and cumbersome-free services. The working days and the daily working schedule of the service centers are providing an added convenience and benefit particularly to employed citizens. The substantial role played by informal sources in the spread of information is also highlighted by the study. The study revealed that mental maturity plays a vital role in welcoming any new system like e-Seva and in analyzing critically the merits and demerits of the system introduced, since 71% of the people belonging to the age group 40-60 expressed high satisfaction with e-Seva. The study has shown that e-Seva is a highly satisfactory method of bringing about e-governance. With the implementation of e-Seva, the vision of e-governance in Andhra Pradesh has seen its reality. This has become a model to be emulated by all other administrative bodies. eSeva implementation has brought the government of Andhra Pradesh, unparalleled credit for two reasons- firstly for introducing a project that has brought great convenience and comfort to its citizens and secondly, for innovating and implementing a project of a unique nature.

2. Driss Kettani, Bernard Moulin & Asmae Elmahdi have published their article on "A framework to assess the impact of e-government systems on governance" The Fez-e-government Project aims to develop a pilot e-government system to provide the municipal government of the city of Fez in Morocco with an advanced ICT platform that enables online delivery of citizen-oriented services to the local community. The main research goals of this project include the elaboration of a road map to support the development of e-government systems in Morocco and the assessment of the impact of such systems on a Moroccan's everyday life and on governance in general. In fact, there is an implicit agreement in the research community that e-government systems enhance governance. Such evidences would definitely benefit decision makers, at the top political level, to foster the deployment of e-Government systems as an asset of good governance.

This research also explored the attributes and indicators that can measure good governance. In addition, this study identified how e-government fosters the different aspects and indicators of good governance.

3. Singh Amar Jeet Singh & Sharma Mahinder have published their article on "District level e-governance Initiatives-A case of Lokmitra in Himachal Pradesh:A Study".

The intention of the Lokmitra project is noble. It is meant to provide citizen centric service and information at kiosks and redress citizen's complaints through a single window interface. In this way the harassment of the people can be put to an end, administration will become responsive and accountable and benefits of the ICT will reach the general public. Initially the project functioned satisfactorily because there was a strong leader in the District Centre who took keen interest in monitoring the project by 'thumb rule' in the absence of a proper strategy.

4. Kadam Kedar has published his article on "Usability: High value proposition for successful e-governance in India"

5. Bhattacharyya Rabinranath has published his article on "e-governance in rural West Bengal (India): impact and implications" [7] The objective of this research paper is to explore the impact of IT as an enabling force in its efforts to meet the present and emerging challenges of a digital age on the rural people in West Bengal (WB). In district has been selected for implementing the country's first rural e-governance pilot project. This paper wants to argue that introduction of rural e-governance in Burdwan, is likely to generate development gains only when it is closely adapted to the needs and capacities of the Panchayats.

RESEARCH METHODOLOGY

This research tells us to identify various issues associated with E-governance from both the user and agency side. The research is exploratory and multiple methods including interviews with state and federal government agencies are actively engaged in e-governance services with persons who are unable to physically attend interviews due to handicapped nature.

The exploratory research questions guiding the user portion of the study included the following:

- 1) What are user expectations from E-Government services and resources?
- 2) What are the issues and barriers users encounter when using E-Government services and resources?
- 3) What factors facilitate and enhance do users experiences with E-Government services and resources?

Questions with federal and state government personnel responsible for E-Government services and resources included:

- 1) What are the primary drivers of the development and implementation of E-Government services and resources?
- 2) To what extent are citizen needs and expectations included in the design and implementation of E-Government services and resources?
- 3) How are citizen identified expectations and desires in E-Government services and resources incorporated into the overall design and continual enhancement of E-Government services and resources?

In July 2010, the total mobile subscribers according to the data collected by the Telecom Regulatory Authority of India was 670.60 million, an increase of 2.61 percent from July 2010. From July 2010, 9.77 % people was increased to 3.17% from the previous month.

Boston Consulting group predicts that from the present date internet will increase to reach 19% of the country's population by 2018. This is the result of the government's plan to roll out the nationwide network at the beginning of this year and to all the regions of the country.

CENTRAL GOVERNMENT INITIATIVES AS MISSION MODE PROJECTS (MMP)**E-OFFICE**

The Government of India has recognized the need to modernize the Central Government offices through the introduction of Information and Communications Technology. e-Office is aimed at increasing the usage of work flow and rule based file routing, quick search and retrieval of files and office orders, digital signatures for authentication, forms and reporting components.

IMMIGRATION, VISA AND FOREIGNER'S REGISTRATION & TRACKING (IVFRT)

India has emerged as a key tourist destination, besides being a major business and service hub. Immigration Check Post is the first point of contact that generates public and popular perception about the country, thus necessitating a state of the art system for prompt and user-friendly services.

UID

The unique identification project was conceived as an initiative that would provide identification for each resident across the country and would be used primarily as the basis for efficient delivery of welfare services. It would also act as a tool for effective monitoring of various programs and schemes of the government.

PENSIONS

The pensions MMP is primarily aimed at making the pension/ retirement related information, services and grievances handling mechanism accessible online to the needy pensioners, through a combination of interactive and non-interactive components, and thus, help bridge the gap between the pensioners and the government.

BANKING

The Banking MMP is yet another step towards improving operational efficiency and reducing the delays and efforts involved in handling and settling transactions. The MMP which is being implemented by the banking industry aims at streamlining various e-services initiatives undertaken by individual banks. Implementation is being done by the banks concerned, with the banking Department providing a broad framework and guidance.

POSTS

Modernization of Postal Services has been undertaken by the Department of Posts through computerization and networking of all post offices using a central server-based system, and setting up of computerized registration centers (CRCs).

State Mission Mode projects

e-GOVERNANCE IN MUNICIPALITIES

It is a unique initiative of the Government of India conceptualized under the umbrella of the overall National e-Governance Plan (NeGP) and the Jawaharlal Nehru National Urban Renewal Mission (Jnnurm) aimed at improving operational efficiencies within Urban Local Bodies (ULBs).

The current trends from the portal (<http://www.eprocurement.gov.in>) are shown below in Fig.4.1 and provide an indication of the stability, growth and success of the project.

TABLE 1

eProcurement Trends		
Financial Year	No. of Tenders	Value in Crores (INR)
2003 - 2004	1549	3623
2004 - 2005	4901	30822
2005 - 2006	9930	11892
2006 - 2007	21985	31487
2007 - 2008	33904	75119
2008 - 2009	44883	130061
2009 - 2010	26062	28208
2010 - 2011	47182	19675
2011 - 2012	49354	24436
2012 - 2013	67593	25191
2013 - 2014	93566	36845

CONCLUSION

The movement to e-governance, at its heart, is about changing the way people and businesses interact with government. It only makes sense to find out what they want, expect, don't want, and worry about. The efforts described above vary considerably in their methods and in the range and reliability of their results. A quick informal questionnaire distributed in a mall, or posted on a web site invites only those who "come there" to express their opinions - but it is a low-cost and low-effort way to get some sense of what the people think. The formal research study that generates statistically significant results or engages carefully selected focus groups tells you more reliably what the public thinks. It also costs a lot more. And all methods are limited by the way the questions are constructed and asked. All these approaches are worth considering. Just be sure to view the results with a discriminating eye and draw only the conclusions that can be supported by the data.

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BREXIT-AN END IN ITSELF OR THE BEGINNING OF A NEW ERA**DEEPA SHARMA****ASST. PROFESSOR****DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES****SIKKIM MANIPAL UNIVERSITY****GANGTOK****ABSTRACT**

The referendum in Britain in June 2016 leading to its withdrawal from European Union has been a topic intensely covered and researched in recent times. In that context, this paper tries to briefly explore the troublesome relation that Britain had with European Union starting from the time it joined in 1973. It also tries to throw light on the important events that shaped the present situation in Britain with respect to Europe. The paper gives a brief view on the emergence of Euroscepticism in Britain and the various factors responsible for it. It also analyses the different predictions made about the economic results by the pro-Europeans for the period immediately after the result of referendum if Brexit was to happen and how these predictions have been true so far. Lastly, this paper lays down what is the current situation and decisions which have been made and also raises some questions for which the answers will be known as the journey will unfold in near future.

KEYWORDS

Brexit, European Union, referendum, Euroscepticism, immigration.

JEL CODE

F55

INTRODUCTION

The socialistic vision of the European Union as propounded by Philipp Bagus in his book "The Tragedy of Euro" postulate a structure of Europe which will be protectionist to the outside but interventionist for the inside, the idea is to create a super state where the centre of the empire will rule over the periphery. The meaning is to develop a state wherein policies will be framed in a manner which will enable the countries belonging to Europe to come together at a platform where they can decide on their countries matters in unity and can negotiate and protect it from outer forces and can have a strong stand on the world's stage. Economic integration as well as free movement of labour, capital and technology is the basic step towards achieving a common market which will enable further integration and will lead towards this vision of Europe. (Phillip Bagus, 2011)

The founding stone of this vision was laid with creation of European Economic Community (EEC) in 1958 by six countries of Europe with increasing economic cooperation between these countries¹.

The referendum of Britain in June 2016 to either exit or to remain within the framework of European Union and its historic result of leaving the EU has come both as a surprise and shock to most of the people not only in Europe but rest of the world. In this light, this paper tries to explore the not so conventional position of Britain and its history of accession to the EU, the events leading to its exit from the European Union, the immediate effects concerning its exit and also posits some future possibilities for both Britain and EU as well.

HISTORY OF BRITAIN JOINING EU

Britain as a country holds one of the central position in EU. If we look into the history of Britain, it was not one of the founding members and it refused the offer to join the European Economic Community in 1957 in the Treaty of Rome. The conservative government of that time felt the EEC was too demanding and decided to back out. After the formation of EU, the founding members enjoyed considerable economic prosperity and it changed the stance of Britain and this led to its decision of joining the EEC.

At first, French president Charles de Gaulle was willing to consider Britain's application but negotiations were to turn sour and in January 1963 Britain's request to join the EEC was vetoed by de Gaulle. De Gaulle's refusal to allow Britain to enter the EEC was based on his dislike of the American government, and as far as de Gaulle was concerned to allow Britain in the EEC would be allowing a country that he came to view as America's Trojan horse. De Gaulle's fear that Britain would jeopardize the Common Agricultural Policy² (CAP) before it was fully implemented could be the main reason for Britain's denied entry to EEC as de Gaulle was persuaded that once Britain was in, the CAP might not survive. An opportunity to veto Britain's application came in the form of a deal negotiated between British Prime Minister Macmillan and President John F. Kennedy. In 1962, Macmillan agreed to the Nassau agreement which meant a commitment from Britain to purchase Polaris missiles from the United States. President De Gaulle, who had refused the deal when it was offered to him, was then in a position to declare that Britain's acceptance of the Nassau agreement proved that it favoured its relationship with the United States over Europe which of course was not compatible with its application for membership to the EEC, hence de Gaulle's veto of Britain's application in January 1963. Britain under labour Prime Minister again applied for EEC membership in 1967. This time also it met with the same fate and De Gaulle again vetoed against it.

After the second attempt, the British government again applied for membership under the leadership of Conservative Prime Minister Edward Heath in 1973 and finally this time French President Georges Pompidou had lifted the veto, hence paving the way for Britain to join the EEC.

Over the course of history, the Britons had always been wary of giving up their power and sovereignty to other countries, so even after joining the Commission they were very much reluctant in adopting the European Communities Act of 1972 which superseded the power of British parliament and stated that the European parliament would have ultimate power to make laws. The driving force for Britain entry into the commission was to enjoy the economic benefits without losing political powers but the consequence was reversed.³

As a result of this factor, the Labour government promised to hold a referendum on the British membership to the EEC if it came into power. It did so in 1975, when it happened and the result was majorly in favour of remain with 67.23% and 32.70% voted to leave.

The labour government then changed its attitude and after that they mostly remained in favour of the Britain remaining in EEC. The conservatives, on the other hand had developed a negative attitude towards it especially after Margaret Thatcher became the Prime Minister in 1979. She supported common market but was against closer political union. She was very reluctant to transfer the powers of the British parliament to the European commission and opposed to the security policy and monetary and currency union. She was against the growing support of the opposition to concentrate more powers in the hands of the commission. She also asserted that Britain contributed to the commission's budget more than the benefits it received from it. She opposed the Common Agricultural Policy, since agriculture is not the major sectors contributing to the economy of Britain. She was against a common social policy. During her power, she continued having a hostile attitude towards EEC and it led to more seclusion of Britain from EEC.

There was a growing support of many conservatives towards the commission and Thatcher was less enthusiastic towards it. After she was replaced and John Major became the new Prime Minister in 1990, he went on to sign the Maastricht Treaty in 1993 which led to the formation of European Union.

BLACK WEDNESDAY

As a part of the European Monetary System, The European Exchange Rate Mechanism was introduced on 13 March 1979. The main purpose was to reduce the volatility in the exchange rates and it was also formulated as a preparatory step for the creation of a monetary union and adoption of a single currency. The ERM was based on a semi-pegged system. Before Euro, the exchange rates were based on the European Currency unit, the European Unit of account, which was determined on the basis of weighted average of the participating member countries currencies. During 1979-1999, the Deutsche mark acted as the European Unit of account and other currencies were in true sense were pegged to it. In order to peg the currencies to Deutsche Mark, the countries had to fundamentally follow closely the interest rates in Germany.

Among much speculation among the ruling conservative party members, UK entered the ERM in 1990 but was compelled to exit from the regime within two years. The important event that happened around the same time was the re-unification of Germany which in true sense determined the fate of UK in ERM. In order to tackle the inflation caused by the event in Germany, the Bundesbank undertook the policy of increasing interest rates. For UK which was already suffering from recession at that time, increasing interest rates further was not considered a prudent policy and rightly so, it abstained from doing that. There was an increasing level of uncertainty in the markets about the fate of pound sterling and lack of trust in the potential of the British government to bring about enough discipline to maintain the stability. The effect was the resulting crash of Sep 16, 1992 also dubbed as Black Wednesday, the estimated cost of which around £3 billion. Along with being an economic failure this was more of a political failure for the conservative government and also became the reason for the ousting of Prime Minister John Major.

MAASTRICHT TREATY

The Maastricht Treaty which was also known as the Treaty of European Union was signed on 7th Feb, 1992. It was a furtherance to the integration of the European community and many additional provisions were added such as in justice and home affairs and a common foreign and security policy were adopted, it also led to the creation of the common monetary union. Britain was one of the countries which had problems in ratifying the treaty along with Denmark and France. John majors, then prime minister signed the treaty amongst rebels from within his own party but decided to opt out of social policy and the common monetary union. The labour government, with Prime Minister Tony Blair, which came to power after Major in 1997 were able to achieve a closer union of the Britain with the EU. He finally brought in the social policy soon after he assumed office, which the labour government even at the time when the Maastricht Treaty was being signed gave its full support. A favourable image of EU was created during his tenure

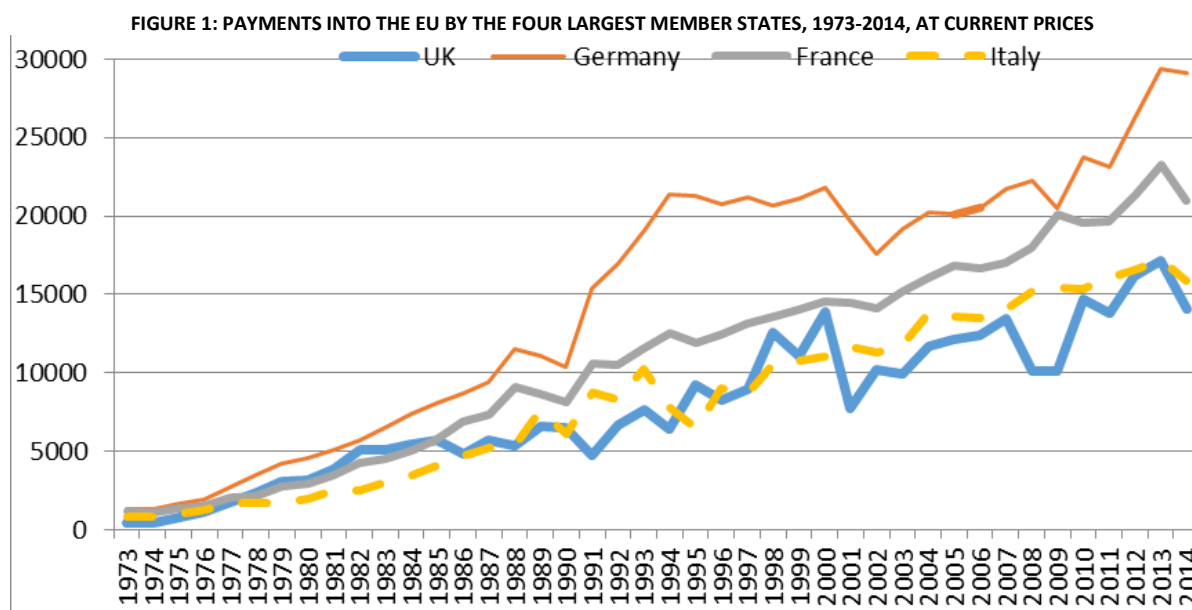
EUROSCEPTICISM

The relation of UK with European Union cannot be said as of being a smooth one. Since the time it planned to join the EEC the outlook towards EU was not entirely a positive one. Britain joined EEC at a time where the benefits of post war boom which was enjoyed by the founding members of EEC had almost ended so immediate economic benefits were not enjoyed. Eurosceptics or the people who were much doubtful with respect to the British membership of the EU were particularly in favour of the policies which gave benefits to the citizens like in the areas of education and defence but they were against policies such as common agricultural policies, which other members countries like France and Italy benefitted more. Having being joined EEC at a much later time the policies favoured the founding members more as compared to Britain. Britain was a net contributor as opposed to other countries which were net beneficiaries. The referendum of 1975 was also an evidence of the growing euroscepticism among the British citizens. Britain joining the ERM was also a rocky path where the ruling party were significantly divided on their approach towards the same. The uncertainty which fuelled Black Wednesday after merely two years of joining in the ERM even exacerbated this scepticism.

Even amongst the positive image which was created after labour government came in to power in 1997, the seeds of Euroscepticism had already been sown into the system where divisions had been created within the parties relating to the stance on EU. Smaller parties like UK Independence Party which were anti-European had started coming into the picture and it became increasingly difficult for the ruling parties to have ignored them.

The main inference which can be gathered from this is that the reason for Britain to develop scepticism for remaining as a member of EU was its reluctance for the shift of power from the British parliament to the European parliament and other European Institutions like European Court of Justice. From the time of Thatcher, the problem actually didn't lie with the economic integration with EU and only enjoying the economic benefits that free markets provide, but it lied to the idea of an ever closer political union. There was always a reluctance in the shift of political power, the members within the parties be it conservatives or labour were against it.

The other reason was the contribution that British provided the EU for being its member which was always a net outflow. It was felt that this was too much cost that was incurred in order to enjoy the benefits of a single market. (See Figure 1)

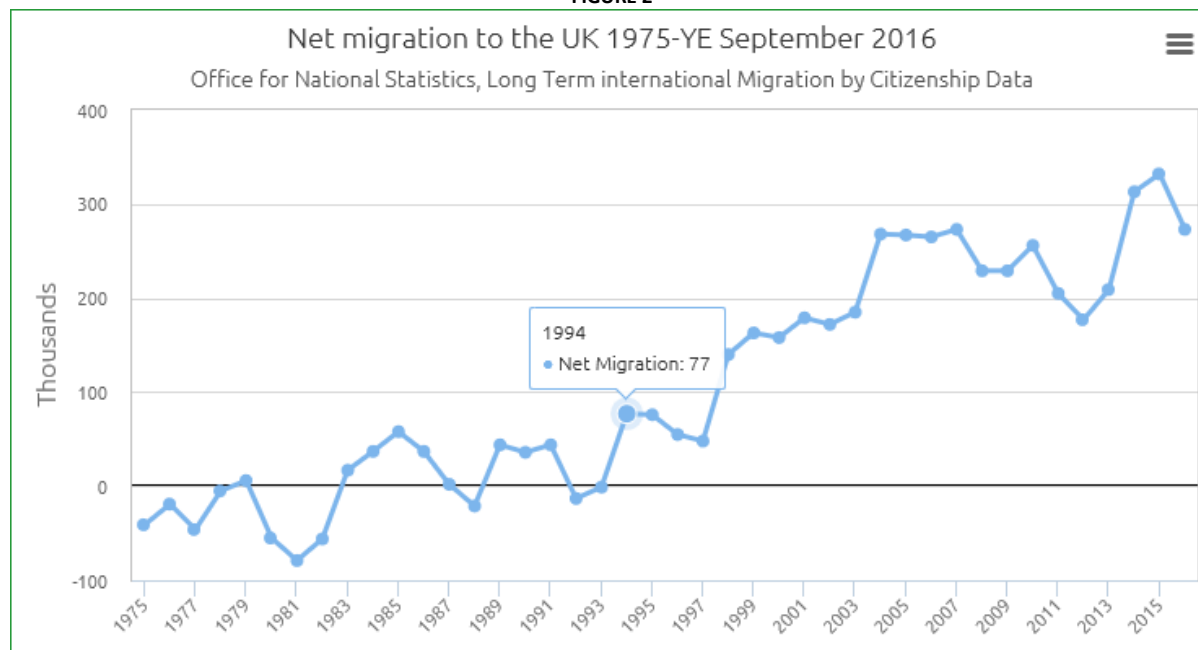


Source: Iain Begg, 2016

The other concern which actually the eurosceptics were able to bring to the fore during 2000s was the problem of growing immigration which had risen continuously since the labour party under Blair came into power and which had a profound effect on the public services and social welfare cost in Britain. (See figure 2) The immigration crisis of the EU fuelled on this negative impact of immigration on the British citizen's perception of remaining in the EU.

The eurosceptics were very much wary of the proposal made by Cameron in his famous Bloomberg speech that it was possible from re-negotiations from EU along with treaty changes it was possible to bring back the power from Brussels from Bruges without having to separate from EU, the view that this can be still done with Britain remaining a member of the EU. With the forthcoming election in 2015, he felt it that it had become absolutely necessary that to cope with the divisions within his party for the Europe issue and the rise of other anti-Europe parties that he had to promise to conduct re-negotiation with the EU on various issues where Euroscepticism had been growing (Goodwin and Milazzo December 2015) and also that the opinion of the British people will have to be taken for moving forward. So he also promised an in-out referendum on EU. Cameron had felt that not asking the British Citizen about their opinion on the matter will encourage the hostility towards EU and ultimately they have to move out of it, leaving tragic repercussions for the Britain economy in the future. (Cameron, 2013)

FIGURE 2



REFERENDUM

Subsequent talks were happening about a Brexit referendum. As Prime Minister David Cameron had taken a pledge in his speech, the referendum was held in June 23 2016. Conservatives MPs had an option to either endorse to be on the remain side or on the leave side. Majority of them chose to be on remain side led by Prime Minister Cameron. Among the leave campaigners most importantly there was Boris Johnson, former mayor of London and David Davis who is currently the Brexit Secretary.

On the labour side majorly there were advocates of remain and campaigned for remaining in the EU led by their leader Jeremy Corbyn.

The SNP (Scottish National Party) backed for remaining in EU. Scotland held a separate referendum where majority of citizens voted for remaining in.

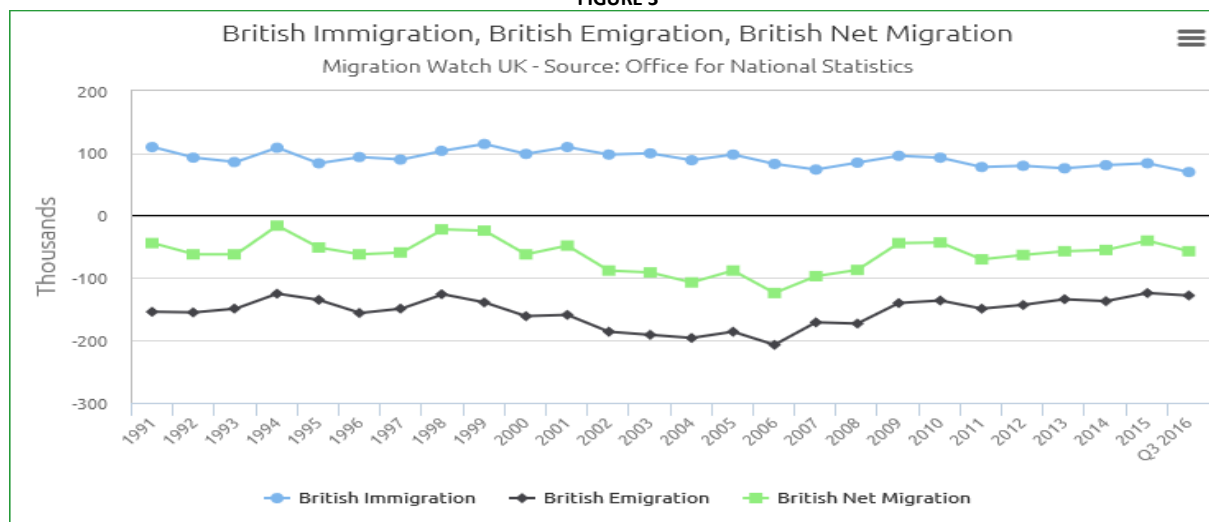
The Liberal democrats had always been majorly supportive of remaining in the EU and they campaigned for the same.

UK Independent Party or UKIP even though didn't held any seats in the parliament, strongly campaigned for leaving the EU, with its party leader Nigel Farage as one of the most important campaigners for leave. They have asserted that the main objective of their party was to campaign against remaining and lead the country towards its freedom from the EU and restoring powers back to their country. (Mark Leonard, 2015)

The remainers campaigned with their main agenda that leaving the EU will produce disastrous result for the British economy and will hamper the economy in a bitter way and that it will lead the citizens towards a dark tunnel with major uncertainties for the future of Britain. It was asserted that the resulting uncertainties will lead to significant volatility in the markets and will have terrible effects on pound. The growth will be hindered and will be pushed back for several years. The foreign investors will be discouraged to invest in the country, which till now has been a very attractive destination.

On the other hand, the leavers made restoring democracy back in to Britain and immigration as their main agendas. Immigration had not been a major issue before 2000s but with more countries joining the union, the net migration to Britain increased to a great extent. There were doubts about the fact that how much the immigrants were contributing to the growth of the country in comparisons to the public welfare and social costs which was incurred. Figure 3 shows the status on British emigration and immigration for the last 25 years.

FIGURE 3



RESULT

The date for the referendum was fixed on 23rd June 2016. The Britain citizens had to answer the question -Should the United Kingdom remain a member of the European Union or leave the European Union? The answer was to leave for almost 52% of the citizens and 48% decided to remain in the European Union. The total turnout was almost 33 million (which is 72.2% of the total voters).

David Cameron who was a supporter of 'remain' campaign resigned from his post following the result as he had already announced. In his last speech as Prime Minister, he agreed that majority of the citizens had chosen otherwise and they must get a leader who they can rely more on in future negotiations with the EU. Soon after the result the discussions began as to who will replace him. Boris Johnson was the frontrunner but surprisingly he didn't put forward his name. Five candidates had put forward their names for the position⁴. After first round of balloting the conservatives MP had selected Theresa May and Andrea Leadsom. Following subsequent withdrawal by Leadsom before the final round of voting, Theresa May became the leader of the party and also the next Prime Minister of Britain.

MAY'S POSITION ON BREXIT

May gave the much anticipated speech on Brexit on January 2017 where she particularly outlined the various objectives she seeks to attain from the subsequent negotiations with EU after article 50 is initiated. She made it clear that she wishes to get a positive deal with EU which will be mutually beneficial for both Britain and EU as she wants to "leave European Union and not Europe". She also particularly said that 'no deal is better for Britain than a bad deal' which means that the deal must be such that it protects the national interests and not such which is intended towards any punitive action for Britain by the remaining EU members. She also made clear that the main reasons for the decision to leave EU is bringing back the power from Brussels to Britain so the European Communities Act will be transformed into British Law and any subsequent changes will be determined through British Parliamentary procedures. She also put forth her point about shifting the powers to make laws from the European Court of Justice. Immigration has been a driving force for Euroscepticism so she accepted outright that immigration policy has to be brought under the control of Britain. She clearly expressed that she wants access to the single market without being a member of single market, a stance which has been termed as a 'hard exit'⁵. Getting access to single market where more trade can happen is one of the main objectives that she wishes to achieve from the negotiations and considers that doing so is economically rational decision for both EU and Britain.

Regarding the notion that providing a very good deal will not be the luxury that will be given to Britain by the remaining member states, she claims that achieving a good deal is possible because EU also needs Britain as much as Britain needs EU especially in the matters of trade, intelligence and security.

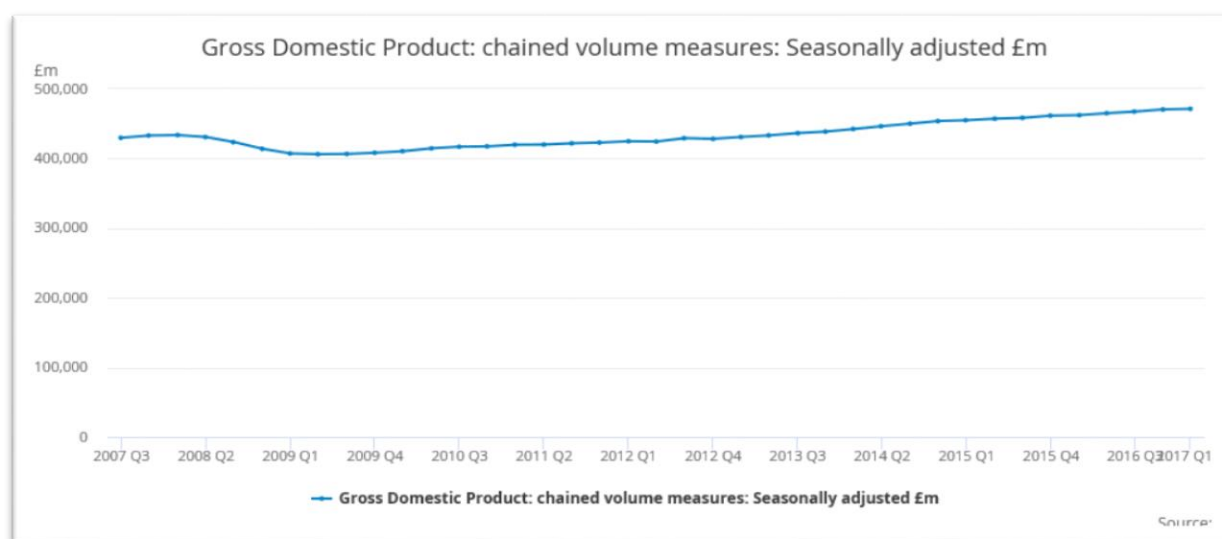
She invoked Article 50 of the Lisbon Treaty in March 29, 2017 which gives Britain two years to settle a deal with EU failing which it will have to leave without any deal in place. The time can be extended if all the remaining member states agree.

PROBABLE IMPLICATIONS OF A BREXIT

Exiting EU is an option which no other country has exercised before Britain and there is no precedent for it. Switzerland was the only country which exited from EEA but it was way back in 1992 and she actually never became a part of the EU. The decision to leave EU following a mass referendum by Britain has created an environment for uncertainty, not only for the British economy and British people but also for many foreign businesses and investors doing business in UK and also for EU citizens residing in Britain. The Remain side had made extreme predictions about the effect that Brexit is going to have on the British economy. British chancellor Osborne and PM Cameron had presented the treasury analysis where it was forecasted that Brexit will have a disastrous effect on the British Economy where the long term Brexit cost will make households poorer by £ 4300 per household. Huge uncertainties will drive Britain into a recession and the GDP will be reduced by almost 3%. They also anticipated that the pound will drop by almost 12-15%. (Cameron, 2013) There will be associated costs of inflation and rising import prices as a result of it. Many economists and supporters of leave campaign have protested this anticipation as being completely misleading. The next section shows how well these forecasts have been true.

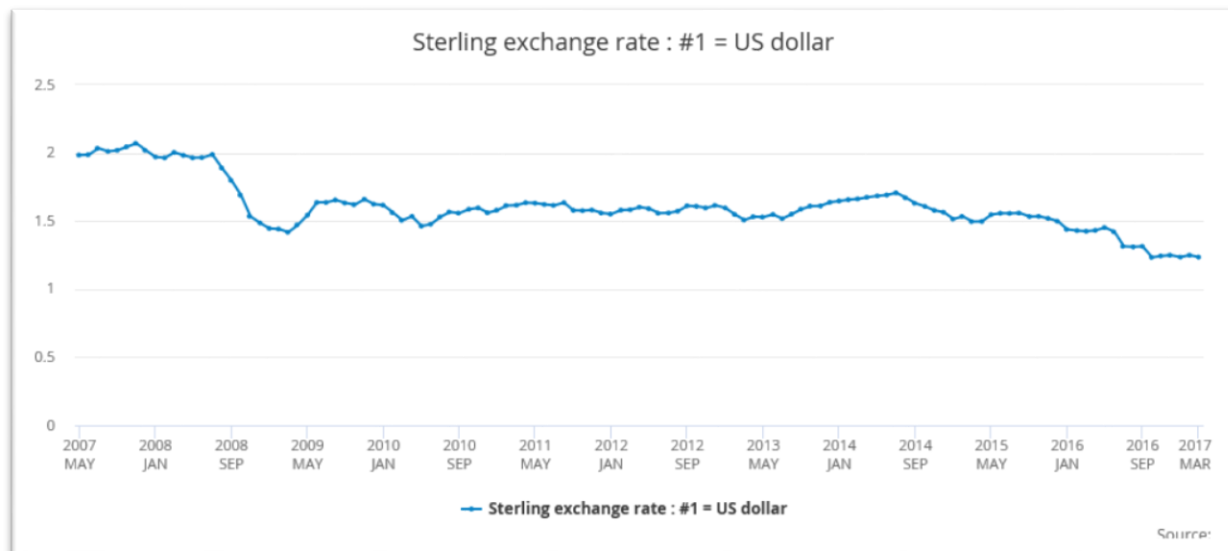
AN OVERVIEW OF SHIFTS IN THE GDP

Figure 4 shows the quarterly shifts in GDP for Britain for the last ten years. The growth has been slump for Britain's GDP owing to the Eurozone crisis when there was a negative growth starting from the second quarter of 2008 to the second quarter of 2009 after that there was a slight revision. After a short recovery there was again a negative rise in second and fourth quarters of 2012. After that there has not been so much of dispersion in the trend and not much difference before and after the referendum. Currently, if we see for the last quarter of 2017 the change in GDP has been around 0.2%. The prediction which was made for a deep recession immediately after the referendum if the vote was negative, has not materialised as we can see changes in GDP before and after has not been much different.

FIGURE 4**POSITION OF POUND STERLING WITH RESPECT TO US \$ AND EURO****AN OVERVIEW OF POUND STERLING TO US \$**

As we can see from the graph (Fig 5), the pound to US \$ has been fluctuating over the last ten years. Significant devaluation happened as a result of Eurozone crisis in 2008. After the result of referendum was announced in June 2016, the rate fell around 7.51% immediately in the following month and presently it has devalued for about 13% from that time. The predictions made by Cameron in his speech has somewhat materialised if we consider the changes in this respect.

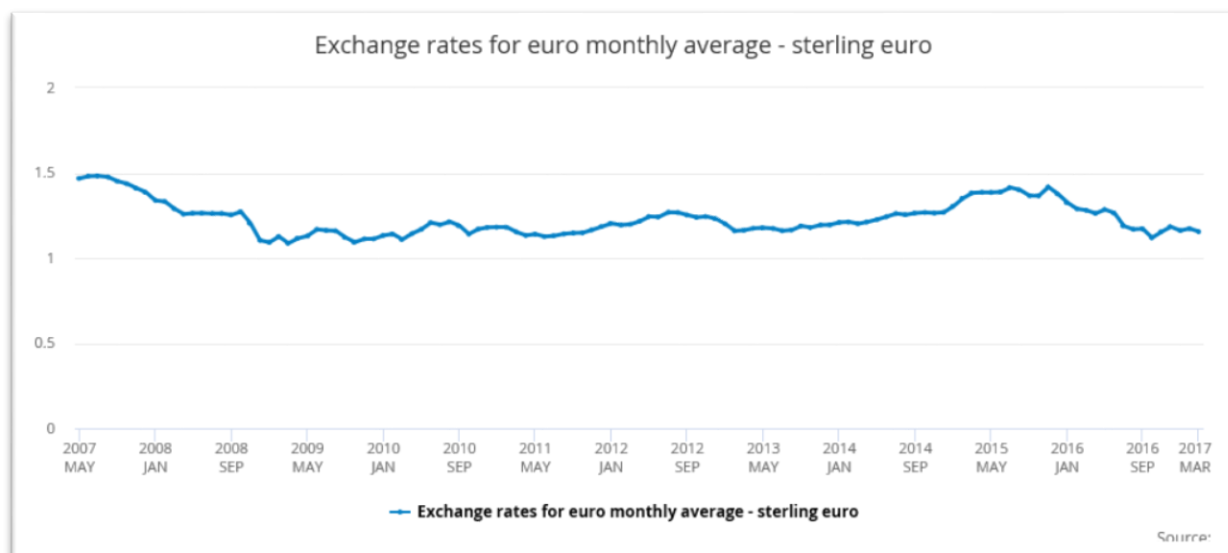
FIGURE 5



AN OVERVIEW OF POUND STERLING TO EURO €

With respect to the fluctuation with respect to Euro figure-6 can be observed. Over the last ten years there have been routine fluctuations in the rate of exchange with the rate falling significantly during the Eurozone crisis. It had increased briefly in the beginning of 2016 but again started falling after that. The rate has been falling since the referendum and it reached the lowest level at 8.68% since then.

FIGURE 6



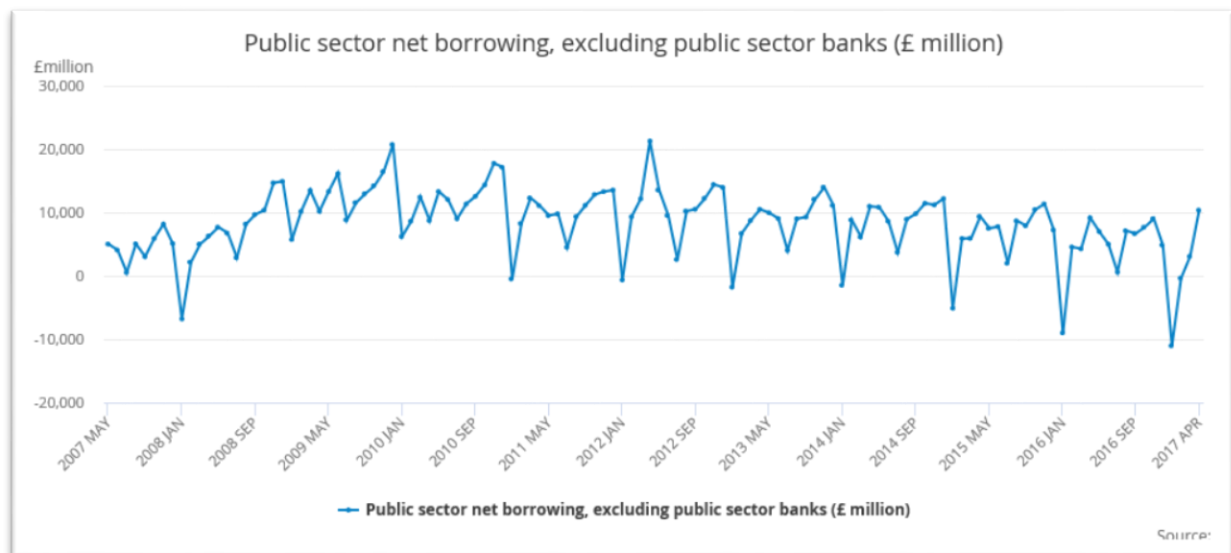
AN OVERVIEW OF THE INFLATION (BASED ON CPI⁶)

The level of inflation for last five years data we see the pattern of rise and fall of consumer price levels. The figure 7 shows the percentage change in CPI over 12 months period for the last five years. We can see that the level was highest during June 2013 when there has a record 2.6 % change in the levels of inflation. It reduced drastically in mid 2015 amidst fall in oil and fuel prices, again to slowly rise up after that. During the referendum in June 2016 the % change in inflation was only about 0.8% which has gradually increased and in last updated data in April 2017 to almost 2.6%. So, the prediction made of a year long inflation has proved completely absurd.

FIGURE 7



FIGURE 8



AN OVERVIEW OF CURRENT ACCOUNT BALANCE

The graphs depicted in Figure 9 and 10 show the current account balance for a ten year period. A positive balance depicts surplus which is if inflows have been more than outflows. We can see that there have been cyclical fluctuations in the balance over the stated time. The balance was almost zero during the second quarter of 2011. The level after that has gradually increased. In the second quarter of 2016, that was around the time of referendum it was around 20,000 million pounds which is around 4.3% of GDP at that time. If we see the data in the last quarter of 2016 we see the balance has decreased to 12,000 million pounds which is almost 2.4% of GDP. The improvement in balance means there has been less borrowing needs for the government which can be precisely seen from the second graph given below where we can see Public sector borrowing for a period of ten years. We see at the time of referendum there was a negative borrowing position owing to the fall in the current account balance. We can observe here that because of devaluation of the currency, the short term position became better as import were costlier and exports cheap. So short term position has been beneficial for the government.

FIGURE 9

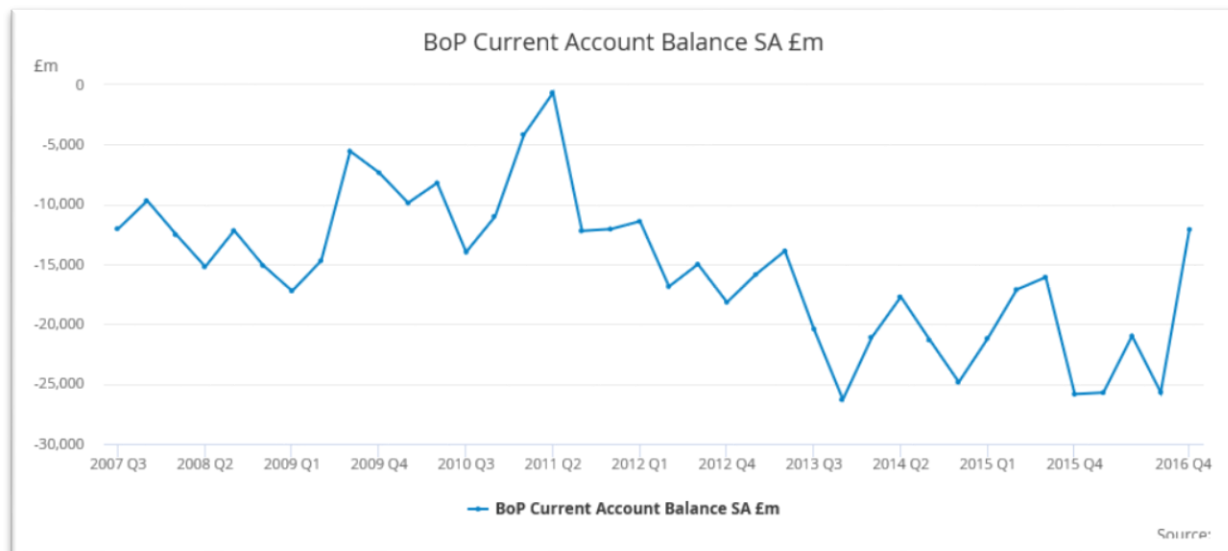
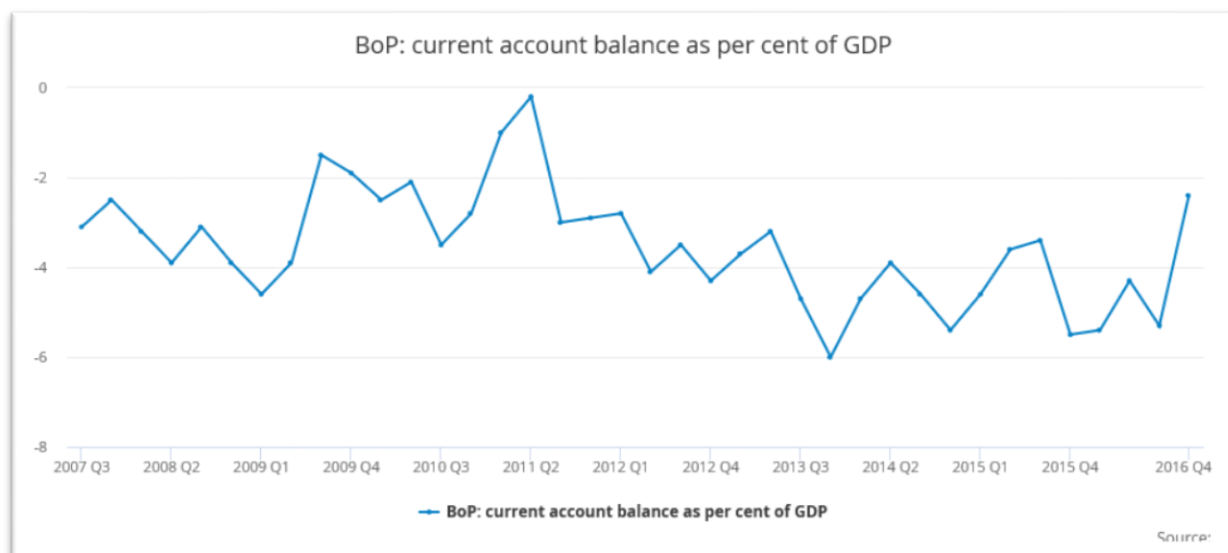


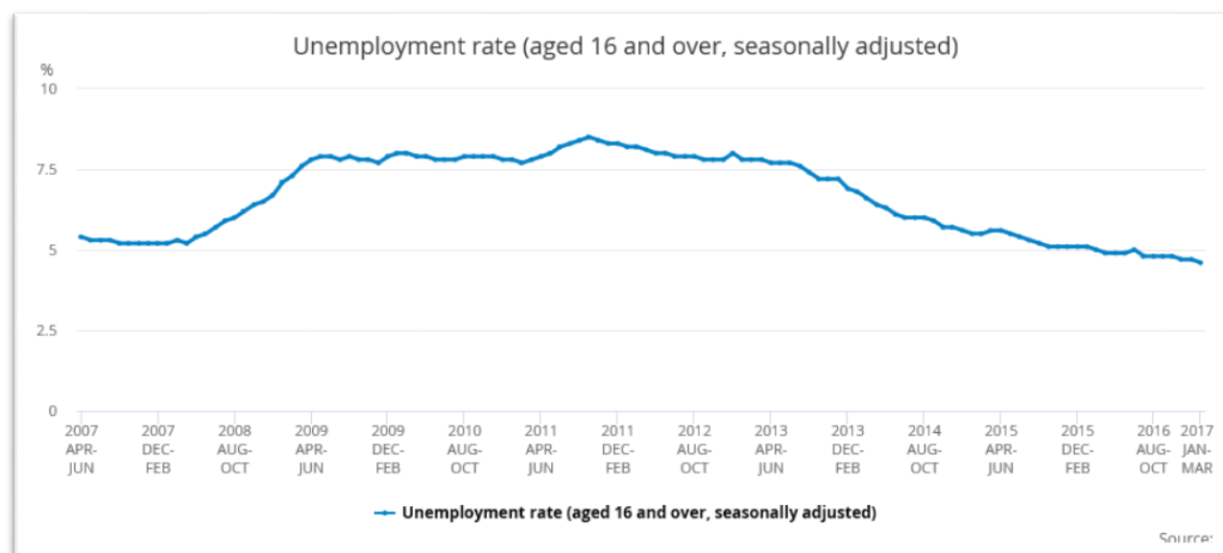
FIGURE 10



OVERVIEW OF THE LEVEL OF UNEMPLOYMENT

If we see the graph given below in Figure-11 it depicts the unemployment rate for age 16 and above, we see the level of unemployment has been highest during Sep-Nov 2011 where it was almost 8.5%. After that period amidst fluctuation it has reduced. At the time of referendum it was around 5% and currently the latest updated figure being 4.6%. The prediction which was that the unemployment may increase to a great extent resulting from a year long recession has not really taken place in reality so far.

FIGURE-11



CONCLUSION

The relation between Britain and EU as can be seen is a very tricky one, for other EU member countries has been a troublesome aspect since the time when it joined the EU. The process of joining in 1973 also cannot be said to be smooth one and was amidst too much chaos in part of Britain as well as EU where the opinions of parties and people alike have been mixed. Many Prime Ministers career have been truly difficult because of the Europe issue like Margaret Thatcher, John Majors, Michael Foot and even David Cameron. The important events which are really important in context of Britain's relation with the EU have been the choice of not being one of the founding member of EEC, its subsequent joining after it was vetoed out twice by France, its decision to join the European Exchange Rate mechanism and subsequently withdrawing from it and the Euro zone economic and migration crisis. Taking a decision to leave the EU is a culmination of all the anti-EU sentiments in the country that have been accumulated on grounds of losing sovereignty, immigration and many more issues. The future course of action however, will be a tricky one, it has to be seen that whether the proposal made by the current Prime Minister about securing a deal that will be mutually beneficial to Britain and as well the other remaining member countries in the EU can be fulfilled. Whether the negotiations will be completed in due course of the period of two years, what will be the perception of other member countries, whether they will be willing to extend the time period or Britain will not be able to secure any deal, how the economic fundamentals will shape up in the years to come, whether the predictions about economic and political consequences made by the pro-Europeans will materialise in the long run, what will be position on Scottish Independence. The answer to these questions can only be known in due course of time but it can be said that whatever may be answer, it will be historic event not only for Britain but also for Europe which has lost one of its important trading member and it can also be said that the result of all the negotiations will have a great impact on the future of the remaining countries in the European Union.

NOTES

¹The founding members as their main objective. Britain was a late entrant to this group and joined only in 1973. EEC subsequently became European Union only with Maastricht Treaty in 1993.

²The Common Agricultural Policy is the agricultural policy of EU where it lays down systems for agricultural subsidies and other issues. It was put into place in 1962 and has undergone many revisions since then.

³The reason for the economic slowdown was basically the oil crisis of 1970s which affected the European countries alike

⁴Justice Secretary Michael Gove, Work and Pensions Secretary Stephen Crabb, former Defence Secretary Liam Fox, Minister of State for Energy and Climate Change Andrea Leadsom, and Home Secretary Theresa May

⁵Since remaining a member of single market would not only mean free trade but also free movement of people, technology and capital which are the areas Britain wants to regain its power to make its own policies.

⁶CPI= Consumer Price Index

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ROLE OF BUYER CHARACTERISTICS IN ONLINE SHOPPING

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ABSTRACT

Characteristics of buyers are an important constituent that can influence actual online buying decision. Some of the potential factors affecting the buyer characteristics include cultural factors, social factors, demographic factors and psychological factors. While Online Buyers have the distinctive ability to extract the advantages offered in e-Retailing, a survey was conducted and data were collected from three different sampling areas on the basis of social articulation levels. The results of the collected data reveal that Intensity levels of Actual Online Buying among Online Buyers is not found to be varying significantly with other online buyer characteristics such as Perceived Security on e-Payment and Intensity of Internet usage. However, it is found to be varying significantly with Preference levels for Physical Payment among Online Buyers. Also, Propensity of Online Buying is found to be varying significantly with other Online Buyer characteristics such as Perceived Security on e-Payment and Preference for Physical Payment among Online Buyers. Further, understanding level of e-Shopping among Online Buyers is not found to be varying significantly with other online buyer characteristics such as Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment. However, it is found to be varying significantly with online buyer characteristics such as Intensity of Internet usage and Perceived Security on e-Payment among Online Buyers.

KEYWORDS

online buyer, online shopping, e-retailing and e-commerce.

INTRODUCTION**PROFILE OF ONLINE BUYERS IN INDIA**

At present Internet in India predominantly serves communication purposes more than its commercial utilities for its users and the conversions of these large user base of Internet as Online Buyers requires effort from various e-Commerce players in the market (Rasool and Rajmohan, 2015). However, the e-Commerce ventures in India is largely restricted to the users of Internet who should be willing to participate in the e-Commerce ventures. While youth populations constitute a major chunk of Internet users in India, the lack of IT knowledge prevents larger population out of the reach of Internet and so much so with its benefits. While many of the commercial ventures through Internet have succeeded in recent times, some of the e-Governance applications like Passport services, Educational and Recruitment services are thrusting citizens to adopt Internet as the necessary form of utility. Further, online buying is viewed fashionable reflecting the social standing and hence, forces many people to adopt Internet. The English as major form of Internet language in India has made many global e-Learning facilities to succeed on commercial terms.

The success of e-Commerce ventures in specific geographical regions is largely based on the availability of e-Payment facilities. At present in India, there is tremendous growth on the adoption of various forms of e-Payments like credit cards, debit cards and Internet banking applications. These developments augment well into the opportunities of various e-Commerce ventures. Already many of the e-Commerce ventures like e-Retailing, e-financial services, e-Ticketing, e-Booking services and e-Recharging services have shown significant levels of growth in India. Further, the increasing numbers of mobile devices, decreasing cost of smart phones and the availability of mobile Internet service offers enormous growth prospects for various forms of these e-Commerce ventures. Also, many of the exiting e-Commerce ventures in India have succeeded in deploying mobile applications harnessing to the need of mobile users. Given these overall indicators, the present scenario offers tremendous growth prospects for various e-Commerce ventures in India.

ONLINE BUYER CHARACTERISTICS IN E-RETAILING

Buyer characteristics can be understood as the personal characteristics of the buyers that can influence the actual buying decision (Aramstrong, 2015). Some of the potentials factors affecting the buyer characteristics include cultural factors, social factors, demographic factors and psychological factors. The potential Online Buyer characteristics that are found to be influencing buyer participation in e-Retailing include Intensity of Online Buying, Intensity of Internet usage, Online Payment Concerns and Understanding levels of e-Shopping (Rajmohan and Sayel, 2011). While Online Buyers have the distinctive ability to extract the advantages offered in e-Retailing, the characteristic identified varies significantly among them. The varied level of understanding on e-Shopping causes limitations in exploiting the fullest advantages of e-Retailing (Keisidou et al., 2011). Similarly, the Online Payment concerns causes variations in the Perceived Security on e-Payment systems which in turn affects the online purchasing intentions very often. Further, varied intensity levels in Internet surfing which is a fundamental skill needed on the part of the Online Buyers gives scope for variations in exploiting the fullest advantages of e-Retailing features (Luo and Zhang, 2012). Also, Online Buyers will have natural variations in the Intensity levels of Online Buying due to various reasons. For instance, varying needs, economic factors, demographic factors and Service Quality levels of e-Retailers could be some of the potential reasons contributing towards these variations. The details of the aspects constituting these Online Buyer characteristics as follows;

1) Intensity of Online Buying

Intensity of Online Buying represents the actual volume of Online Buying made by the Online Buyers in a specific period. Some of the key parameters determining the intensity levels of Online Buying include the quantum of money spent and the actual number of online purchases over a period, number of online shops dealt by the Online Buyers over a period and the possibilities of initiating online purchase in future.

2) Intensity of Internet usage

Intensity of Internet usage represents the actual time spent by the Online Buyers in accessing Internet for a specific period. Some of the key parameters determining this intensity levels include Internet usage experience, frequency of Internet usage and the actual time spent on accessing Internet in a day.

3) Online Payment concerns

Online Payment concern is the inhibitions on the part of the Online Buyers to initiate e-Payment without the fear of security breach in the Internet mediated environment. Some of the popular e-Payment systems in India include credit card, debit card and net banking applications. Most of the e-Retailing enterprises in India are providing facilities to pay through COD (Cash on Delivery) options for the orders initiated through e-Retailing websites.

4) Understanding level of e-Shopping

Understanding level of e-Shopping is the fluency levels of Online Buyers to initiate purchase through e-Retailing web site and pay for it in the Internet mediated environment. Some of the key parameters determining these understanding levels include hedonic experience in the website, ability to manage user account in the e-Retailing portal, knowing the procedure to redeem promotional codes; gift vouchers; loyalty points etc., ability to track the orders and knowing the product return procedure.

OBJECTIVE OF THE STUDY

To test the variations among Online Buyer characteristics.

HYPOTHESIS

H1	Propensity of Online Buying does not vary with Perceived Security on e-Payment and Preference for Physical Payment.
H2	Actual Online Buying does not vary with Perceived Security on e-Payment and Intensity of Internet usage.
H3	Actual Online Buying does not vary with Preference for Physical Payment.
H4	Understanding levels of e-Shopping does not vary with Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment.
H5	Understanding levels of e-Shopping does not vary with Intensity of Internet usage and Perceived Security on e-Payment.
H6	Perceived Security on e-Payment, Preference for Physical Payment and Propensity of Online Buying do not vary with different Intensity of Internet usage.

The present study arises due to the growing volumes of e-Retailing activities in recent times. Also, the market scenario in India offers tremendous growth prospects for e-Retailing and related services with increasing levels of disposable income among buyers. While many studies in recent past have focused on market centric and customer centric aspects on e-Retailing, buyer characteristic aspects still remain less improvised in the literature. In this concern, survey was conducted and data were collected from 703 online buyers from three different states of India following the guidelines of diffusion of Innovation theory (Roger, 1983) and random sampling. The data collected were coded and transferred in to Statistical package for social science (SPSS) for the purpose of analysis with One-way ANOVA.

RESULTS AND DISCUSSIONS**INSTRUMENT VALIDITY**

Standardized scale for measuring Online Buyer characteristics such as Intensity of Online Buying, Intensity of Internet usage, Online Payment concerns and Understanding levels of e-Shopping are far from maturity. Hence, to reduce variables to a smaller set of summary variables and to identify the structure of relationship between respondents and variables of online buying characteristics, Exploratory Factor Analysis (EFA) was performed. In this regard, 6 items considered for measuring Intensity of Online Buying, 6 items considered for measuring Online Payment Concerns, 4 items considered for measuring Intensity of Internet usage and 11 items considered for measuring Understanding level of e-Shopping (See Appendix-1). Several well-recognized criteria for the factorability on the basis of item correlations were used separately for each factor. The reasonable factorability of the model could be ensured with the pattern of correlations obtained among the items. Also, the Kaiser-Meyer-Olkin measure of sampling adequacy for each online buying characteristics was above the recommended value of 0.60 (Nunnally and Bernstein, 1994) and the test of sphericity was significant at 5 percent level.

During the repeated procedures of factor analysis on the basis of Principal Component Analysis for measuring the Intensity of Online Buying, an item with a factor loading value of below 0.5 was eliminated and the remaining 5 items got extracted and loaded in two factors. After examining the details of the items loaded in each of the factor, the factor 1 was named as 'Propensity of Online Buying' and the factor 2 was named as 'Actual Online Buying'. Similarly, for measuring Online Payment Concerns, two items got eliminated and the remaining 4 items got extracted and loaded in two factors. After examining the details of the items loaded in each of the factor, the factor 1 was named as 'Perceived Security on e-Payment' and the factor 2 was named as 'Preference for Physical Payment'. Also, for measuring Intensity of Internet usage, an item with a factor loading value of below 0.5 was eliminated and the remaining 3 items got extracted and loaded in single factor and for Understanding level of e-Shopping, four items with a factor loading value of below 0.5 was eliminated and the remaining 7 items got extracted and loaded in single factor (See Appendix-2).

VARIATIONS IN THE PROPENSITY OF ONLINE BUYING

The variations in the Propensity of Online Buying between different levels of Perceived Security on e-Payment, and between different levels of Preference for Physical Payment among the Online Buyers are defined in hypothesis-1, taken up and its results are shown in the table-1, as an outcome of one way ANOVA model conceptualized. Perceived Security on e-Payment and Preference for Physical Payment were categorized into three groups such as low levels, medium levels and high levels for identifying variations in the Propensity of Online Buying. From the results of this one way ANOVA model shown in table-1, it can be inferred that the F values of 5.671 and 5.942 corresponding to Propensity of Online Buying on each different Intensity levels of Perceived security on e-Payment and on each different levels of Preference for Physical Payment; are found to be significant at 5 percent level. Hence, hypothesis-1 is rejected at 5 percent level of significance. This result clearly shows that there exist significant variations in the Propensity of Online Buying between different levels of Perceived security on e-Payment and between different levels of Preference for Physical Payment among Online Buyers. In order to identify the exact variations between different levels of Perceived security on e-Payment and between different levels of Preference for Physical Payment, multiple comparison was made with LSD method and its results are provided along with table-1.1, where the variations are noted as follows.

Propensity of Online Buying between different Levels of Perceived e-Payment Security

Based on the value of mean differences found in the table-1.1, it can be inferred that the highest Propensity of Online Buying is identified with low Perceived Security on e-Payment among the Online Buyers, the next higher levels of Propensity of Online Buying is identified with medium Perceived Security on e-Payment and the low levels of Propensity of Online Buying is identified with high Perceived Security on e-Payment among the Online Buyers.

From the details provided in the table-1.1, it can be noted that, the variations in the Propensity of Online Buying between low Perceived e-Payment Security and high Perceived e-Payment Security are found to be significant at 5 percent level. Also, the variations in the Propensity of Online Buying between medium Perceived e-Payment Security and high Perceived e-Payment Security are found to be significant at 5 percent level among Online Buyers. However, the variations in the Propensity of Online Buying between low Perceived e-Payment Security and medium Perceived e-Payment Security are not found to be significant at 5 percent level among Online Buyers.

TABLE 1: RESULTS OF ANOVA FOR HYPOTHESIS-1

Dependent Variable	Details of sources of grouping		Sum of Squares	Df	Mean Square	F
Propensity of Online Buying	Perceived Security on e-Payment as Source of Grouping	Between Groups	11.228	2	5.614	5.671*
		Within Groups	693.000	700	0.990	
		Total	704.228	702		
	Preference for Physical Payment as source of Grouping	Between Groups	11.757	2	5.879	5.942*
		Within Groups	692.471	700	0.989	
		Total	704.228	702		

TABLE-1.1: RESULTS OF MULTIPLE COMPARISONS FOR HYPOTHESIS-1

	Multiple Comparisons					
	Details of sources of grouping	(I) e-Payment	(J) e-Payment	Mean Difference (I-J)	Std. Error	Sig.
Propensity of Online Buying	Perceived Security on e-Payment as Source of Grouping	Low	Medium	0.022	0.101	0.824
			High	0.267*	0.095	0.005
		Medium	Low	-0.022	0.101	0.824
			High	0.245*	0.086	0.005
		High	Low	-0.267*	0.095	0.005
			Medium	-0.245*	0.086	0.005
	Preference for Physical Payment as source of Grouping	(I) Physical Payment	(J) Physical Payment	Mean Difference (I-J)	Std. Error	Sig.
		Low	Medium	-0.243	0.130	0.062
			High	0.168*	0.079	0.034
		Medium	Low	0.243	0.130	0.062
			High	0.412*	0.128	0.001
		High	Low	-0.168*	0.079	0.034
			Medium	-0.412*	0.128	0.001

Independent Variable: Perceived Security on e-Payment and Preference for Physical Payment;

*Significant at 5 percent level

Source: Computed from primary data

Propensity of Online Buying between different Levels of Preference for Physical Payment

Based on the value of mean differences found in the table-1.1, it can be inferred that the highest Propensity of Online Buying is identified with medium Preference for Physical Payment among the Online Buyers, the next higher levels of Propensity of Online Buying is identified with low Preference for Physical Payment and the low levels of Propensity of Online Buying is identified with high Preference for Physical Payment among the Online Buyers.

From the details provided in the table-1.1, it can be noted that, the variations in the Propensity of Online Buying between low Preference for Physical Payment and high Preference for Physical Payment are found to be significant at 5 percent level. Also, the variations in the Propensity of Online Buying between medium Preference for Physical Payment and high Preference for Physical Payment are found to be significant at 5 percent level among Online Buyers. However, the variations in the Propensity of Online Buying between low Preference for Physical Payment and medium Preference for Physical Payment are not found to be significant at 5 percent level among Online Buyers.

VARIATIONS IN ACTUAL ONLINE BUYING

The variations in the Intensity levels of Actual Online Buying between different levels of Preference for Physical Payment among the Online Buyers are defined in hypothesis-3, taken up and its results are shown in the table-2, as an outcome of one way ANOVA model conceptualized. Preference for Physical Payment were categorized into three groups such as low levels, medium levels and high levels for identifying variations in the Intensity levels of Actual Online Buying. From the results of this one way ANOVA model shown in table-2, it can be inferred that the F value of 4.159 corresponding to Intensity levels of Actual Online Buying on each different levels of Preference for Physical Payment; are found to be significant at 5 percent level. Hence, hypothesis-3 is rejected at 5 percent level of significance. This result clearly shows that there exist significant variations in the Intensity levels of Actual Online Buying between different levels of Preference for Physical Payment among Online Buyers. In order to identify the exact variations between different levels of Preference for Physical Payment, multiple comparison were made with LSD method and its results are provided along with table-2.1, where the variations are noted as follows.

TABLE 2: RESULTS OF ANOVA FOR HYPOTHESIS-3

Variable	Preference for Physical Payment as source of Grouping	Sum of Squares	Df	Mean Square	F
Actual Online Buying	Between Groups	22.928	2	11.464	4.159*
	Within Groups	1929.576	700	2.757	
	Total	1952.504	702		

Independent Variable: Preference for Physical Payment; *Significant at 5 percent level

Source: Computed from primary data

TABLE-2.1: RESULTS OF MULTIPLE COMPARISONS FOR HYPOTHESIS-3

Variable	(I) P-payment	(J) P-payment	Mean Difference (I-J)	Std. Error	Sig.
Actual Online Buying	Low	Medium	0.503*	0.217	0.021
		High	-0.115	0.133	0.388
	Medium	Low	-0.503*	0.217	0.021
		High	-0.618*	0.214	0.004
	High	Low	0.115	0.133	0.388
		Medium	0.618*	0.214	0.004

Independent Variable: Preference for Physical Payment; *Significant at 5 percent level

Source: Computed from primary data

Intensity levels of Actual Online Buying between different Preference levels for Physical payment

Based on the value of mean differences found in the table-2.1, it can be inferred that the highest Intensity levels of Actual Online Buying is identified with high Preference for Physical Payment among the Online Buyers, the next higher Intensity levels of Actual Online Buying is identified with low Preference for Physical Payment and the lower Intensity levels of Actual Online Buying is identified with medium Preference for Physical Payment among the Online Buyers.

From the details provided in the table-2.1, it can be noted that, the variations in the Intensity levels of Actual Online Buying between low preference and medium Preference for Physical Payment are found to be significant at 5 percent level. Also, the variations in the Intensity levels of Actual Online Buying between medium preference and high Preference for Physical Payment are found to be significant at 5 percent level among Online Buyers. However, the variations in the Intensity levels of Actual Online Buying between low preference and high Preference for Physical Payment are not found to be significant at 5 percent level among Online Buyers.

Insignificant variations in Actual buying

The variations in the Intensity levels of Actual Online Buying between different Perceived Security on e-Payment and Intensity of Internet usage among Online Buyers is defined in hypothesis-2, taken up and its results are shown in the table-3, as an outcome of one way ANOVA model conceptualized.

TABLE 3: RESULTS OF ANOVA FOR HYPOTHESIS-2

Dependent variable	Detail of Grouping Variables		Sum of square	Df	Mean Square	F	Sig.
Actual Online Buying	Perceived Security on e-Payment	Between Groups	7.084	2	3.542	1.274	0.280
		Within Groups	1945.420	700	2.779		
		Total	1952.504	702			
	Intensity of Internet usage	Between Groups	6.007	2	3.003	1.194	0.303
		Within Groups	1760.204	700	2.515		
		Total	1766.211	702			

Independent Variable: Perceived Security on e-Payment and Intensity of Internet usage;

Source: Computed from primary data

From the results of this one way ANOVA, it can be inferred that the F values of 1.274 and 1.194 corresponding to the factors Perceived Security on e-Payment and Intensity of Internet usage considered as grouping variables are not found to be significant at 5 percent level with, Intensity levels of Actual Online Buying among the Online Buyers. Based on the results shown in table-3, it can be confirmed that the factor such as Intensity levels of Actual Online Buying is not found to be varying significantly with different Perceived Security on e-Payment and Intensity of Internet usage among Online Buyers. Hence the hypothesis-2 is accepted.

VARIATIONS IN UNDERSTANDING LEVELS OF e-SHOPPING

The variations in the Understanding levels of e-Shopping between different levels of Intensity of Internet usage and between different levels of Perceived Security on e-Payment among the Online Buyers are defined in hypothesis-5, taken up and its results are shown in the table-4, as an outcome of one way ANOVA model conceptualized. Intensity of Internet usage and Perceived Security on e-Payment were categorized into three groups such as low levels, medium levels and high levels for identifying variations in the Understanding levels of e-Shopping. From the results of this one way ANOVA model shown in table-4, it can be inferred that the F values of 10.681 and 33.018 corresponding to Understanding levels of e-Shopping on each different Intensity levels of Internet usage and on each different levels of Perceived Security on e-Payment; are found to be significant at 5 percent level. Hence, hypothesis-5 is rejected at 5 percent level of significance. This result clearly shows that there exist significant variations in the Understanding levels of e-Shopping between different Intensity levels of Internet usage and between different levels of Perceived Security on e-Payment among Online Buyers (Eastlick et al., 2006). In order to identify the exact variations between different Intensity levels of Internet usage and between different levels of Perceived Security on e-Payment, multiple comparison was made with LSD method and its results are provided along with table-4.1, where the variations are noted as follows.

Understanding of e-Shopping between different Intensity Levels of Internet Usage

Based on the value of mean differences found in the table-4.1, it can be inferred that the highest Understanding levels of e-Shopping is identified with high Intensity Internet Usage among the Online Buyers, the next higher levels of Understanding in e-Shopping is identified with medium Intensity Internet usage and the low levels of Understanding of e-Shopping is identified with low Intensity Internet Usage among the Online Buyers.

From the details provided in the table-4.1, it can be noted that, the variations in the Understanding levels of e-Shopping between low intensity and medium Intensity Internet usage are found to be significant at 5 percent level. Also, the variations in the Understanding levels of e-Shopping between low intensity and high Intensity Internet usage are found to be significant at 5 percent level among Online Buyers. However, the variations in the Understanding levels of e-Shopping between medium Intensity and high Intensity Internet usage are not found to be significant at 5 percent level among Online Buyers.

Understanding of e-Shopping between different Levels of Perceived e-Payment Security

Based on the value of mean differences found in the table-4.1, it can be inferred that the highest Understanding levels of e-Shopping is identified with medium levels of Perceived Security on e-Payment among the Online Buyers, the next higher levels of Understanding in e-Shopping is identified with high levels of Perceived Security on e-Payments among the Online Buyers and the low levels of Understanding of e-Shopping is identified with low levels of Perceived Security on e-Payment among the Online Buyers.

TABLE 4: RESULTS OF ANOVA FOR HYPOTHESIS-5

Dependent Variable	Details of sources of groping		Sum of Squares	Df	Mean Square	F
Understanding level of e-Shopping	Intensity of Internet usage as Source of Grouping	Between Groups	194.450	2	97.225	10.681*
		Within Groups	6371.823	700	9.103	
		Total	6566.273	702		
	Perceived Security on e-Payment as Source of grouping	Between Groups	566.051	2	283.025	33.018*
		Within Groups	6000.222	700	8.572	
		Total	6566.273	702		

Independent Variable: Internet usage and Perceived Security on e-Payment; *Significant at 5 percent level

Source: Computed from primary data

TABLE-4.1: RESULTS OF MULTIPLE COMPARISONS FOR HYPOTHESIS-5

Multiple Comparisons						
Understanding level of e-Shopping	Details of sources of grouping	(I) Intensity of Internet usage	(J) Intensity of Internet usage	Mean Difference (I-J)	Std. Error	Sig.
	Intensity of Internet usage as Source of grouping	Low	Medium	-0.616*	0.303	0.043
			High	-1.185*	0.257	0.000
		Medium	Low	0.616*	0.303	0.043
			High	-0.569	0.314	0.070
		High	Low	1.185*	0.257	0.000
			Medium	0.569	0.314	0.070
	Perceived Security on e-Payment as Source of grouping	(I) e-Payment Low	(J) e-Payment Medium	-2.190*	0.297	0.000
			High	-2.036*	0.281	0.000
		Medium	Low	2.190*	0.297	0.000
			High	0.154	0.255	0.546
		High	Low	2.036*	0.281	0.000
			Medium	-0.154	0.255	0.546

Independent Variable: Internet usage and Perceived Security on e-Payment; *Significant at 5 percent level

Source: Computed from primary data

From the details provided in the table-4.1, it can be noted that, the variations in the understanding levels of e-Shopping between low levels of Perceived Security on e-Payment and medium levels of Perceived Security on e-Payment are found to be significant at 5 percent level. Also, the variations in the Understanding levels of e-Shopping between low levels of Perceived Security on e-Payment and high levels of Perceived Security on e-Payment are found to be significant at 5 percent level among Online Buyers. However, the variations in the Understanding levels of e-Shopping between medium levels of Perceived Security on e-Payment and high levels of Perceived Security on e-Payment are not found to be significant at 5 percent level among Online Buyers.

Insignificant variations in Understanding levels of e-Shopping

The variations in the Understanding levels of e-Shopping between different Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment among Online Buyers is defined in hypothesis-4, taken up and its results are shown in the table-5, as an outcome of one way ANOVA model conceptualized.

TABLE-5: RESULTS OF ANOVA FOR HYPOTHESIS-4

Dependent Variable	Details of Grouping variable		Sum of square	Df	Mean Square	F	Sig.
Understanding level of e-Shopping	Actual Online Buying	Between Groups	4.022	2	2.011	0.215	0.807
		Within Groups	6562.251	700	9.375		
		Total	6566.273	702			
	Propensity of Online Buying	Between Groups	5.251	2	2.625	0.280	0.756
		Within Groups	6561.022	700	9.373		
		Total	6566.273	702			
	Preference for Physical Payment	Between Groups	55.137	2	27.568	2.964	0.052
		Within Groups	6511.137	700	9.302		
		Total	6566.273	702			

Independent Variable: Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment

Source: Computed from primary data

From the results of this one way ANOVA, it can be inferred that the F values of 0.807, 0.756 and 0.052 corresponding to the factors Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment considered as grouping variables are not found to be significant at 5 percent level with, Understanding levels of e-Shopping among the Online Buyers. Based on the results shown in table-5, it can be confirmed that the factor such as Understanding levels of e-Shopping is not found to be varying significantly with different Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment among Online Buyers. Hence the hypothesis-4 is accepted. In this regard, Wang et al. (2011) have reported dissimilar patterns of Influences on consumer responses on the basis of web aesthetics which is viewed as the function of Understanding levels of e-Shopping in the present work.

INSIGNIFICANT VARIATION IN INTENSITY OF INTERNET USAGE

The variations in the Perceived Security on e-Payment, Preference for Physical Payment and Propensity of Online Buying between different Intensity of Internet usage among Online Buyers is defined in hypothesis-6, taken up and its results are shown in the table-6, as an outcome of one way ANOVA model conceptualized.

TABLE 6: RESULTS OF ANOVA FOR HYPOTHESIS-6

TABLE 6: RESULTS OF ANOVA FOR HYPOTHESIS-6							
Dependent variable	Details of Grouping Variables		Sum of square	Df	Mean Square	F	Sig.
Perceived Security on e-Payment	Intensity of Internet usage	Between Groups	6.436	2	3.218	2.610	0.074
		Within Groups	863.015	700	1.233		
		Total	869.451	702			
Preference for Physical Payment		Between Groups	5.461	2	2.730	1.790	0.168
		Within Groups	1067.959	700	1.526		
		Total	1073.420	702			
Propensity of Online Buying		Between Groups	3.300	2	1.650	1.648	0.193
		Within Groups	700.928	700	1.001		
		Total	704.228	702			
Independent Variable: Intensity of Internet usage Source: Computed from primary data							

From the results of this one way ANOVA, it can be inferred that the F values of 2.610, 1.790 and 1.648 corresponding to the factors Perceived Security on e-Payment, Preference for Physical Payment and Propensity of Online Buying are not found to be significant at 5 percent level with, Intensity of Internet usage considered as grouping variable among the Online Buyers. Based on the results shown in table-6, it can be confirmed that the factors such Perceived Security on e-Payment, Preference for Physical Payment and Propensity of Online Buying are not found to be varying significantly with different Intensity of Internet usage among Online Buyers. Hence the hypothesis-6 is accepted. Further, this proposition established in the present work goes in line with earlier reported findings (Liao and Cheung, 2001). The homogeneity of Online Buyer characteristics across different Intensity levels of Internet usage confirms the importance of intensity levels of Internet usage contributing to the willingness to purchase online.

FINDINGS AND CONCLUSION

Understanding level of e-Shopping among Online Buyers is not found to be varying significantly with other online buyer characteristics such as Actual Online Buying, Propensity of Online Buying and Preference for Physical Payment. However, it is found to be varying significantly with online buyer characteristics such as Intensity of Internet usage and Perceived Security on e-Payment among Online Buyers. The variations in the Understanding levels of e-Shopping between those who have low and medium Intensity Internet usage are found to be significant. Similarly, the variations in the Understanding levels of e-Shopping between those who have low and high intensity Internet usage are found to be significant among Online Buyers. However, the variations in the Understanding levels of e-Shopping between those who have medium and high intensity Internet usage are not found to be significant among Online Buyers. Also, the other Online Buyer characteristics such as Perceived Security on e-Payment, Preference for Physical Payment and Propensity of Online Buying among Online Buyers are not found to be varying significantly with Intensity levels of Internet usage. The variations in the Understanding levels of e-Shopping between those who have low and medium levels of perceived security on e-Payments are found to be significant. Also, the variations in the Understanding levels of e-Shopping between those who have low and high levels of perceived security on e-Payments are found to be significant among Online Buyers. However, the variations in the Understanding levels of e-Shopping between those who have medium and high levels of perceived security on e-Payments are not found to be significant among Online Buyers. Highest Understanding levels of e-Shopping is identified with High Intensity Internet Usage among the online buyers who have medium levels of Perceived security on e-Payments, the next higher levels of Understanding in e-Shopping is identified with medium Intensity Internet usage among Online Buyers who have with high levels of perceived security on e-Payments and the low levels of Understanding in e-Shopping is identified with low Intensity Internet usage among the online buyers who have low levels of perceived security on e-Payments.

Intensity levels of Actual Online Buying among Online Buyers is not found to be varying significantly with other online buyer characteristics such as Perceived Security on e-Payment and Intensity of Internet usage. However, it is found to be varying significantly with Preference levels for Physical Payment among Online Buyers. The variations in the Intensity levels of Actual Online Buying between those who have low and medium Preference for Physical Payment among Online Buyers are found to be significant. Also, the variations in the Intensity levels of Actual Online Buying between those who have medium and high Preference for Physical Payment are found to be significant among Online Buyers. However, the variations in the Intensity levels of Actual Online Buying between those who have low and high Preference for Physical Payment are not found to be significant among Online Buyers. Highest Intensity levels of Actual Online Buying are identified with those who have high Preference for Physical Payment among the Online Buyers. The next higher Intensity levels of Actual Online Buying is identified with those who have low Preference for Physical Payment and the lower Intensity levels of Actual Online Buying is identified with those who have medium Preference for Physical Payment among the Online Buyers.

Propensity of Online Buying is found to be varying significantly with other Online Buyer characteristics such as Perceived Security on e-Payment and Preference for Physical Payment among Online Buyers. The variations in the Propensity of Online Buying between those who have Low and High Perceived e-Payment Security are found to be significant. Also, the variations in the Propensity of Online Buying between those who have Medium and High Perceived e-Payment Security are found to be significant among Online Buyers. However, the variations in the Propensity of Online Buying between those who have Low and Medium Perceived e-Payment Security are not found to be significant among Online Buyers. The variations in the Propensity of Online Buying between those who have Low and High Preference for Physical Payment are found to be significant. Also, the variations in the Propensity of Online Buying between those who have Medium and High Preference for Physical Payment are found to be significant among Online Buyers. However, the variations in the Propensity of Online Buying between those who have Low and Medium Preference for Physical Payment are not found to be significant among Online Buyers. Highest Propensity of Online Buying is identified with Low Perceived e-Payment Security among the Online Buyers who have Medium Preference for Physical Payment, the next higher levels of Propensity of Online Buying is identified with medium Perceived e-Payment Security among Online Buyers who have Low Preference for Physical Payment and the low levels of Propensity of Online Buying is identified with High Perceived e-Payment Security among the Online Buyers who have High Preference for Physical Payment.

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APPENDIX

APPENDIX I

QUESTIONNAIRE

SECTION I: DEMOGRAPHIC PROFILE

1. Name of the respondent:

2. Gender:

(a) Male	(b) Female

3. Age:

(a) Less than 21 years	(b) 21 – 30 years	(c) 31 – 40 years	(d) 40 – 50 years	(e) Above 50 years

4. Educational Status:

(a) School dropouts	(b) Upto 10 th or 12 th STD	(c) Diploma or technically certified	(d) Graduate	(e) Post-graduate

5. Total family Income per month:

(a) Upto ₹15000	(b) ₹15000 to ₹25000	(c) ₹25000 to ₹45000	(d) ₹45000 to ₹85000	(e) Above ₹850000

6. Marital Status:

(a) Single	(b) Married

7. Income Earners:

(a) Dependent or single earning	(b) Married, one income	(c) Married, two income	(d) Married, three income	(e) Others

SECTION II: ONLINE BUYING

1. Provide the frequency of your online purchase involving financial transaction.

Not purchased	Once in a year	Once in 6 months	Once in a Month	More than once in a month

2. How likely do you visit online retailing shops to buy product/services in the coming years?

Definitely will not buy	Probably will not buy	May or may not buy	Probably will buy	Definitely will buy
-------------------------	-----------------------	--------------------	-------------------	---------------------

3. List 5 major online retailing shops based on your experience.

- (a) _____ (b) _____
 (c) _____ (d) _____
 (e) _____

4. List 5 major products/services you purchase online

- (a) _____ (b) _____
 (c) _____ (d) _____
 (e) _____

5. On an average how much you spend in online shopping in a year Rs: _____

6. What was the amount you spent on last shopping towards online retailing shops? _____

Please tick the appropriate option based on the Intensity levels of Your Internet Usage

Your Internet Surfing Behavior			
(a) Hours of Surfing in a day	(b) Frequency of Internet Usage	(c) Internet Usage Experience	(d) Place of Internet Usage
Below 1-hour	Once in a month or still less	Less than 6 months	Internet café
1-3 hours	Once in 15 Days	Above 6 months but below 1 year	Public access Wireless hotspot
3-5 hours	Once in a week	Above 1 Year But less than 3 years	Home
5-7 hours	Once in two Days	Above 3 Years but less than 5 years	Work place
Above 7 hours	Every day	More than 5 years	Other Places

Express your opinion on the following online payment systems and its security.

	Online Payment Concerns	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
a	Paying the online transaction through Debit card is safe & secure					
b	Paying the online transaction through Credit card is safe & secure					
c	Paying the online transaction through Net banking is safe & secure					
d	Paying the online transaction through Mobile banking is safe & secure					
e	Paying the online transaction through Cheque is safe & secure					
f	Paying the online transaction through Cash on delivery is safe & secure					

Please rate the following items on your Understanding levels of e-Shopping.

S.no	Understanding levels of e-Shopping	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
a	You always enjoy Online shopping					
b	Your understanding of Online shopping is complete					
c	Online payment instruments like credit/debit card and net banking is needed to buy products online.					
d	You are aware about COD (cash on delivery) method in Online shopping.					
e	Having separate user account with each Online shopping website is advantageous.					
f	You are aware about the procedure to redeem promotional codes, gift vouchers and loyalty points in an Online shopping website.					
g	e-mail Id is needed to place orders in Online shopping website.					
h	Separate mobile no. is needed to place order online.					
i	You are comfortable in managing your account details with Online shopping websites.					
j	You know how to use online product tracking tools for the product ordered online.					
k	You are aware about the procedure to return the products ordered online.					

APPENDIX II

Results of the EFA on the Scale for measuring Intensity of Online buying							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					0.65		
Bartlett's Test of Sphericity		Approx. Chi-Square			117.036		
		df			10		
		Sig.			0.000		
Cumulative Variance Explained					51 %		
Item no.	Assigned Item Name	Item Detail	Component Extracted		Ex-Communalities	Al-pha	
			Factor 1	Factor 2			
1	ONLBYNGA	Provide the frequency of your online purchase involving financial transaction	0.765		0.588	0.785	
2	ONLBYNGB	How likely do you visit online retailing shops to buy product/services in the coming years	0.785		0.618		
3	ONLSHOP	No of Major Online shops dealt by the Customers		0.603	0.592	0.753	
4	PPRODUCT	No of Major Online Products/Services purchased by the Customers		0.757	0.574		
5	AVGSPND	Intensity of Online Spending by the Customers		0.571	0.599		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Source: Computed from Primary data.

Results of the EFA on the Scale for measuring Online Payment concerns							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				0.718			
Bartlett's Test of Sphericity		Approx. Chi-Square		409.713			
		df		10			
		Sig.		0.000			
Cumulative Variance Explained				60%			
Item no.	Assigned Name	Item	Item Detail	Component Ex-tracted		Communalities	Al-pha
				Factor 1	Factor 1		
1	ONLPYTA		Paying the online transaction through Debit card and Credit card is safe and secure	0.892		0.802	0.722
2	ONLPYTC		Paying the online transaction through Net banking is safe and secure.	0.615		0.610	
3	ONLPYTE		Paying the online transaction through Cheque is safe and secure		0.813	0.676	0.775
4	ONLPYTF		Paying the online transaction through Cash on delivery is safe and secure		0.841	0.714	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Source: Computed from Primary data.

Results of the EFA on the Scale for measuring Intensity of Internet usage					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.790		
Bartlett's Test of Sphericity	Approx. Chi-Square		116.890		
	df		3		
	Sig.		0.000		
Variance Explained			56%		
Item no.	Assigned Item Name	Item Detail	Component Extracted	Communalities	Alpha
			Factor 1		
1	INTSURFA	Hours of Surfing net in a day	0.663	0.517	0.835
2	INTSURFB	Frequency of Internet Usage	0.825	0.681	
3	INTSURFC	Internet Usage Experience	0.643	0.513	

Extraction Method: Principal Component Analysis.

Source: Computed from Primary data.

Results of the EFA on the Scale for measuring Understanding level of e-Shopping							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					0.735		
Bartlett's Test of Sphericity		Approx. Chi-Square			1733.421		
		df			45		
		Sig.			0.000		
Variance explained					36%		
Item no.	Assigned Name	Item	Item Detail	Component tracted	Ex-	Communalities	Al-pha
				Factor 1			
1	ULESHOPA		You always enjoy online shopping.	0.630		0.617	0.878
2	ULESHOPB		Your understanding of online shopping is complete.	0.620		0.681	
3	ULESHOPD		You are aware about COD (Cash on Delivery) method in online shopping.	0.773		0.621	
4	ULESHOPE		Having separate user account with each online shopping website is advantageous.	0.669		0.748	
5	ULESHOPG		E-mail Id is needed to place orders in online shopping website.	0.693		0.752	
6	ULESHOPJ		You know how to use online product tracking tools for the products ordered online.	0.654		0.806	
7	ULESHOPK		You are aware about the procedure to return the products ordered online.	0.789		0.746	

Extraction Method: Principal Component Analysis.

Source: Computed from Primary data.

FOREIGN INSTITUTIONAL INVESTORS (FIIs) FLOWS AND VOLATILITY IN STOCK MARKETS OF INDIA DURING SUB-PRIME CRISIS AND POST FPI ACT

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ABSTRACT

The portfolio investment by Foreign Institutional Investors (FIIs) has become a remarkable force behind the development of Indian stock market and is majorly perceived as a chief cause of stock market volatility. In order to ascertain the nexus between FIIs portfolio flows and stock market volatility the impact study of stock market returns and FIIs inflows and outflows relationship has been established. The present study is conducted on basis of daily time series of NIFTY, SENSEX and FIIs activity for a period of sixteen years spanning from January, 2001 to December, 2016. The primary motive of study is to explore relationship among a FII flows and volatility in stock markets during unlike situations and favourable situations of capital market. The data is divided according to certain important events in recent past such as great financial crisis during 2008-09 and introduction of new act known as FPI act, 2014. In present study, traditional statistical tools like mean, variance, standard deviation, skewness and kurtosis analysis are used to examine the impact of FIIs impact on Indian stock market volatility. In addition to these tools, the modern tool namely ARCH and GARCH model is also used to study the impact of FIIs capital flows on stock market volatility. To check the non-stationary of the time series the Augmented Dickey-Fuller (ADF) test is applied. The study reveals that there is a significant relationship between FIIs capital flows and stock market volatility. Moreover, FIIs investment has statistically significant influence on volatility in returns of NIFTY and SENSEX, used as biggest pointer to Indian stock market. The meticulous analysis has revealed that volatility prevails in both of the stock markets due to FIIs flows but has considerably reduced after stringent new act of FPI is introduced. The study has shown the similar results with historical method and the contemporary volatility estimators.

KEYWORDS

BSE, GARCH, sub-prime crisis, NSE, volatility.

INTRODUCTION

The present study is to measure the impact of foreign investor's portfolio investments on volatility of stock markets in India. Accordingly, an attempt is made to find the impact of volatility of BSE & NSE due to changing flows of FIIs. Various studies have found instability in stock returns and FIIs flows as key alarming situation for stock market investors, merchants, government investments. The inability to capture the level of oscillation in the prices of shares and volatility attached with stock returns has brought attentions of many researchers and concern of stake holders. This has attracted numerous of researchers to study the relationship between FIIs Portfolio flows and volatility in stock market of India. The market efficiency of stock market has reasonably improved after liberalised flows of FIIs. Foreign institutional investors follow international standard for portfolio diversification and brings global experience which results in improvement of stock market returns. On the contrary it also brings systematic and unsystematic risk along with financial flows. So it has become vital aspect to ascertain the major reasons behind the volatility and diverse nature of returns.

This study is an attempt to analyse the dynamics of stock market returns and FII flows. The basic element of volatility is the information concerning past and present which brings fall and rise in stock market returns. This study is an attempt to find whether volatility has significant role in increase or decrease in flows of FIIs. In addition, swings and subsequent reversals in FIIs flows highly influence the emerging stock markets and create urge to understand the dynamics of stock prices and FII approaches. Volatility is becoming an alarming feature for major researches and formulation of policies by the government and distressing distribution of resources. Volatility create fear in the mind of investors due to which they do not hold stocks for longer period and on the other hand few investors earn high returns due to high volatility in the stock prices even in short holding. Many researchers are opposing to this notion that FIIs flows negatively impact the market volatility.

REVIEW OF LITERATURE

Many researchers have done studies to determine the relationship between the FIIs flows and stock markets in India. Few researchers have found the positive relation and few of them found negative relationship. This segment of paper reviews them in brief.

Chakrabati (2001) Provides enough evidence that there is significant high correlation with returns of stock indices in India. He found that return causes the FII flows but returns does not affects the FII flows. **Kumar, S.S.S (2000)** found that there was stability during 1990-1998 in BSE returns before the arrival of FIIs. His study also revealed that volatility in stock market has reduced after the arrival of FIIs when compared with pre-arrival. **Mazumdar (2004)** Study revealed that FII flows improve liquidity in stock market but haven't found enough evidence of volatility in returns due to FII flows. **Biswas Jaideep (2006)** found that impact of FII liberalization, development and growth of Indian stock market during 1991-2005. His study reveals that liberalizing benefited to larger extent in growth of stock market. Trading volume and market capitalization and liquidity had significantly improved post-liberalization. **Batra.A (2004)** examined that time variation in volatility using monthly data and asymmetric GARCH model augmented by structural change analysis. Study found that of nature of events caused changes in volatility such as (BOP) crisis and reforms in stock market rather than global events. **Benerjee and Sarkar (2006)** conducted a study during 2000-2004 on volatility and NSE returns, using intra-day data and applying GARCH Model. He found that that there is clear evidence of volatility clustering, leverage effect on volatility change in volume positively affects the market. Further, he found that FII flows does not affects significantly increase in volatility of returns.

RESEARCH QUESTIONS

The main focus of the study is to examine the effects of trading activity by FIIs on the volatility in the Indian Capital Markets. Here, attempt has been made to find solutions to countless unresolved Questions. Answers to these questions will help policy makers to address the problems of FII flows with much improved approach.

1. Do FIIs help in the improvement of investment scenario in Sensex and Nifty?
2. What is the Impact of boom or crash created by FIIs on Stock Markets stock market returns on FII flows?
3. What is the influence of the present & past information on the volatility in returns of Sensex and Nifty?

OBJECTIVES OF STUDY

The broad objective of the study is to analyze the impact of foreign institutional investors' investment on Indian stock market. This study is formalized to find the effect and to analyze the dynamics of FII flows on the Indian stock markets. The basic feature of volatility is that past and present information brings rise and fall in stock prices. Further this study is an attempt to find whether volatility has increased or decreased its impact on Indian stock market over the period of study and have a significant impact due to changing circumstances in financial markets.

The other main objective of this study is to investigate whether the foreign institutional investors has influence on the stability and efficiency of Indian stock market. The study undertakes an analysis of stock returns volatility in India in the circumstances of financial crisis and change after the introduction of New FPI act. In order to achieve aforementioned objective, the stock return has been calculated on basis of daily data of closing index of Nifty and Sensex.

HYPOTHESIS OF THE STUDY

Keeping in view the above-mentioned objectives of the study, it was proposed to test the following hypotheses:

Ho: There is a significant change in volatility in the returns of Indian Stock Market due to changing flows of FIIs during sub-prime crisis and introduction of New FPI act

Ha: There is no significant change in volatility in the returns of Indian Stock Market due to changing flows of FIIs during sub-prime crisis and introduction of New FPI act

DATA SOURCES

This study attempts to ascertain the volatility relationship between FII Flows, BSE returns and NSE returns. To ascertain the volatility ubiquitous in the Indian stock exchanges, we have taken up daily data ranging from 2001-16 (16 years) for all the variables under the study.

TABLE 1: PERIODICALLY DATA SOURCES OF VARIABLES

Variable	Period	Source	frequency
FII (NET)	1-1-2001 to 31/12/2016	SEBI and Bloomberg database	Daily
BSE (RETURN)	1-1-2001 to 31/12/2016	BSE official website	Daily
NSE(RETURN)	1-1-2001 to 31/12/2016	NSE official website	Daily

Financial institutional investors cover different quality and quantity of investment in stock exchanges and manage their risk accordingly. These functions can't be captured by a single measurement or sample. Also at the moment there is no broad consensus as to which of the proxies is the best measurement of stock market development. Therefore, the essence of discovering role of foreign institution investors and stock markets is to find unanswered relation among them and how flows contribute to volatility of the market. The primary motive of study is to developed relation among a FII flows and volatility in stock markets during diverse situations of capital market. The data is divided according to certain important events in past such as great financial crisis during 2008-09 and introduction of new act known as FPI act, 2014. For that reason data subsets are formed to explore the volatility dynamics seen in the different time period.

TABLE 2: PERIODICITY OF EVENTS AND SAMPLE SUB-SETS

Sample Sub-Sets	Base/Events	Time Period
P-I	Reform period/Asian Crisis	1/01/2001-31/12/2006
P-II	Pre-Financial Crisis	1/01/2007 -09/01/2008
P-III	During Financial Crisis	10/01/2008 -01/09/2008
P-IV	Post –Financial Crisis	2/09/2009 -31/12/2012
P-V	Before FPI Act	1/01/2013 -06/01/2014
P-VI	After FPI Act	7/01/2014 -31/12/2016

RESEARCH METHODOLOGY

The Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) are two leading stock exchanges of India. The foreign institutional investors are majorly interested in investing larger in these markets. So, both of these markets have been taken to study the dynamics of the foreign institutional investment in India. Therefore, to determine the impact of FIIs on Indian stock market (i.e. on return and volatility) Bombay Stock Exchange and national stock exchange has been considered. The time period taken under of the study varies with the various events in financial markets. Traditional method of standard deviation of returns or squared returns is used to find out the extent of impact of volatility in stock prices due to FIIs flows, but due to limitations of traditional measures of volatility the present study has also used conditional volatility models namely ARCH & GARCH model to overcome the drawbacks of traditional methods. The study follows both traditional and popular conditional instability models to understand the varying nature of volatility.

To examine the extent of volatility in Nifty returns and Sensex returns, the daily closing prices have been taken and further these are converted to logarithmic returns. After conversion of data series of returns into logarithmic returns all series are tested for unit root.ADF test is run to check the stationary of data series. This study applied econometric model ARCH and GARCH. More, specifically we have used the GARCH (1, 1) model. To specify the GARCH model two equations have to be specified. One is the mean equation and the second is the variance equation.

The mean equation is as follows:

$$BSE_t/NSE_t = \alpha + b_1 FII + e_t \quad (1)$$

Second equation formed is the variance equation of the following form:

$$h_t = w + a_1 e^2_{t-1} + b_1 h_{t-1} + \Psi FII \quad (2)$$

Where, h_t is the conditional variance at period t .

In equation (2) first term after the intercept w is the ARCH term, which shows the affect of recent news on the volatility of the underlying stock market by putting the square of previous error term. And second term is the GARCH term, which shows the affect of previous volatility on the current volatility and ΨFII is showing the impact of the variable on the volatility in the return of underlying stock market, which is NSE and BSE in case of the present study.

The level of volatility in the Indian stock market has been examined using unconditional variance using the formula:

$$Var E_t = \alpha_0 / 1 - (\alpha_1 + \beta_1) \quad (3)$$

Where,

α_0 =Intercept

α_1 =ARCH Term

β_1 =GARCH Term

EMPIRICAL ANALYSIS

LEVEL OF VOLATILITY IN THE NSE (NIFTY) AND FII FLOWS

Traditional methods such as average return and standard deviation is employed to examine the impact of financial institution investors flows on stock markets in India using daily stock return from the January, 2001 to December, 2016. The sample is divided into five sub-samples on the basis of major financial market events:

TABLE 3: VOLATILITY OF NSE (NIFTY) RETURNS AS PER CONVENTIONAL MEASURES & DESCRIPTIVE STATISTICS

	Reform Period & Asian Crisis	Before Sub-prime crisis	During Sub-prime Crisis	After Sub-prime Crisis	FPI (Pre-Act)	FPI (Post-Act)
Mean	0.000774	0.001703985	-0.00276	0.000883	0.000145	0.001076
Standard Error	0.000372	0.001041736	0.001548	0.000449	0.000707	0.000493
Standard Deviation	0.014404	0.015901409	0.026996	0.013834	0.011296	0.008478
Sample Variance	0.000207	0.000252855	0.000729	0.000191	0.000128	7.19E-05
Kurtosis	7.312093	1.530382389	1.664656	20.36073	1.561804	0.927816
Skewness	-0.90283	-0.209712129	-0.30882	1.718425	-0.09247	-0.15576

Daily closing prices of NSE (Nifty) have been taken to examine the volatility. The daily closing price series has been converted into logarithmic returns. These logarithmic returns have been tested for unit root. The stationarity of the all data series has been confirmed using ADF test statistic testing the null of non stationary. The descriptive statistics for nifty have been reported in table: 3 above. The descriptive statistics report that nifty return series is, the basic statistics indicate that the mean return (-0.00276) is during the period of Subprime Crisis which has been recovered in post FPI act (.001076) closer to zero, when relatively compared to the standard deviation (0.014404) and (0.008475) respectively. The return series is negatively skewed in each period but only positive in the post crisis period. The negative skewness implied that the return distributions of the shares traded in the market in the given period have a higher probability of earning returns greater than the mean. The results are similar to Chakarbarti (2001), biswas jaideep (2006) in Bombay Stock Exchange and National Stock Exchange. The Kurtosis, which measures the magnitude of the extremes, is greater than three, in the case of reform period and post financial crisis period which means that the return series are leptokurtic in shape, with higher and sharper central peak, and longer and fatter tails than the normal distribution. In case of other sub sample periods distribution kurtosis is less than 3, which indicates platykurtic. Compared to a normal distribution, its central peak is lower and broader, and its tails are shorter and thinner. A risk-averse investor prefers a distribution with low kurtosis (i.e. returns not far away from the mean). Thus, sufficient evidence for using GARCH model has been generated with the help of ARCH Test. Further to model the variance, GARCH (1, 1) equation has been estimated. GARCH (1, 1) empirical results in this regard are reported in table: 4

TABLE 4: NSE VOLATILITY MEASUREMENT: GARCH (1, 1)

TIME PERIOD	INTERCEPT(α_0)	ARCH(α)	GARCH(β_1)	$=\alpha_1+\beta_1$	VARIANCE
Reform period	0.0000117	0.173135	0.748195	0.92133	0.000148723
Pre -Crisis	0.0000141	0.091941	0.856701	0.948642	0.000274543
Crisis Period	0.0000283	0.133189	0.831242	0.964431	0.000795637
Post crisis	0.00000101	0.048033	0.944967	0.993	0.000144286
Pre act	0.00000214	0.060023	0.92619	0.986213	0.000155219
Post act	0.0000148	0.01383	0.806108	0.819938	8.21939E-05
Whole period	0.0000466	0.114317	0.866961	0.981278	0.00248905

To examine the level of volatility prevailing in the Indian stock market, GARCH (1,1) equation has generated the values for different parameters. These parameter values have been found to be significant as p value is zero for the constant, the ARCH term & the GARCH term. The level of volatility in the NSE has been examined using unconditional variance method. Thus various values generated using GARCH (1, 1) has been put into equation (3) and the level of volatility have been estimated. For time series analysis, it is desirable to have stationary series. Stationarity of the series can be found by summation of $\alpha_1 + \beta_1$ and the value of summation should be less than one. As for the stationarity of the variance process, it was observed that $\alpha_1 + \beta_1$ is 0.981 for Nifty for whole period (value of α_1 is + 0.114 and that of β_1 is +0.867, reported in Table 4) Hence, stationarity condition ($\alpha_1 + \beta_1 < 1$) is satisfied in NSE stock market. However, the sum was rather close to one which indicated a long persistence of shock in volatility. It implies a 'long memory'. A large value of GARCH lags coefficients β_1 (+ 0.867 for Nifty indicates that shocks to conditional variance take a long time to die out, so the volatility is 'persistent'. Low value of error coefficient α_1 i.e. 0.114 for Nifty suggests that market surprises induce relatively small revisions in future volatility. The present study has attempted to devise a volatility forecast model for the NSE Nifty and concluded the GARCH (1, 1) specification fits the system. On the basis of ARCH /GARCH analysis indicate clearly lower volatility during period of reforms, significantly better than found in pre-crisis period. Interestingly, volatility was higher in era of second generation reforms or during Asian crisis period and post financial sector reforms and during (i.e. 2000-06). Further reveals that the stock return had collapsed and variance was highest during the crisis period. Simultaneously, the variance which measures the volatility has mounted from 0.00027 percent during pre-crisis period to 0.00077 percent during crisis. Further, volatility had dropped after the massive crisis and re-opening up of domestic stock market for FIIs. Time period of crisis gave a serious setback to stock market performance. However, after the introduction of new FPI act, it clearly boosted up to the stock returns and the volatility has declined to large extent in Indian stock market. It is appreciable that new FPI Act has brought in more cheers for the capital market as the risk (i.e. variance) has lowered and the stock returns have gone higher in the time period. Level of volatility prevailing in the stock market has been found to be lower during whole period. It is observed from the table that the coefficient of ARCH (1) term is significant at 1 percent level. The above clearly indicates that the recent past information is creating a positive and significant impact on the volatility of the return of the stock market. Similarly, the coefficient of GARCH (1) term also shows a positive and significant impact on the share market volatility, the GARCH term impact is higher in comparison to ARCH term which implies that the past volatility affect is more on the future volatility. Similar to the S.S.S. (2000), it implies that due to the introduction of foreign institutional investors the volatility in Indian stock market. So, we do not accept the Null Hypothesis that there is no significant volatility in the National stock market (NSE-Nifty) due to FII Flows.

LEVEL OF VOLATILITY IN THE BSE SENSEX AND FII FLOWS

TABLE 5: VOLATILITY MEASUREMENT OF BSE SENSEX (CLASSICAL ESTIMATOR)

	Reform Period & Asian Crisis	Before Sub-prime crisis	During Sub-prime crisis	After Sub-prime Crisis	FPI (Pre-Act)	FPI (Post-Act)
Mean	0.00084	0.001534	-0.00294	0.000922	0.00022354	0.001011
Standard Error	0.000365	0.00101	0.001577	0.000447	0.00068095	0.000494
Standard Deviation	0.014146	0.015424	0.027499	0.013781	0.01087386	0.008497
Sample Variance	0.0002	0.000238	0.000756	0.00019	0.00011824	7.22E-05
Kurtosis	5.837075	1.456777	0.941863	19.32159	1.47711102	1.009896
Skewness	-0.71236	-0.19175	-0.11799	1.72247	-0.0854079	-0.1289

The descriptive statistics for BSE Sensex have been reported in table 5. The stationarity of the series has been confirmed using ADF test statistic testing the null of non stationary. The descriptive statistics indicate that the mean return (-0.00294) prevails during the period of crisis and which has been recovered in the period post FPI act (0.001011) which is closer to zero, moreover relatively compared to the standard deviation (0.027499) and (0.008497) respectively. The return series is negatively skewed in each period but positive in the post crisis period. The negative skewness implied that the return distributions of the shares traded in the market in the given period have a higher probability of earning returns greater than the mean. The results are similar to NSE (Nifty). The Kurtosis, which measures the magnitude of the extremes, is greater than three, in the case of reform period and post financial crisis period which means that the return series are leptokurtic in shape, with higher and sharper central peak, and longer and fatter tails than the normal distribution. In case of other sub sample periods distribution kurtosis is less than 3, which indicates platykurtic. Compared to a normal distribution, its central peak is lower and broader, and its tails are shorter and thinner. A risk-averse

investor prefers a distribution with low kurtosis (i.e. returns not far away from the mean). The evidence of high kurtosis is also consistent with the results of previous findings e.g., Mazumdar (2004), Batra. A(2004)Benerjee and Sarkar (2006).

The above table clearly indicates that both daily return and volatility during 2001, period of financial sector reforms or Asian crisis period, were significantly higher than those found in pre-crisis period. Returns were enthusiastic and volatility was normal during the era of financial sector reforms (i.e. 2000-06). It is depressing to see from the table that the great financial crisis negatively impacted the Indian stock market which have brought in more distress for the capital market as the risk (i.e. Standard Deviation of return) increased but the stock return went negative in the period. Clearly the volatility has declined in Indian stock market after year 2014. Simultaneously, the standard deviation which measures the volatility has declined from 2014 onward after introduction of new FPI Act. Thus, both volatility and return have improved after the introduction of FPI Act in domestic stock market for FIIs. It indicates that it is good time to recover, after a serious setback on stock market performance due to Sub-prime crisis.

TABLE 6: BSE VOLATILITY MEASUREMENT: GARCH (1,1)

TIME PERIOD	INTERCEPT(α_0)	ARCH(α_1)	GARCH(β_1)	$=\alpha_1+(\beta_1$	VARIANCE
Reform period	0.0000141	0.173142	0.75035	0.923492	0.000184294
Pre -Crisis	0.000011	0.091941	0.86656	0.958501	0.000265067
Crisis Period	0.0000364	0.134126	0.821724	0.95585	0.000824462
Post crisis	0.00000109	0.042031	0.948632	0.990663	0.00011674
Pre act	0.00000215	0.054803	0.929339	0.984142	0.000135578
Post act	0.0000171	0.01383	0.76331	0.77714	7.67298E-05
Whole period	0.0000426	0.112315	0.869762	0.982077	0.002376834

As for the stationarity of the variance process, it was observed that $\alpha_1 + \beta_1$ is 0.983 for Sensex for whole period (value of α_1 is + 0.1123 and that of β_1 is +0.869, reported in Table 6. Hence, stationarity condition ($\alpha_1 + \beta_1 < 1$) is also satisfied in BSE stock market. However, the sum was rather close to one which indicated a long persistence of shocks in volatility. It implies a 'long memory'. A large value of GARCH lags coefficients β_1 (+ 0.869 for Sensex indicates that shocks to conditional variance take a long time to die out, so the volatility is 'continual'. Low value of error coefficient α_1 i.e. 0.1120 for Sensex suggests that market surprises induce relatively small revisions in future volatility. The present study has attempted to devise a volatility forecast model for the BSE Sensex and concluded the GARCH (1,1) specification fits the system. On the basis of ARCH /GARCH analysis indicate clearly lower volatility during period of reforms, significantly better than found in pre-crisis period. Interestingly, volatility was higher in era of second generation reforms or during Asian crisis period and post financial sector reforms. Further reveals that the stock return had collapsed and variance was highest during the sub –prime crisis period. Simultaneously, the variance which measures the volatility has mounted from 0.000265 percent during pre-crisis period to 0.00082 percent during crisis. Further, volatility had dropped after the huge crisis and re-opening up of domestic stock market for FIIs. Time period of crisis gave a serious setback to stock market performance. However, after the introduction of new FPI act, it clearly boosted up to the stock returns and the volatility has declined to large extent in Indian stock market. It is appreciable that new FPI Act has brought in more cheers for the capital market as the risk (i.e. variance) has lowered and the stock returns have gone higher in the time period.

The present study has attempted to formulate a volatility forecast model for the BSE Sensex and Nifty, and concluded the GARCH (1, 1) specification fits the Sensex return and Nifty return time series quite well. To examine the level of volatility prevailing in the Indian stock market, GARCH (1,1) equation has generated the values for different parameters. These parameter values have been found to be significant as p value is zero for the constant, the ARCH term & the GARCH term. The level of volatility in the BSE and NSE has been examined using unconditional variance method. Thus various values generated using GARCH (1,1) has been put into equation (3) and the level of volatility has been estimated. The results show that in the case of daily data ARCH(1) coefficient is not found significant while the GARCH (1) coefficient is still positively significant so, we accept the Null Hypothesis that there is no volatility in the Sensex due to FII Flows. The total of the ARCH and GARCH term is less than 1, which implies that the model is perfectly structured.

CONCLUSIONS

The time period of study has noticed tremendous policy changes in Indian stock markets more importantly developments like New FPI act, dematerialization of securities, established liberal trade practices and stringent corporate governance practices formulated by SEBI and RBI. These all brought efficiency in the market and reduced the risk of volatility in the market to the larger extent. This study is carried out to understand the volatility behaviour of the Indian stock market by computing historical volatility levels of Nifty using classical, range based and drift independent volatility estimators. The study also aims to estimate conditional variance of the sample return series through GARCH (1, 1) model. On the whole, the analysis of 16 year data starting from January, 2001 to December, 2016 established six phases in volatility in Sensex and Nifty, namely, the boom and subsequent crash of the Indian stock market during 2001-06 and the subprime financial crisis that cropped up across the globe during 2008-2009. The volatility in the stock return of Nifty and Sensex shows that Indian stock market reacts intensely to the fluctuation in funds flows by FIIs and it takes larger time to die out. It indicates that Indian stock markets are not highly efficient and impact of information does not reflect easily or for longer period in alignment of Batra (2003), Mazumdar (2004), Banerjee and Sarkar (2006) Biswas, Jaydeep (2006) the results of the study conclude that there is significant impact on volatility of the FII investments. Hence, volatility prevails in both the stock market due to FII flows during the period of study.

The present study has revealed that GARCH (1, 1) fits the system and forecast the volatility with ARCH and GARCH model. On the basis of analysis, it has cleared the picture that during the period of reforms volatility was lower in comparison to pre-crises period. Surprisingly the level of volatility during Asian crises period was higher as compare to other period. Despondently, the level of variance was high on the basis of standard deviation during the sub-prime crises period. Further, volatility has plunged after the crises period and regained the faith of investors in the stock markets of India. The time period of crises gave a serious shock to the efficiency of stock market and dampens down the interest of foreign institutional investors in the Indian stock markets. However, after the introduction of new FPI act, volatility has declined to larger extent and has boosted the inquisitiveness of investors. The time period taken under the study is well known for policy changes and new regulatory regime such as new FPI act, dematerialized of securities, stringent corporate governance practices. These developments during this period has brought efficiency to the market and helped in reducing the uncertainty of volatility in the stock market returns.

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ASSESSMENT OF KNOWLEDGE LEVEL, NEED AND IMPACT OF ICTS AMONG FARMERS IN DIFFERENT ASPECTS OF AGRICULTURE AT TALERA BLOCK OF BUNDI DISTRICT IN RAJASTHAN

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ABSTRACT

Agriculture is a major part of our economy and its allied activities play a vital role in provide employment to rural and urban people. Now a day's Agriculture depends upon timely and accurate Information about agricultural inputs, weather forecasting and markets access etc. But due to lack of physical infrastructure, awareness and Information, farmers do not get proper Information about market, weather forecasting etc. Information and Communication Technology (ICT) is an effective way for develop and raise the Agriculture standard. The main objective of this study was to access the knowledge level of ICTs among farmers for getting different Agriculture Information and to identify the need of ICT for farmers and measure the attitudes of farmers towards ICT based Agricultural Services. The study also suggested an ICT based model for developing and strengthening the Agriculture standards. The research was conducted at Talera Block of Bundi District in Rajasthan and reviews the applications of ICTs in Agriculture. The research was a descriptive research based on probability sampling of different farmers of selected villages of block. The study concludes that majority of respondents do not have access to ICT facilities. Some of the respondents have knowledge about ICTs but they could not use them due time constraint and improper scheduling of programmes.

KEYWORDS

ICT, Agriculture, information, farmers, network, awareness.

INTRODUCTION

INTRODUCTION OF INDIAN AGRICULTURE SCENARIO

India is the seventh largest country in geographical area, second largest country in population and twelfth largest country in economic wise. The economy of India is as diverse as it is large, with a number of major sectors including manufacturing industries, Agriculture, textiles and handicrafts, and services. Agriculture is a major component of the Indian economy, more than 75 % of our people have their livelihood as Agriculture and allied sector. Mahatma Gandhi said "Indian economy lives in rural villages", and many of the industries getting their raw material from Agriculture sector.

Indian Agriculture sector achieved green revolution during 1970s and then white revolution in milk production during 1980s. But despite some stagnation during the later modern era the policy makers were not concentrate the development of comprehensive agricultural program and rural development compare to urban development and industrial development. Nearly 21.1% of the entire rural population of India exists in difficult physical and financial predicament. But rate of poverty in urban population is 15%. In general, the Government controls the Indian economy, and there remains a great disparity between the rich and the poor. Due to urbanization and industrialization use of Agriculture land is reduced during the last one decade Agriculture lands are converted in to residential houses and factories hence the number of Agriculture labors lost their work and move to urban areas. This leads to low output in agricultural products, insufficiency and rise in food articles prices.

Infrastructure is also a significant factor in the process of development but country like our rural India has not possess the infrastructure such as roads, electricity, fertilizer and pesticides availability which caused the vulnerable damage to the growth of Agriculture. Farmer's access to markets is hampered by poor roads, rudimentary market infrastructure, excessive regulation and middlemen intervention in selling the products is very big problem in marketing the products.

AGRICULTURE INFORMATION NEED AND INFORMATION SOURCES

Agricultural extension services, Information network or agricultural advisory services, comprises the entire set of organizations that support people engaged in agricultural production and facilitate their efforts to solve problems; link to markets and other players in the agricultural value chain; and obtain Information, skills, and technologies to improve their livelihoods (Birner et al. 2009; Davis 2009). This definition has evolved since the T&V program, where the focus of extension was transfer of technology to improve productivity, especially for staple food crops. While transfer of technology still has relevance, agricultural extension is now seen as playing a wider role by developing human and social capital, enhancing skills and knowledge for production and processing, facilitating access to markets and trade, organizing farmers and producer groups, and working with farmers toward sustainable natural resource management practices (Swanson 2008).

Within this expanded role, the breadth of Information that agricultural extension can support—through provision and facilitating access and sharing—is much larger. In addition, as the Agriculture scenario has become more complex, farmers' access to sources of reliable and relevant Information has become increasingly important. Farmers require a diverse range of Information to support their farm enterprises. Information is needed not only on best practices and technologies for crop production, irrigation and inputs which the traditional public-sector extension system provided during the Green Revolution, but also Information about postharvest aspects including processing, marketing, storage, and handling.

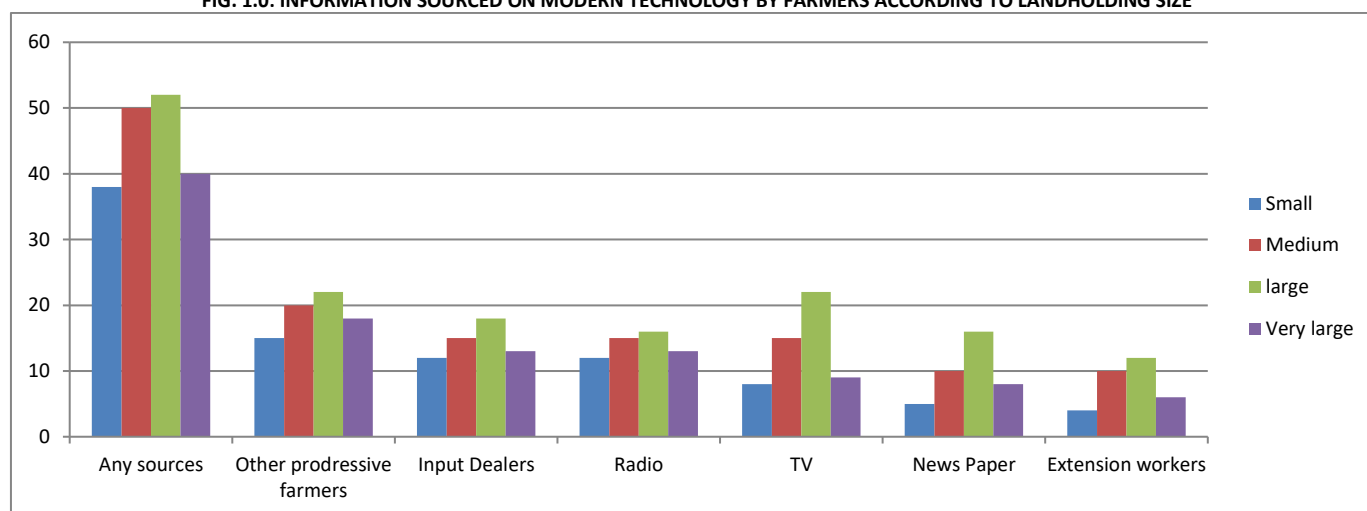
Farmers require Information related to the following (Van den Ban 1998):

- Most appropriate technological options
- Management of technologies, including optimal use of inputs
- Changing farm system options (mixed farming and diversification, animal husbandry, fisheries)
- Sourcing reputable input suppliers
- Collective action with other farmers
- Consumer and market demands for products
- Quality specifications for produce
- Time to buy inputs and sell produce
- Off-farm income-generation options
- Implications of changing policies (input subsidies, trade liberalization)
- Access to credit and loans

It has observed that the Information required will differ between categories of farmers and can be targeted to specific groups, based, for example, on landholding size or agro climatic region (Rivera 1996). In addition to needing different types of Information and using different Information sources, different farmers will have

different search behaviors. Factors such as literacy or access to resources will have a large impact on Information needs, searching behavior, access, and use. These categories can be described various in target groups: rural and farm women, small and marginal subsistence farmers, medium-scale farmers, commercial farmers, and rural youth (Swanson 2008).

FIG. 1.0: INFORMATION SOURCED ON MODERN TECHNOLOGY BY FARMERS ACCORDING TO LANDHOLDING SIZE



Source: Adhiguru, Birthal, and Ganesh Kumar (2009)

According to the 2003 survey (NSSO 2005), access to Information from any source increased with larger farm size (Figure 1.0). Most farmers sought Information on seed for cultivation, followed by veterinary care in animal husbandry, and then management and marketing in fisheries. The main Information source was other farmers (16.7 percent), followed by input dealers (13.1 percent), radio (13 percent), TV (9.3 percent), and newspapers (7 percent). Public-sector extension was used for Information by only 5.7 percent of survey respondents. In terms of differences in sources of Information for the 40 percent of farmers who had accessed Information, smallholder farmers relied primarily on other progressive farmers, input dealers, and radio for Information, while medium-size and large-scale farmers equally used radio, TV, and newspapers. Contact with extension workers for medium-size and large-scale farmers was almost double that of smallholder farmers.

INFORMATION NEEDS OF FARMERS

In each and every aspects of Agriculture farmers need various kinds of Information. The needs of farmers can be classified in two groups generally. These are as follows

Felt Needs of Farmers-

- Problem perceived by the farmers in their day-to-day operations like scarcity of water, Agri inputs, Agriculture Information and subsidy etc.
- Problem with respect to immediate economic loss like seasonal and caused disease of crops etc.
- Recurrent problems (eg. Wilt of tomato)

Unfelt Needs of Farmers-

- Potential innovations of research institutes to which farmers are not exposed like new varieties of plants, seeds and fertilizers (eg. Hybrid rice)
- New schemes/policies about which farmers are not aware (eg. Heavy subsidy on Drip Irrigation System, Rastriya Krishi Bima Yojana etc.)
- Use of long-term effect (eg. Sustainability and environmental concern)

Problem with Present Mode of Information Network

- Poor infrastructure facilities in rural areas
- A very serious problem farmers generally face is generic Information of Agriculture
- Supply chain orientation in Agri inputs and outputs is very poor in rural areas
- No perfect mechanism of problem solving
- Most credible-least accessible Agriculture facilities
- Not backed by diagnostic services for Agriculture
- Lack of Information network
- Information not backed by material and support services

ROLE OF ICT IN AGRICULTURE AND DEVELOPMENT

ICT can be interpreted broadly as "technology that facilitates communication, processing and transmission of Information by electronic means.

ICTs play a vital role in the social transformation to realize the concept of "Knowledge Society". India will have to be recast to take full advantage of the knowledge availability to achieve the multiple goals so income, food, jobs etc (Swaminathan1993). The brilliant innovations in Information and Communication Technology prove that with proper support and encouragement, we can bring about a directional change that can eventually benefit the humanity at large (Mashelkar 2004). A number of initiatives have been taken by Government and Non-Government Organizations. The mention may be made about Wana-wired, Gyandoot, e-choupal, Info village project, Tarahaat.com, e-Sagu, Agropedia, Rice Knowledge Management Portal, In DG Portal etc. India has taken up praiseworthy initiative for establishing 1Lakh common service e-center (CSCs) across the country. These CSCs serve as front end delivery point for the services of government, non-government and private sector business organizations.

The technological development in the field of computer, communication and space technology has given an opportunity for technological convergence. The same Information can be accessed through LAN, WLAN, Internet and Mobile phones. With quantitative and qualitative improvement in informatics infrastructure, the Information flow has become faster and seamless.

The ICT penetration in rural area has been a good sign which is evident from the fact that telecommunication density has increased up to 24.29 percent with the quantum rise of 9.36 percent (TRAI Annual Report, 2009-10).

IMPACT OF ICTS USE IN AGRICULTURE

There is a noteworthy impact of ICT in each and every area of Agriculture and its allied sector. These are as follows:

- Providing quick access of Information to farmers for timely action taking
- Average yield gain 4-5 % covered in recent years
- ICT technologies have reduced cultivation cost by 2-14 percent

- ICT saves traveling time and transportation costs by 80 percent
- Tools of ICTs are very useful in providing important data and Information to development professionals during different projects of Agriculture
- Mobile phones are increasing rapidly in rural areas and it made Information network more easier for Agriculture
- Daily revenues have risen by three times
- Profits jumped by almost 9 percent in recent years
- New markets have emerged, average 30–40 percent fishermans could sell fish outside their market
- Reduction in price dispersion from 60-70 percent to less than 15 percent
- About 2 percent increase in per capita GDP from one market alone

Jensen, Robert. 2007 "The Digital Provide: Information (Technology), Market Performance and Welfare in the South Indian Fisheries Sector". The Quarterly Journal of Economics; Vol. CXXII August 2007 Issue 3

VARIOUS TOOLS AND TECHNIQUES USING IN ICT MODELS

ICT enabled extension initiatives and services of the country could be broadly classified based on the ICT tools that are being employed, such as computer networks, community radio, audio video conferencing, mobile telephony, I-TVs (Internet TVs), automated tools etc.

The focus of nineties had been on harnessing the computer networking in making ICT services available to the farmers. Earliest efforts in this category are Gyandoot project (Madhya Pradesh), Warana Wired Village Project (Maharashtra), Information Village Project (Pondichery), e-choupal models (ITC—for Soya and aqua regions) etc., These initiatives essentially aimed at providing the Computer network infrastructure at village level and provision of Information and service needs of stakeholders.

Other kind of initiatives that could be brought under this category are development of websites providing agricultural Informations such as www.agriwatch.com, www.planters.net, www.haritgyan.com, e-sugam (a grievance box on internet for farmer) etc. The Ministries of Agriculture has also developed the model, channels and TV and radio Programme for awareness of people like *Krishi Darshan*, *Chopal*, *Kheta re bata* etc. In December 2002, the Government of India approved a policy for the grant of licenses for setting up of Community Radio Stations. Since then various NGOs, SAUs and other agencies have initiated Community Radio mediated extension efforts. Deccan Development Society, *Sauras* Crane of Kutch, *UAS Dharwad* etc., have these Community Radios in place. On other side in the era of mobile telephony, all the ICT initiatives are redefined. Provision of Information, question-answer services, SMS alerts etc., are gaining importance. Majority of the mobile manufacturing companies such as Nokia have initiated ambitious projects such as Nokia Life tools targeting the rural India. On the other hand, service providers such as IL&FSE education, Handigo, Airtel aim at reaching out to farmers through Mobile extension initiatives.

In spite of the aggressive campaign for mobile telephony the *Kisan Call Centre* initiative of GOI can never be undermined. The KCC aims at providing the expert answers at various hierarchical levels suiting to the contexts of farmers.

Extension efforts have been started in Agriculture and allied sectors that essentially harness the automated tools. One of the earliest examples is the use of Automated Milk Collection Centers (AMCC) of AMUL. This kind of initiatives is best example of providing extension advisory on the printed receipts. Recent ICT project realized the importance of blending two or more of the stools in reaching out to the farmers. Striking examples are Agrisnet of DAC and Rice Knowledge Management Portal of NAIP. Processes The ICT enabled extension initiatives can also be classified based on different processes adopted in delivering the services to the farmers. Broad categories that could be considered are; Hub & Spokes Process, Knowledge Management processes, Open and Distance Learning Process and Kiosk based process.

From the above references a research was conducted at Talera Block of Bundi District in Rajasthan to review the applications of ICTs in Agriculture. The study was focused on to access the need and awareness of ICT among farmers. The findings of study also suggested a model for developing and strengthening the Agriculture Standards through bridging the gap and scope.

REVIEW OF LITERATURE

Many studies have been conducted in deploying ICT in Agriculture in various parts of the world. Some of the studies conducted and their major findings have been shown below.

A study on "Potentials of New Information and Communication Technologies (ICTs) in Agriculture Sector" was conducted by M.S. Allahyari I and M. Chizari in 2010. The purpose of this study was to identify potentials and roles of new Information and communications technologies in agricultural and rural sector. The findings of the study revealed that the most applications for these ICTs in rural and agricultural sector were: E-trade of inputs and outputs, extension and training activities for rural dwellers, advertisement of rural tourism products, knowledge transfer from urban to rural and vice versa, official procedures and Geographic Information System (GIS) for management of natural resources. The study also emphasized on use of this ICTs media for not only the improvement of agricultural products or post harvesting activities, but the final goal is to reduce rural poverty in an environment where their livelihood should be improved.

A study on "Information and Communication Technology in Agricultural Development: A Comparative Analysis of Three Projects from India" was conducted by Shaik. N. Meera, Anita Jhamtani, and D.U.M. Rao in 2004 for examination of the performance of three ICT projects in India. The projects had quite different origins and purposes, but all were concerned with improving the delivery of Information to farmers and other rural dwellers. The study describes the organization of each project; discusses the types of farmers involved and assesses their utilization of the services; and looks at the backgrounds and performance of the functionaries who manage the projects. The projects studied varied with respect to the type of services provided, but these included marketing Information, extension advice, Information about rural development programmes, and other Information from government and private sources. The major findings of the project were that the state government project, users most valued access to market Information, land records and Information on rural development programmes. In cooperative project, question-and-answer services, accounting, and farm management Information were valued most. In the private company experiment, participating farmers valued various types of Information on practices, management of pests and diseases, and rural development programmes.

A study on "Role of Information Technology in Agriculture and its Scope in India" was conducted by S.C. Mittal at IIFCO, India. The study concluded that Information of the required quality always has the potential of improving efficiency in all spheres of Agriculture. The emerging scenario of a deregulated Agriculture, thanks to WTO, has brought in a greater 'need' and urgency to make it an integral part of decision making by Indian agricultural community. Information Technology (IT) has a major role to play in all facets of Indian Agriculture. In addition to facilitating farmers in improving the efficiency and productivity of Agriculture and allied activities, the potential of IT lies in bringing about an overall qualitative improvement in life by providing timely and quality Information inputs for decision making. The personnel who work for the welfare of Indian farmers, such as extension workers, do not have access to latest Information which hinders their ability to serve the farming community effectively. This study focuses on the scope for e-powering people who live in rural India as well as those who work for their welfare. The latest developments in IT that facilitate effective IT penetration to rural India, changing pattern of Information requirements & role of IT, type of systems required in the post-WTO environment, the bottlenecks in e-powering rural India along with possible solutions were examined.

A study on "Information and Communication Technology for Rural Farmers Market Access in Tanzania" was conducted by Agnes Godfrey Mwakaje of University of Tanzania in 2010. In this study two hundred farmers were selected randomly to provide Information about ICT use for accessing agricultural market Information. Findings depict that market Information sources are still dominated by the farmers themselves, relatives and traders. Nevertheless, a considerable number of farmers (23%) used ICT to access market Information, weather forecasting and Information of farming technologies. The use of ICT by farmers was significantly related to the quantity produced, income level, type of crop marketed and gender. Farmers who used ICT obtained higher prices than farmers who did not use ICT for accessing market Information and other Information; weather, fertilizers etc. The use of ICT is constrained by costs, accessibility and reliability.

After referring all these studies, it has been observed that IT plays a major role in the development of Agriculture and there is a scope of similar research which could be carried in Rajasthan. Hence, as per the identified need, the current research will be carried out in Talera block of Bundi District.

NEED/IMPORTANCE OF THE STUDY

Agricultural success depends upon timely and accurate Information about weather, markets, Agriculture inputs etc. which could be assessed by ICTs. Hence the current research creates valuable literature and accesses the knowledge of farmer, identifies the need of ICT and suggests an effective ICT model for strengthening Agriculture. It could be beneficial for the Policy Makers like (Members of Planning Commission, Funding Agencies, Development Organizations etc.), Government Institutions (NARBARD, ICAR, SIAM etc.) and Others (Corporate organizations, NGOs, Banks etc.).

STATEMENT OF THE PROBLEM

What is the Knowledge Level, Need and Impact of ICTs among farmers in different aspects of Agriculture at Talera Block of Bundi District in Rajasthan?

OBJECTIVES

The study was carried keeping in mind following objectives:

1. To access the knowledge level of ICTs among farmers for getting Information on weather, market, agricultural inputs etc.
2. To identify the need of ICT in different aspects of Agriculture including farming, production etc
3. To measure the attitudes of farmers towards ICT based Agricultural Services
4. To suggest (design) the effective and suitable ICT model or idea to strengthen the Agriculture.

HYPOTHESIS (ES)

H1a: That the income level of the farmers influences the knowledge level of ICT

H1b: That age and education of farmers influence the knowledge level of ICT among farmers

RESEARCH METHODOLOGY

This Research described effective use of ICTs in Agriculture and main objective of this study was to understanding the use of ICT in Agriculture. The study also explored various studies of ICTs and Agriculture and it also focused on gaining insights and familiarity objectives. Hence the current research was Descriptive and Exploratory in nature which would involve both quantitative and qualitative analysis.

SAMPLE SIZE AND SAMPLE DESIGN

Total population of Talera block= 2.59 lakh (Census 2011)

Average size of family =6 (Planning Commission Report 2010)

Approximate no of farming unit or household= $\frac{2.59}{6} = 41,600$ (Which could be taken as population size)

The Sampling Technique was multi-stage Sampling. In first stage researcher used simple random sampling for selection of villages and in second stage researcher used Sampling with Probability proportional to size of village for selection of respondents from particular village. The sample size determined as shown below

$$n = \frac{Z^2 \cdot p \cdot q \cdot N}{e^2 \cdot (N-1) + Z^2 \cdot p \cdot q} = 79 \approx 80$$

Where

n = sample size

Z= normal variation corresponding to the desired confidence interval (1.96) for the 95% confidence interval

p= sample proportion (0.5) (in which case "n" will be maximum or for most conservative sample)

q= 1-p (0.5)

e= accepted error (0.15) (which was taken as 15% or 0.15)

LOCATION OF STUDY

The study was conducted in Bundi District of Rajasthan. There were five blocks in Bundi district named as Nainwa, Hindoli, Talera, Keshawrai Patan and Bundi (newly emerged in census 2011). For this study, specifically Talera block was chosen. In that block crops like pulses, wheat, gram, barley, cotton, tobacco and oil seeds were grown. Among oil seeds, mustard and rape were the most commonly produce. Important fruit trees of that block were orange, pomegranate, lemon, guava and mango. The annual rainfall was almost 75cm. The Block also had three small rivers, two dams and 6-7 ponds which provide enough water for irrigation. Most of the villages were connected with roads.

The below maintained table gives some demographic profile (as per the Census 2011) for better understanding of the block.

TABLE 1.1: DEMOGRAPHIC PROFILE

Particulars	Data
Area	1,229 sq.km
Population	2.59 lakh
Gram Panchayat	31
Villages	106

Source: District Census Department, Bundi

The below table describes sample distribution of different villages selected for data collection.

TABLE 1.2: SAMPLE DISTRIBUTION OF DIFFERENT VILLAGES

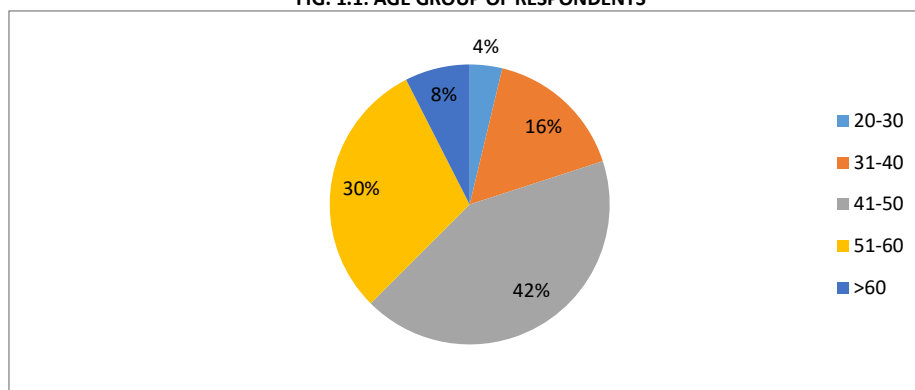
S.No.	Village	HH	Population	Sample size (n=80)
1	Daboosar	39	190	1
2	Dhorela	122	624	4
3	Jawahar Sagar	470	2345	12
4	Naya Bardha	189	1238	9
5	Alphanagar	113	513	9
6	Talera	919	5402	21
7	Sapteeja	63	428	2
8	Dehit	500	2990	8
9	Badoonda	279	1678	9
10	Gopalpura	162	818	5
	Total	2966	16894	80

RESULTS & DISCUSSION

Following findings and analysis were based on collected Information from a survey conducted through questionnaire of 80 farmers during field visit and data collection.

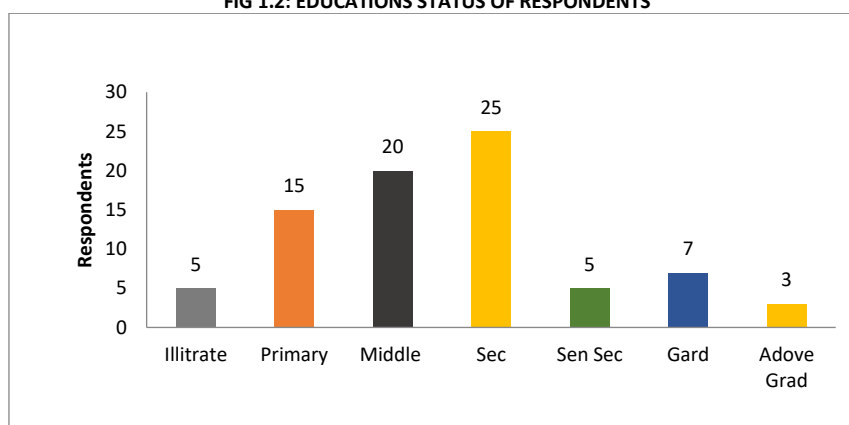
ANALYSIS FROM DEMOGRAPHIC DATA

1. After observing the below pie chart it could be analyzed that age group of respondents was quite varying. Majority of the respondents (42 percent) were from age between forty one to fifty and 30 percent from age between fifty one to sixties.

FIG. 1.1: AGE GROUP OF RESPONDENTS

Sources- Data collected form survey

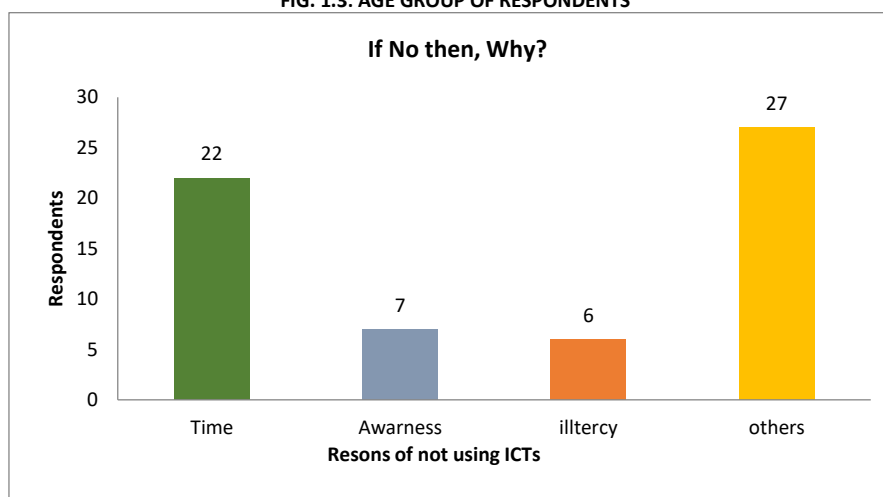
2. Education status of respondents plays a vital role in research. During the data collection all the population was classified into seven sub categories as shown in fig 1.2.

FIG 1.2: EDUCATIONS STATUS OF RESPONDENTS

Sources - Data collected form survey

From the fig 1.2 it could be inferred that in the education level of respondents was very less. Hence the use of ICT has to be carefully deployed keeping in the account their education and knowledge level in Talera Block.

3. From the collected data, it was analyzed that only 44 percent respondents were using ICT services for Agriculture purpose. While exploring the reasons of not using ICTs in Agriculture, the result depicted that time constraint, awareness of ICTs, Illiteracy and hesitation to use ICT in technologies and new practices and more trust on other villagers for Agriculture Information were main reasons of not using ICT.

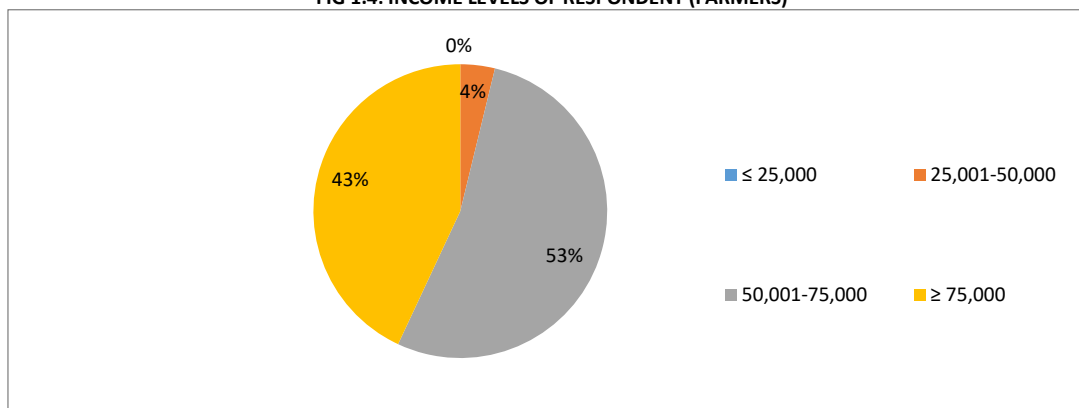
FIG. 1.3: AGE GROUP OF RESPONDENTS

Sources- Data collected form survey

From the fig 1.3 it can be derived that the main reason behind not using the ICTs was time constrain and awareness. There are other reasons also exist like more friendly towards traditional Information methods, socio economic barrier etc.

4. ICTs had significant impact on income level of respondents. From the collected data it could be inferred that most of the farmers had annual income of between 50,000- 75,000. And there were fifty three percent people who had income up to 75,000 or more than it.

FIG 1.4: INCOME LEVELS OF RESPONDENT (FARMERS)

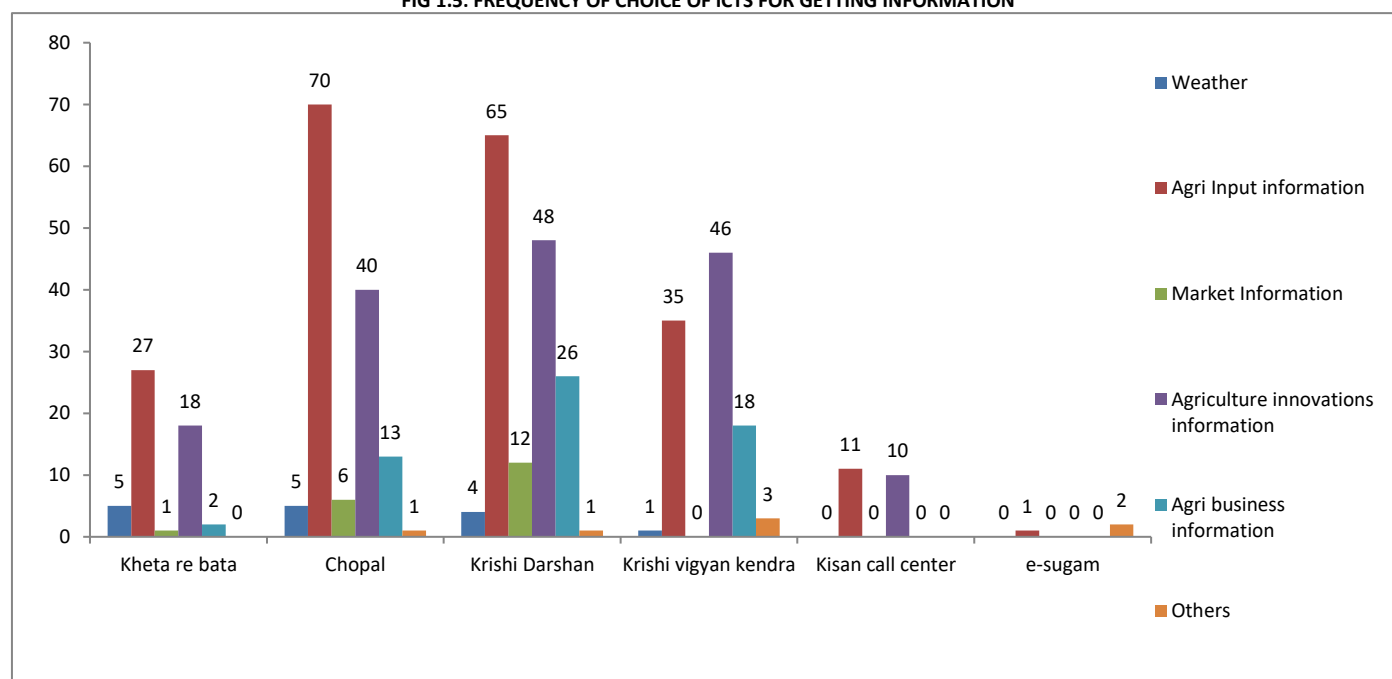


Source- from collected data

FREQUENCY OF CHOICE OF ICTS FOR GETTING AGRICULTURE INFORMATION

Although a huge no of farmers is friendly towards traditional methods of Information in Agriculture. But even then ICTs are major source of Agricultural Information in rural areas. It provides different types of important and timely Information to farmers for facilitating Agriculture.

FIG 1.5: FREQUENCY OF CHOICE OF ICTS FOR GETTING INFORMATION

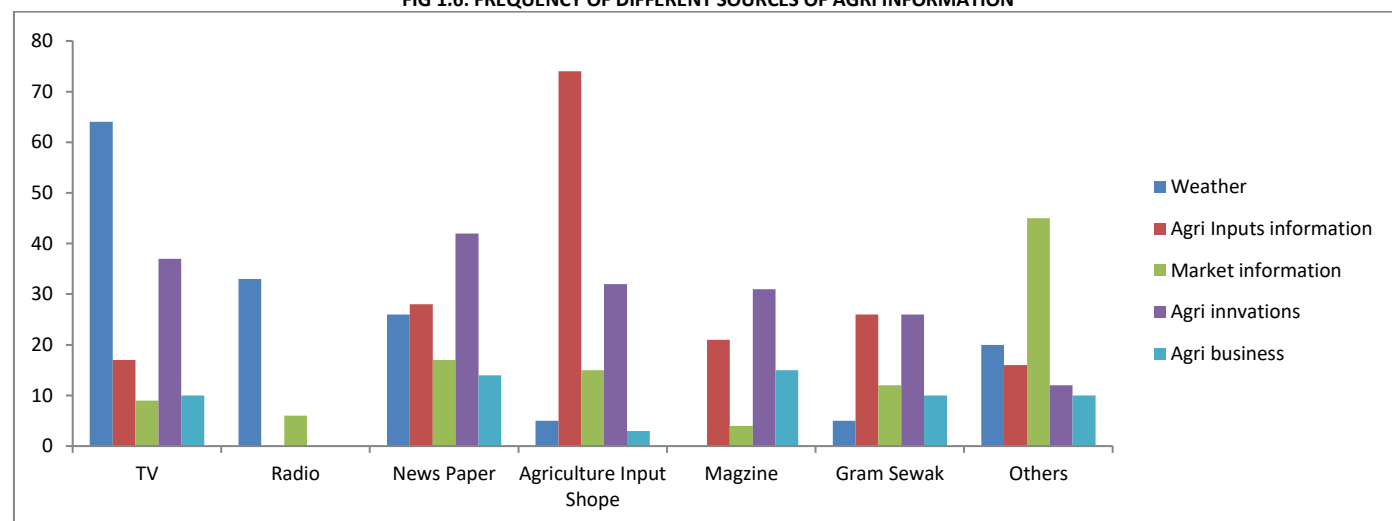


From the above fig 1.5 it could be inferred that majority of respondent use ICTs like Chopal, Krishi Darshan and Krishi Vigyan Kendra for Agri Information and Agri innovations. And few respondents were in favor use of ICTs like *Kheta re bata*, Kisan Call Center for Agri Information.

FREQUENCY OF DIFFERENT SOURCES FOR AGRICULTURE INFORMATION

There is different source of Agriculture Information available in Talera block like TV, Radio/FM, Newspaper, Magazines, Gram Sewak, Agri inputs shops etc. farmers use different sources of Information according to their need.

FIG 1.6: FREQUENCY OF DIFFERENT SOURCES OF AGRI INFORMATION

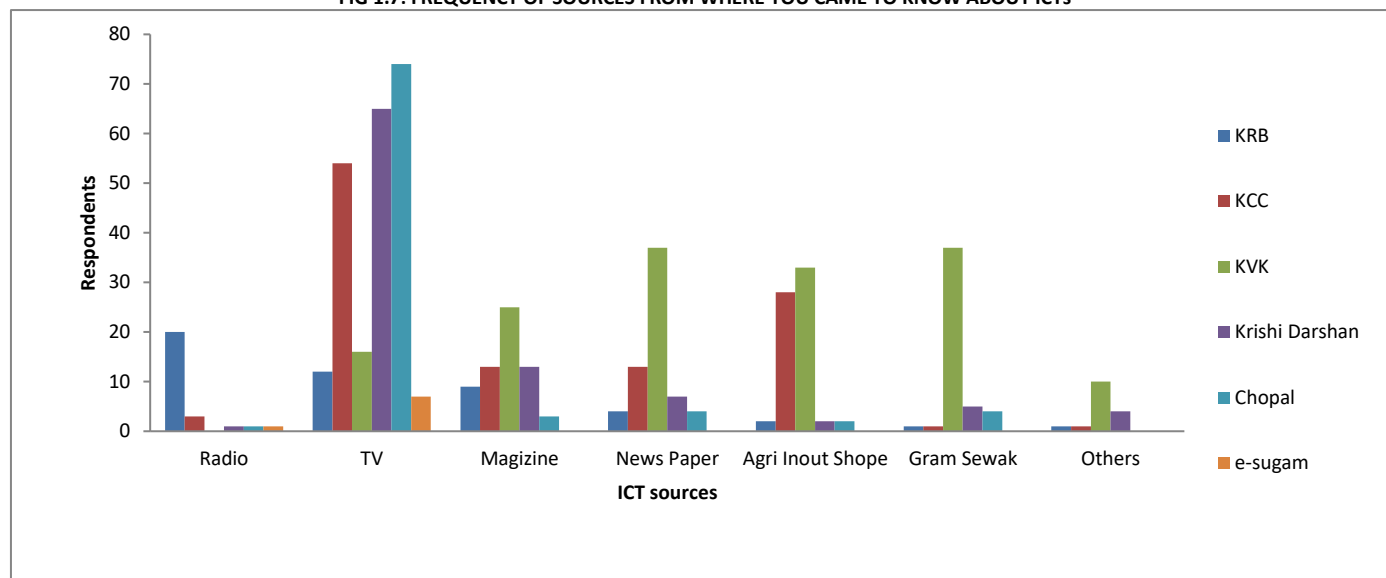


From the fig 1.6 it could be depicted that Agri input shops are key source of Information. TV and Radios were major sources of Information like weather and Agri innovations. Newspapers and Gram Sewak were other sources of Information they provide all types of Agri Informations. There were some other sources of Information also exist in rural areas like Villagers, Patwaris, Relatives, Traditional methods etc.

FREQUENCY OF SOURCES FROM WHERE DO YOU CAME TO KNOW ABOUT ICTs?

There are many sources of Information (TV, Radio, Newspaper etc.) available in rural areas for providing knowledge about ICTs like *Kheta re bata*, Kisan Call Center, Krishi Vigyan Kendra, Kishi Vigyan Kenda, Chopal, e-sugam etc.

FIG 1.7: FREQUENCY OF SOURCES FROM WHERE YOU CAME TO KNOW ABOUT ICTs

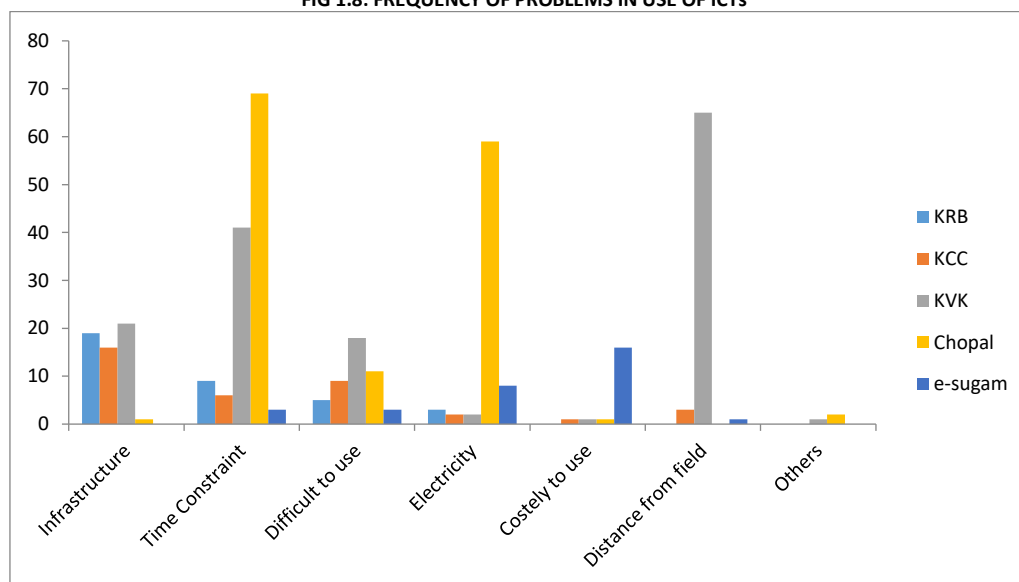


According to fig 1.7 shown above it could be inferred that TV magazine and Newspaper were key source of all ICTs. Radios were only source of *Kheta re bata* and Kisan Call Center. Agri input shops also gave Information about Krishi Vigyan Kendra and Kisan Call Center mainly.

FREQUENCY OF PROBLEMS IN USE OF ICTs

There is various problem occurred in use and access of ICT tools. These problems can be categories in Infrastructure, Time constraint or Scheduling of programmes, Difficulty to use, Electricity, Costly to use, Distance from field etc.

FIG 1.8: FREQUENCY OF PROBLEMS IN USE OF ICTs

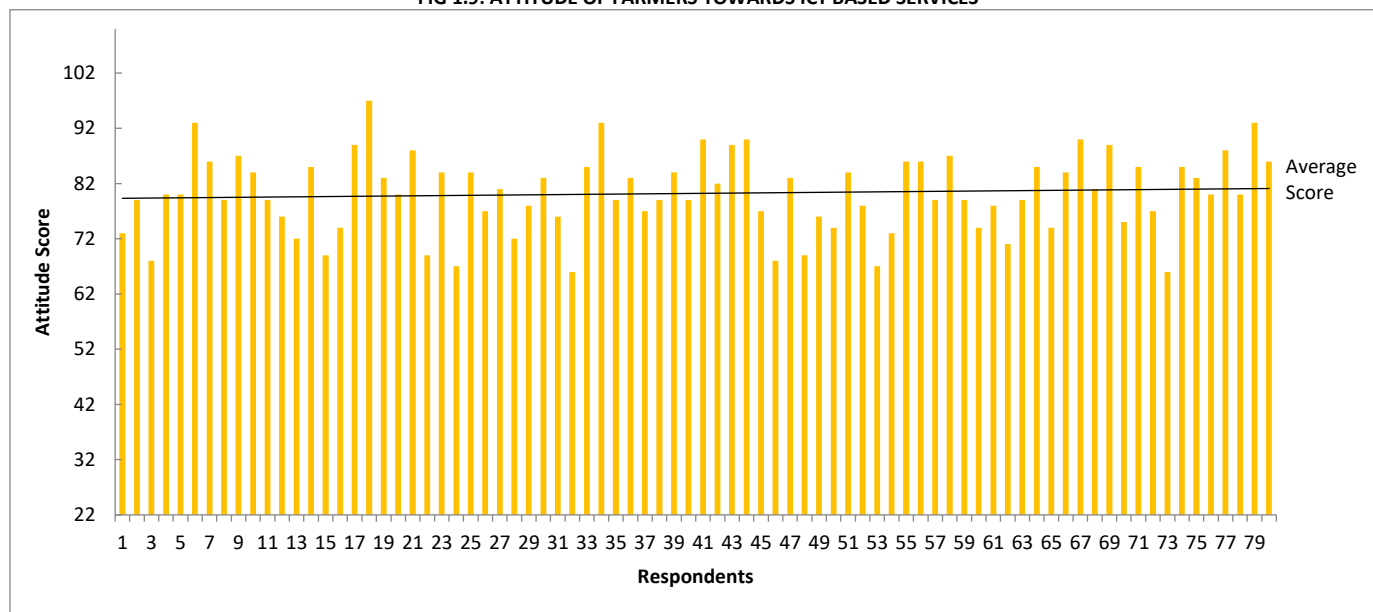


Form the fig 1.8 it could be inferred that time constraint and electricity was a major problem in use of ICTs. The programmes which were telecasted on TV have common problem of scheduling and electricity. KVK is located far from block so farmers couldn't access frequently.

ATTITUDE MEASUREMENT

The attitude measurement scale consists of 22 statements were used for the measurement of attitude towards ICT based services. The responses were recorded on a five point *Likert* scale representing strongly agree, agree, undecided, disagree, and strongly disagree with scores of 5,4,3,2, and 1 for positive statements and vice-versa for negative statements. The attitude score of each respondent could be calculated by summing the scores obtained by him on all the items. The attitude score on this scale was range from 22 to 110. The higher score indicated that respondent had more favorable attitude towards ICTs based services and vice-versa.

FIG 1.9: ATTITUDE OF FARMERS TOWARDS ICT BASED SERVICES



Source- from collected data

After observing the collected data and above fig it could be inferred that the score of farmers is 80 which shows that farmers were agree with the ICT services. But there were very few people who strongly agree with ICTs services. And percentage of undecided (UD) score was also high which depicts that people were not that much satisfied with ICT services.

HYPOTHESIS TESTING

H1a: That the income level of the farmers influences the knowledge level of ICT

TABLE 2.1: RELATION BETWEEN USE OF ICT AND INCOME LEVEL

Income	Use of ICT		Total
	Yes	No	
≤ 25,000	0	0	0
25,001-50,000	0	4	4
50,001-75,000	20	23	43
≥ 75,000	15	18	33
Total	35	45	80

From the above table 2.1 this hypothesis could be proved by using chi square method. In this method two variables income and with use of ICT were compared. The calculated chi square value (table 2.1) for three degree of freedom was 3.38. The calculated value of chi square was less than their table values for 5 percent level of significant, hence the result of study support hypothesis. So it could be concluded that income of farmers does not has any significant relation with use of ICT in Agriculture.

H1b: That age and education of farmers influence the knowledge level of ICT among farmers

TABLE 2.2: RELATIONS BETWEEN USE OF ICT AND AGE

Age	Use of ICT		Total
	Yes	No	
20-30	2	1	3
31-40	9	4	13
41-50	15	19	34
51-60	7	17	24
>60	2	4	6
Total	35	45	80

TABLE 2.3 RELATIONS BETWEEN USE OF ICT AND EDUCATION

Education status	Use of ICT		Total
	Yes	No	
Illiterate	1	4	5
Primary	3	11	14
Middle	5	17	22
Sec.	15	9	24
Sen. Sec	2	3	5
Graduation.	6	1	7
Above graduation	3	0	3
Total	35	45	80

From the above table 2.2 and 2.3 this hypothesis could be proved by using chi square method. In this method two variables education and age were compared with use of ICT.

The calculated chi square value (table 2.2) for four degree of freedom was 6.41. The calculated value of chi square was less than its table value (9.48) for 5 percent level of significant, hence the result of study supports hypothesis. So it could be concluded that Age of farmers do not has any significant relation with use of ICT in Agriculture.

The calculated value (table 2.3) for six degree of freedom was 20.25. The calculated value of chi square was higher than its table value (12.59) for 5 percent level of significant, hence the result of study does not support hypothesis. So it could be concluded that **education status has significant relation with use of ICT in Agriculture.**

FINDINGS

ICT initiatives are intended to address the needs of the farmers for their actual usage and ability to bring significant impact on the crop productivity and socio-economic development of society. The common problems addressed in adoption of ICT in Talera Block are ICT illiteracy, availability of relevant and localized contents in their own languages, easy and affordable accessibility and other issues such as awareness and willingness for adoption of new technologies among the people etc.

The result of this study says that majority of farmers know about ICT programme like KCC, KRB, Chopal etc. And the farmers also agree that ICTs are helpful for Agriculture but they could not use it frequently. There were various problems observed during the use of ICTs in Agriculture in Talera block. These are time constraint, difficulty to use and understanding, electricity etc. the major problem occurred in use of ICT unwillingness of people. Many respondents had huge faith on traditional methods.

One critical aspect in the usage of ICT's for farmers and their groups, as seen in some of the ICT driven initiatives, is the involvement of human interface at the last mile indicating that there is a human dependency in transmission of Information/Knowledge to farmers like in Kisan Call Center and Krishi Vigyan Kendra. So, there is a need to understand as to how far the ICT initiatives are able to address the farmers need so that better solutions can be developed to address those unmet needs.

RECOMMENDATIONS/SUGGESTIONS

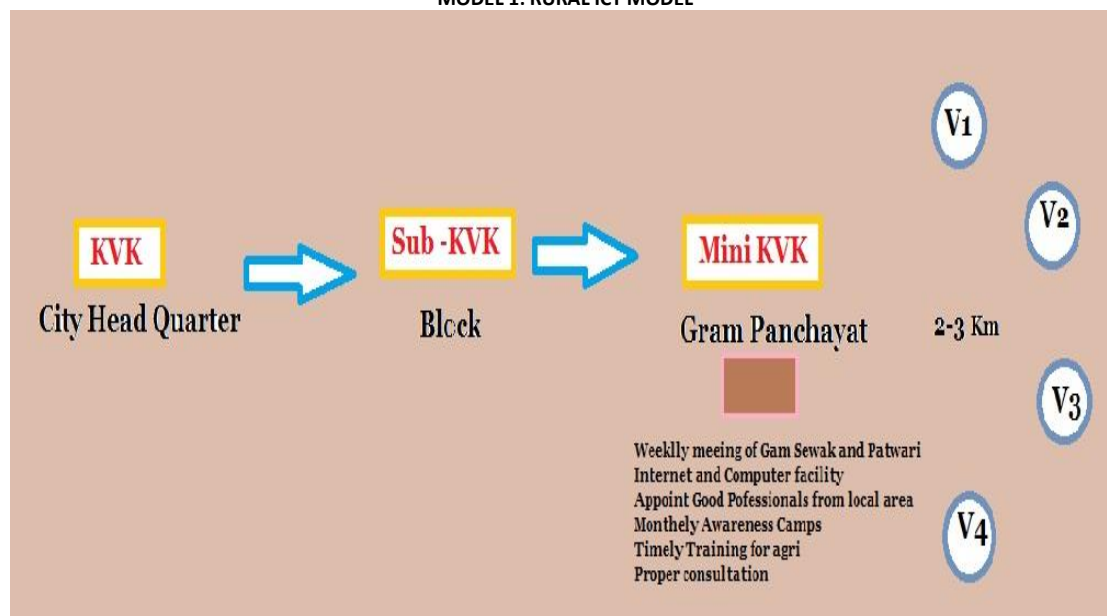
As we know ICT initiatives are unmatched models for social transformation. Although these extension services are very prone in Talera block, but there are some possibilities to change and make them more strengthen. There are some recommendations as follows:

- There is always a need of specific Information to farmers, so ICT tools should be well managed for providing timely and regular Information
- The Krishi Vigyan Kendra is located very far from particular block (Talera). So there is a problem of access to there. There could be alternate to locate a common *Kisan Sewa Kendra* on Gram Panchayat level. Kisan sewa Kendra will be like Aanganwari center at village level or Sub Center at Gram Panchayat level
- All the ICT's programmes which provide extension knowledge to farmers are mechanized in Hindi or English language which is a problematic to farmers to understand. If these ICTs will also telecast in local language, it will more helpful for farmers
- The major problem in use of ICT services is time constrain. Most the Agriculture programmes are generally telecast in evening and morning, which always clash the schedules of farmers. There should be more focus on use IEC material for Agriculture
- In *Kisan Sewa Kendra* a person who has good Agriculture knowledge should be appointed. This person should have proper schedule of visit villages for make people aware for effective use of Agriculture
- There should be more IEC material printed or distributed on Agriculture inputs shop for awareness
- Associating Farmer Friend/SHG/PRI representatives with Agriculture schemes and projects so they can get more and more benefits
- Today maximum villages have access of mobile phones. So more Information coverage should be through Mobile phones to SMS services
- Special training and camps should have held regularly for farmers and Agri input vendors to get update about Agri Information and innovations

CONCLUSIONS

Rural Model ICT model: During the field visit and data collection it was identified that due to lack of hard infrastructure there is a big of Information network in villages. The Agriculture inputs shops and mandies are generally located on district or block level only. If there is any center on Panchayat level, it is not well equipped and managed. To access all the Agriculture Information farmers have to reach or go to block level or district which is not possible frequently. The main problem which farmers generally face is time constrain. Due to this problem they cannot go far from field to get proper and better Information. After observing the villages of Talera block it was observed that Krishi Vigyan Kendra is located to district head, which covers reach of only 10-15 villages come under its territory. But it's not possible for other villages far from it to reach their regularly. Hence, a **model to form an Information and communication network** could be developed. The process of KVK can be divided in decentralization manner. There should be Sub- KVK at block level and a Mini -KVK at Gram Panchayat level. This process should be managed by Head KVK or district KVK. Mini- KVK will be work as a key resource center for villagers. They can reach easily over there and access the require Information. M-KVK will be well equipped with internet and Computer. A local professional should be appointed there to access the computer and aware people and give needful knowledge to farmers. This has been depicted below:

MODEL 1: RURAL ICT MODEL



LIMITATIONS

Some of the limitations of the study are mentioned below:

- As the research has been undertaken by single researcher and the scope of the study is vast, it would be practically impossible to cover all the aspects of the study. There is also a limitation of time as the research has to be carried within two months
- Main problem occurred was community support. Most the farmers were busy on fields during data collection and they didn't respond properly
- Many farmers were not friendly with terminology used in questionnaire
- In some villages farmers responded very badly and behave very rudely

SCOPE FOR FURTHER RESEARCH

The study has great scope and can be done on different locations of Rajasthan as well as India. This type of study would definitely help the agricultural scientists to measure the performance of ICT in different locations.

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APPENDIX/ANNEXURE

QUESTIONNAIRE

Assessment of Knowledge Level, Need and Impact of ICTs among Farmers in different aspects of Agriculture

1. Personal Details

.1	Name:	.2	Village:
.3	Contact No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	.4	Gram Panchayat:
.5	Age of Respondent (in years) a) 20 – 30 <input type="checkbox"/> b) 31 – 40 <input type="checkbox"/> c) 41 – 50 <input type="checkbox"/> d) 51 – 60 <input type="checkbox"/> e) > 60 <input type="checkbox"/>	.6	Education Level Primary <input type="checkbox"/> Middle <input type="checkbox"/> Secondary <input type="checkbox"/> Senior Secondary <input type="checkbox"/> Graduation <input type="checkbox"/>

2. ICT in Agriculture Assessment

2.1 Do you use ICT (communication media for Information on weather, market prices, seeds, fertilizers, pesticides etc.) in Agriculture?

Yes ☐ No ☐

If, No, then why are you not using ICT:

2.2 Please indicate the number of years you have been using ICT in Agriculture:

a) 0 – 3 ☐ b) 4 – 6 ☐ c) 7 – 10 ☐ d) > 10 ☐

2.3 Please tick (☑) on the type of agricultural Information which you take from below mentioned ICTs:

	Weather	Agri. inputs	Market Info.	Agri. Innovations	Agribusiness	Others (pl. specify)
<i>Kheta re bata</i>						
Kisan Call Center						
Krishi Vigyan Kendra						
Krishi Darshan (DD1)						
Chopal (DD1)						
e-sugam						

2.4 Please tick (☑) the source of the below mentioned agricultural Information:

	Agriculture Inputs Shops	TV	Radio	News Paper	Magazine	Gram Sewak	Others (pl. specify)
Weather							
Agri.inputs							
Market Info.							
Agri. Innovations							
Agribusiness							

2.5 Please tick (☑) the source of the below mentioned ICTs in Agriculture:

	Agriculture Inputs Shops	TV	Radio	News Paper	Magazine	Gram Sewak	Others (pl. specify)
<i>Kheta re bata</i>							
Kisan Call Center							
Krishi Vigyan Kendra							
Krishi Darshan (DD1)							
Chopal (DD1)							

2.6 Are there any problems in using ICTs in Agriculture, If Yes, please tick (☑) the below mentioned causes:

	Infrastruc- ture	Difficulty in use and under- standing	Costly to use	Time con- straints	Distance from fields	Electric- ity	Others (pl. spec- ify)
<i>Kheta re bata</i>							
Kisan Call Center							
Krishi Vigyan Ken- dra							
Krishi Darshan (DD1)							
Chopal (DD1)							
e-sugam							

3. Attitude Measurement towards ICT

3.1 Please indicate on the extent to which you agree or disagree on following statements towards ICT based services.

S. No.	Statements	SA	A	UD	DA	SDA
1.	ICTs provide possible solutions to the present agricultural situation.					
2*	ICTs cannot meet location specific needs of the farmers.					
3	ICTs are potential tools to reach the needy farmers.					
4	Farmers feedback is fast through ICTs than traditional methods					
5*	Illiteracy will not deter farmers in availing ICT services.					
6*	ICTs cannot deliver personalized Information.					
7	ICT based extension services assist the farmer in planning and decision making aspects in Agriculture.					
8*	'ICT services' is a distant dream for resource poor farmers.					
9	Farmers can get remunerative prices to their produce through ICT based market Intelligence					
10	Expert advice makes the farmers enterprise/activities productive.					
11*	All kinds of Information exchange are possible only through ICTs.					
12	Existing infrastructure of ICTs is not enough to meet the needs of the farming community.					
13*	Only resourceful farmers can get the benefit of the ICTs					
14	Access to Information centre at village level is boon to the farming community.					
15	Phone-in-live with scientists gives first hand Information about queries.					
16*	ICTs alone would solve the problems of farmers.					
17	ICT based Pest/disease outbreak warning system facilitate farmers to take preventive measures.					
18*	ICT extension services avoid the personal extension contact.					
19	ICTs based extension services provide new opportunity to build a skilled and knowledge community.					
20*	ICT is a valuable tool, but it will never influence farmers' own decision making.					
21	Weather forecasting through ICTs assists farmers in timely decisions.					
22*	ICT based extension services are alternative to the present extension system.					

* Negative statements.

SA: Strongly agree A: Agree UD: Undecided DA: Disagree SDA: strongly disagree

4. Agriculture Productivity Measurement

4.1 Please specify the yield per hectare, of the crops, if applicable in your field:

	Approx. Yield (This Year)	Approx. Yield (Previous Year)
Cereals		
Pulses		
Oilseeds		
Fodder		
Others (pl. specify) _____		

4.2 Please specify your Annual Income (in Rs.)

- a) ≤ 25,000 ☐
- b) 25,001 – 50,000 ☐
- c) 50,001 – 75,000 ☐
- d) ≥ 75,000 ☐

Date: _____

Place: _____

(SIGNATURE)

ESSENTIAL FACTORS FOR TRAINING TRANSFER: A STUDY OF PHARMACEUTICAL REPRESENTATIVES IN LUCKNOW AREA

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ABSTRACT

Through the study it is the endeavour of the researcher to bring to the fore the factors responsible for training transfer among the medical representatives in Lucknow area. For the purpose of the study a survey was conducted among the medical representatives with 203 participants. For the purpose of the study important factors acting in the work environment that impact training was identified through a literature review and their role in training transfer was analysed there from.

KEYWORDS

characteristics, factors, study, training, transfer.

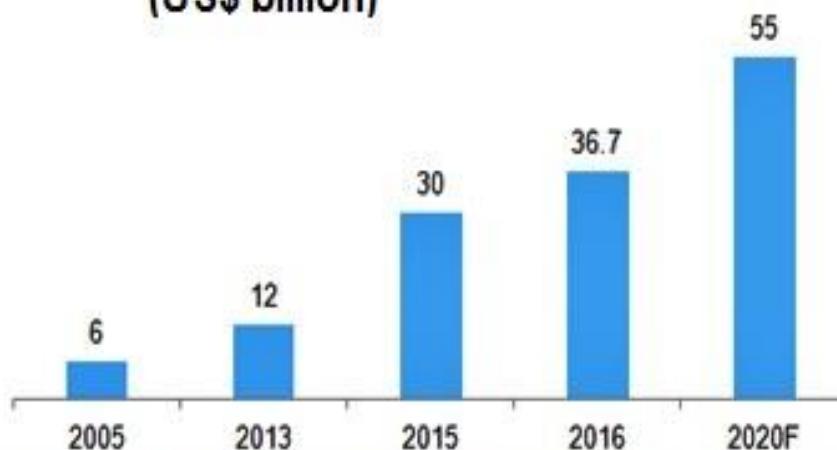
INTRODUCTION

The pharmaceutical industry produces, sells and promotes drugs used as panacea for various ailments. Pharmaceutical companies are allowed to deal in generic or brand medication and medical equipments. The pharmaceutical industry discovers, develops, formulates and sells medicines. The organized sector of India's pharmaceutical industry consists of 250 to 300 companies, which account for 70 percent of products on the market, with the top 10 firms representing around 30 percent. However, the total sector is estimated at nearly 20,000 businesses, some of which are extremely small. Approximately 75 percent of India's demand for medicines is met by local manufacturing. In 2013, the pharmaceutical industry had a workforce of about 4, 50,000. This included researchers, scientists, doctors and project managers. (Source* the Ministry of Statistics and Programme Implementation).

Indian pharmaceutical industry is facing a considerable change in its aims, objectives, parameters of growth in changing scenario on account of globalization at the corporate level merger, acquisition phases are taking place. Newer developments cropping on account of new innovation are made alongside each other, intrinsic life style, health care and health consciousness and caution have risen to such unimaginable heights as never before. An attempt is required to focus on issue of development of HR practices in pharmaceutical industries. In the times of globalization, free economy, disinvestment policy, privatization of public sector a flexible thinking is needed to deal with the human resource issues arising in this fast growing sector.

CHART 1

Revenue of Indian pharmaceutical sector (US\$ billion)



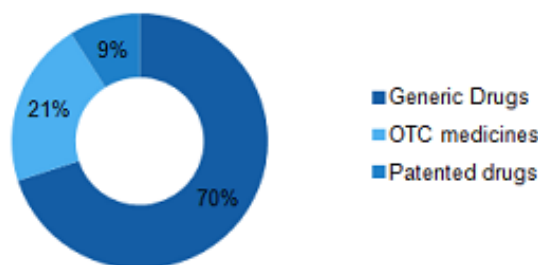
Source: Department of Pharmaceuticals, PwC, McKinsey, TechSci Research

Notes: F - Forecast, CAGR - Compound Annual Growth Rate

The sector can be sub-divided into generic drugs, over the counter drugs and patent drugs.

FIG. 2

Revenue share of Indian pharmaceutical sub-segments in 2015 (%)



Source: Business Monitor International, FCCI Indian Pharma Summit 2014-15, TechSci Research

Pharmaceutical products are difficult to manufacture, requiring sophisticated machinery and processes to meet the exacting standards laid down by regulatory authorities. However, the customer will not buy the product for this reason alone. As with any other product, the purchase is affected only when the customer believes the product will be of some use to him. Thus, as is the case with marketing in general, pharmaceutical marketing is aimed at fulfilling the customers' needs. Pharmaceutical marketing is the last element of an information continuum, where research concepts are transformed into practical therapeutic tools and where information is progressively layered and made more useful to the health care system. Thus, transfer of information to physicians through marketing is a crucial element of pharmaceutical innovation. By providing an informed choice of carefully characterized agents, marketing assists physicians in matching drug therapy to individual patient needs. Pharmaceutical marketing is presently the most organized and comprehensive information system for updating physicians about the availability, safety, efficacy, hazards, and techniques of using medicines.

TRAININGS AND PHARMACEUTICAL MARKETING

It is eminent that selling is a vibrant occupation, and salespersons need to upgrade their knowledge about products and services constantly to be a successful. This is essential for a sector like pharmaceutical where the cost intensive procedure of drug development is offset by the efforts of marketers' ability to promote the drug. This makes the task of salesmen in the pharmaceutical sector is tougher when compared to their counterparts in other industries. When sales representatives join pharmaceutical companies, they undergo intensive pharmaceutical sales classroom training sessions, where they are trained aggressively by doctors and medical sales managers. Once this sales training is complete, they go out to the market and work in the field. There are the five types of training that are covered in the exhaustive sales training curriculum.

1. **Anatomy & Physiology** – This comprises a thorough training on the human anatomy and physiology – the functions of the various organs, the different parts of the organs, and what happens if they function abnormally. This training is usually conducted by doctors.
2. **Diseases** - The various diseases for which the company offers medicines, their symptoms and future drugs.
3. **Drugs** - The drugs available for a particular disease. How does the drug help cure the disease? Its indications and contra-indications. This training is given by a pharmaceutical specialist.
4. **Sales Process** - Once sales representatives complete their medical training, the next step is a through process training on how to work with doctors, how to break the ice and open the conversation, how to introduce the drugs, and how to promote the drug and company. This training usually covers soft skills needed to make a sale and is delivered by a senior sales trainer.
5. **Handling Objections** - Finally, sales representatives are trained on how to handle the doctors' objections. How to reply in a dignified way without being harsh to the doctors.

Getting the employees with entry level job related talent is one of the issues concerning the industry. The issue assumes significance as companies are spending more time on training entry-level talent to make them job ready. This has been more pronounced in sectors such as pharmaceuticals have also started facing a dearth of talent even as they chalk out their expansion plans. With no real solution in sight, companies are left with no option but to invest large sums in training. This investment in training has an impact only if the training transfers into work performance of the employees. Over the years many factors have been identified as contributing towards the transfer of training by training researchers such as Ford, Baldwin, Holton et al.

REVIEW OF LITERATURE

Literatures related to the transfer of training and work environment reviewed are presented below in order to understand the related knowledge on the training transfer.

TRAINING

Cherrington (1991) differentiated training, development and education. Training is the acquisition of specific skills or knowledge, development is the improving of the intellectual or emotional abilities needed to do better job and education is something more general that attempts to provide student with general knowledge that can applied in many different settings. Training also can be defined as a planned learning experience for the acquisition of new knowledge, attitudes or skills (David, 1997; Campbell; 1970; Goldstein, 1980).

TRANSFER OF TRAINING

Transfer of training is the application of learned knowledge, skills and attitudes to the job and subsequent maintenance over time (Cheng & Ho 2001) for the purposes of improving the job performance (Velada & Caetano 2007). Geilen (cited in Van der Klink, Gielen, and Nauta 2001) identified three dimensions of transfer: the direction; the level of complexity; and the distance.

FACTORS AFFECTING TRAINING TRANSFER

Baldwin and Ford (1988) identified three categories of influences on training transfer;

1. individual characteristics,
2. training design factors and
3. organisational factors

A review of literature has demonstrated that research exploring the relationship between organisational, or the transfer system, factors and training transfer has been investigated less frequently than training design or individual characteristics (Valada et al. 2007; Saks & Belcourt, 2006; Chen, Holton & Bates 2006). The transfer system refers to all the person, training, and organisational related factors that have the potential to influence transfer of learning to job performance (Holton, Bates and Rouna, 2000). The complex events such as outcomes of a training intervention cannot be understood by analysing them in isolation because learned skills at the individual level are embedded in a wider context. Noe (2000) suggests that an understanding of organisational factors affecting transfer will

make a greater contribution to HRD practitioners wishing to optimise the effectiveness of training and development programmes. Holton et al. (2000) stated that an understanding of what constitutes an organizational transfer climate is unclear and there is no clear consensus on the network of factors affecting transfer of learning in the workplace. This is evident from the different explanations of the work environment. Lim and Johnson (2002) however, stated the work environment factors can be separated into two subcategories:

1. Factors that relate to the work
2. Factors related to people

NEED OF THE STUDY

A lot of financial investment has been going into training of medical representatives but not many researchers have tried to explore the factors that aid the training transfer and explore which factors are important for training transfer.

STATEMENT OF THE PROBLEM

There are various existing work environment factors for medical representatives in Lucknow to identify the hierarchical importance of these in training transfer.

OBJECTIVES

1. To study the work environment factors affecting training transfer.
2. To find which work environment factors impact training transfer of medical representatives working in pharmaceutical companies in Lucknow the most.
3. To find out which work environment factors impact the training transfer of medical representatives working in pharmaceutical companies in Lucknow the most.

RESEARCH METHODOLOGY

- **Source of data:** The study is based on primary and secondary data. The main source of primary data is the medical representatives working in the pharmaceutical companies in Lucknow. The data was collected by administering a structured questionnaire. Secondary data was collected through journals, magazines, company reports etc.
- **Sample design:** Random sampling technique was adopted to select the samples from the study organizations
- **Sample size:** The sample size consists of 203 participants. Having work experience in the field ranging from 0 to 5 years and who have undergone different trainings in their respective organisations.
- **Method of scoring:** Five point Likert rating scale was used in the questionnaire where in the following numbers represent the respective descriptions. 5. strongly disagree 4. disagree 3. neutral 2. agree 1. strongly agree
- **Method of data analysis:** The impact of the work environment factors such as: Employee characteristics, academic qualification, supervisor support and peer support were rated by the participants using the survey instrument and the scores were entered into a regression model to study their impact on training transfer also rated by the respondents in the same survey.

These scores were then entered into a hierarchical regression model in order to study the impact of these work environment factors on changes they can bring about in training transfer.

DATA ANALYSIS

Model: Using training transfer as dependent variable and the work environment factors (Employee characteristics, academic qualification, supervisor support and peer support) as predictors.

In analysis we tried to study the effect of all the independent factors namely employee characteristics, academic qualification, supervisory climate and peer support through hierarchical regression analysis in order to study their relative effect on training transfer. The order of entering the independent variable into the model was based upon their order of recording in the survey.

TABLE 1: HIERARCHICAL REGRESSION MODEL ON TRAINING TRANSFER

Independent Variable	R Square	R square change	Beta Weight
<u>Step 1</u> Employee Characteristics	0.014	0.014	0.119
<u>Step 2</u> Employee Characteristics Academic qualification Supervisor support	0.20	0.005	0.118 -0.033 -0.067
<u>Step 3</u> Employee Characteristics Academic qualification Supervisor support Peer support	0.041	0.021	0.117 -0.018 -0.038 -0.148

Source: Data collected from survey of Medical Representatives in Lucknow

- Variance inflation factor (VIF) values for all predictors were well below a cut-off value of 10, indicating no violation of the multi -co linearity assumption (Pallant, 2005).
- In the above table we can see that employee characteristics can explain 1.4 % change in training transfer when entered first.
- In the second step when we add academic qualification and supervisory support as predictors for training transfer together the three are able to explain 2 % variance
- In the third step when we enter peer support to the model the predictors explain 4.1 % variance in the training transfer.
- The beta weight (standardised regression coefficient) for employee characteristics in the first step was 0.119.
- The beta weight (standardised regression coefficient) in the second step on adding academic qualifications and supervisory support is changed to 0.118, -0.033 and -0.067 respectively
- The beta weight (standardised regression coefficient) in the third step upon adding peer support was 0.117,-0.018,-0.038 and -0.148 for all the independent variables respectively

RESULTS AND DISCUSSION

- From this table we can see that employee characteristics explain the major part of variability in training transfer alone and also have a positive influence over it.
- As we added the predictors the r change in the second step was only 0.5 % while beta weights for all other predictors was negative meaning that as there is an increase in these predictors there will be a decrease in training transfer.
- Thus employee characteristics are the most important variable to predict training transfer.

CONCLUSION

This study adds to the existing training transfer research by creating further understanding of work environment factors like employee characteristics, academic qualification, peer support and supervisor support that influence actual transfer of learning from a formal training setting to the workplace. In addition, the pharmaceutical companies will be able to use this study to enhance its continuous transfer of training efforts. The results of the study may also provide additional insight on transfer as a multi-dimensional process. Many organizations, human resource personnel and trainers are struggling with issues like the accurately identifying factors that encourage and inhibit transfer as they develop their own programs with the vital goal of increasing organizational performance. Many groups, such as educators, and trainers, dealing with transfer of training issues may find the results of this study helpful.

LIMITATIONS

1. Due to numerous work environment factors existing for the pharmaceutical employees only a few could be considered for the purpose of our study
2. This study relied on self-ratings, it could be argued that the results obtained with these ratings are misleading

SUGGESTIONS AND SCOPE FOR FURTHER RESEARCH

1. An in-depth study is required as to why the training fails to be transferred to the workplace for which the organisations need to do some introspection and conduct a research within to discover the possible reasons for this phenomenon.
2. There is a need to do a comparative study after various training sessions to see how much has been learnt.
3. There is a scope for study into training transfer with a 360 degree feedback method to see the changes in performance of employees after a certain time lag.

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DATA SOURCES

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EXPLORING PSYCHOLOGICAL CAPITAL IN INDIAN CONTEXT AMONG MSME ENTREPRENEURS**MARIA TRESITA PAUL V.****RESEARCH SCHOLAR****BHARATHIAR SCHOOL OF MANAGEMENT & ENTREPRENEUR DEVELOPMENT****BHARATHIAR UNIVERSITY****COIMBATORE****DR. N. UMA DEVI****ASST. PROFESSOR****BHARATHIAR SCHOOL OF MANAGEMENT & ENTREPRENEUR DEVELOPMENT****BHARATHIAR UNIVERSITY****COIMBATORE****ABSTRACT**

Major findings of the research paper indicate that the respondents differ on their scores on psychological capital. The demographic profiles except the age, educational qualification, years of experience, income, location of business, family type, business type and the entrepreneurial generation no other profiles had a significant difference in the MSME entrepreneur's psychological capital levels. So, hence it becomes necessary for the MSME development authorities, government and entrepreneur development bodies, to take necessary steps like creating a conducive environment, formulate training modules seminars and conferences, providing entrepreneurs with encouragement as growth of MSME entrepreneurs is deemed a vital source of employment creation and holistic development of India.

KEYWORDS

MSME entrepreneurs, psychological capital.

1. INTRODUCTION

Entrepreneurs are considered as the 'change agents' in the process of industrial and economic development of a country. Entrepreneurial contributions are crucial, in developing economies like India. They aid employment generation, growth of Gross Domestic Product and per capita income, economic diversification, optimum utilization of local resources, improvement in standard of living, promoting export and import, new product and market development. Thus, the overall development of country intimately depends on entrepreneurial success.

Research has demonstrated that Psychological Capital (PsyCap), drawn from positive psychology in general and positive organizational behaviour in particular, has important influence on entrepreneurial behavior. Psychological capital is viewed as a person's self-view or sense of self-esteem. (Goldsmith 1997). Thus, it can be viewed as a person's ability to successfully utilize the financial social and human capital he/she brings into the organization in a productive manner. Psychological capital is formally defined as a higher-order construct derived from a constellation of motivation and behavioural tendencies associated with self-efficacy, hope, optimism and resilience (Luthans, Youssef et al., 2007).

The Micro, Small and Medium Enterprises (MSMEs) play a pivotal role in the economic and social development of the country, often acting as a nursery of entrepreneurship. In India MSME sector has emerged as highly vibrant and dynamic over the last five decades. The sector contributes about 8% to Gross Domestic Product (GDP) besides 45% to the total manufacturing output and 40% to the exports from India (MSME at a Glance 2016 Report, MSME).

The present study measures the psychological capital of MSME entrepreneurs based upon their perception of having psychological capital. Previous research, has found that Psychological capital plays a role in, entrepreneurial behavior and success (Gartner 2005; Hmieleski and Baron 2009; McGee et al. 2009) which as earlier mentioned is important for overall development of India, making it very much important to be measured.

Hmieleski and Carr proposed that psychological capital (PsyCap) is a vital individual trait required by entrepreneurs to lead their businesses throughout their entrepreneurial practices. However, inadequate empirical studies have examined this. Furthermore, psychological capital has been argued to have positively linkages with desirable attitudes and negative linkages with the undesirable attitudes. Unfortunately, past researchers ignored the influence of psychological capital on positive attitudes like future growth intentions of entrepreneurs'. Based on these reports it is reported and found out that the study is needed to understand the perceptions of entrepreneurs towards their Psychological capital in their overall development.

2. PSYCHOLOGICAL CAPITAL

During the past decade, there has been a lot of scientific studies on psychological capital. Psychological Capital is identified as personal traits contributing to individual productivity by psychologists (Gohel, 2012). It is the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace (Luthans et al., 2007).

A critical review done by Adipraja Al Rasyid & Yuni Ros Bangun (2015), in their study conclusively proved, that Psychological capital positively affects entrepreneurial traits of the students, with optimism and resiliency to be the state with the highest impact on entrepreneurship.

Michael Frese & Michael M. Gielnik (2014), in their research article on Psychology of Entrepreneurs, concluded that personality dimensions, such as (general) self-efficacy and need for achievement, and entrepreneurial orientation are highly associated with entrepreneurship (business creation and business success).

Psychological Capital is seen as a resource that goes beyond human capital (experience, knowledge, skills and abilities) and social capital (relationships, networks). It deals with "who you are here and now", and "who you can become" in the proximal future if your resources are developed and nurtured in the workplace (Luthans et al., 2004). Psychological Capital only makes entrepreneurs proactive.

Susan M. Jensen (2012) in his study on Psychological Capital and Entrepreneurial Stress, proposed that the core construct of psychological capital (comprised of self-efficacy, hope, optimism, and resilience) may enhance the understanding of how individuals perceive stress and the malleable nature of psychological capital offers opportunity for entrepreneurs to strengthen their own psychological capital and that of their employees. The study provides practical strategies for stress management within the entrepreneurial environment are provided.

Keith M. Hmieleski & Jon C. Carr (2008) in their study investigated the relationship between the psychological capital of entrepreneurs and the performance of their new ventures. Entrepreneurs' psychological capital was found to explain a significant amount of variance in new venture performance, above and beyond measures of financial capital, human capital and social capital. Further, the relationship between psychological capital and new venture performance was found to be enhanced by environmental dynamism, such that the relationship is most positive when dynamism is high, as opposed to low.

Fred Luthans, Kyle W. Luthans & Brett C. Luthans (2004) in their research article suggest that by eschewing a preoccupation with personal shortcomings and dysfunctions and focusing instead on personal strengths and good qualities, today's leaders and their associates can develop confidence, hope, optimism, and resilience, thereby improving both individual and organizational performance.

According to Luthans & Youssef (2007), "Psychological Capital is an individual's positive psychological state of development, characterized by:

- (1) *Self-efficacy*: Having confidence to take on and put in the necessary effort to succeed at challenging tasks,
 (2) *Optimism*: Making a positive attribution about succeeding now and in the future,
 (3) *Hope*: Persevering towards goals and, when necessary, redirecting paths to goals to succeed,
 (4) *Resilience*: When beset by problems and adversity, sustaining and bouncing back and even beyond to attain success”.

3. RESEARCH QUESTION

Will entrepreneurs differ on their scores on Psychological Capital?

4. NULL HYPOTHESIS

- H1: There is no significant difference between the family type of entrepreneurs on their scores on Psychological Capital.
 H2: There is no significant difference between the Entrepreneurial Generation of entrepreneurs on their scores on Psychological Capital.
 H3: There is no significant difference between the location of business of entrepreneurs on their scores on Psychological Capital.
 H4: There is no significant difference between the Business Type of entrepreneurs on their scores on Psychological Capital.
 H5: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their Age.
 H6: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their Educational qualification.
 H7: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their experience.
 H8: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their income.

5. INSTRUMENTATION

5.1 Psychological Capital Scale

The scale for measuring psychological capital, was adopted from psychological capital questionnaire or PCQ developed by Luthans et al., in the year 2007. The scale consists of 24 items. In our study the scale was adopted to measure the level of psychological capital of entrepreneurs and the responses were collected using a five point scale (1- Strongly Disagree; 2- Disagree; 3- Neutral; 4- Agree; 5- Strongly Agree), such that higher scores indicate that there is a higher level of psychological capital among the entrepreneurs and lower the scores indicate lower psychological capital. The minimum possible score was 24 and the maximum possible score was 120. The scale has 6 items for self efficacy, 6 items for hope, 6 items for optimism and 6 items for resilience.

5.2 Reliability

Spearman Brown split half reliability formula was used to find the reliability of all items of psychological capital questionnaire. The score was 0.763.

6. SAMPLE AND SAMPLE CHARACTERISTICS

Samples for the current study have been carefully chosen after in- depth analysis in the particular field of study. Probability sampling is used to collect the data from the respondents. Systematic random sampling method has been used for this study selecting the sample. This study comprises of entrepreneurs of micro small and medium enterprises registered with District industries Centre, Coimbatore district. A sample of 382 respondents' has been selected in the entire Coimbatore district. The data were collected from 382 respondents. On scrutinizing it was found that 367 questionnaires only were filled with the complete set of data and they were used for further analysis.

7. ANALYSIS

Statistical analysis was conducted on the collected data. The mean difference test by using z-test and ANOVA were carried out to find the score of psychological capital of entrepreneurs.

7.1 INTERPRETATION OF DATA

H1: There is no significant difference between the family type of entrepreneurs on their scores on Psychological Capital.

TABLE 1

Psychological Capital	Family Type	Std. Deviation	Z	Sig
Self-Efficacy	Nuclear	.39049	-.238	.812
	Joint	.43202		
Optimism	Nuclear	.54543	2.802	.005*
	Joint	.71030		
Hope	Nuclear	.39804	-.514	.608
	Joint	.41435		
Resilience	Nuclear	.53351	-2.578	.010*
	Joint	.56696		

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 1 shows the result of Z test result between the family type of the respondent and psychological capital. It is used to determine whether the respondent's opinion on psychological capital differed among the respondents based upon the family type. Since, the significant value is less than 0.05 the null hypothesis is rejected. Conclusion can be made from the table that there occurs a significant difference on respondent's opinion about Optimism and Resilience between entrepreneurs belonging to joint and nuclear families.

H2: There is no significant difference between the Entrepreneurial Generation of entrepreneurs on their scores on Psychological Capital.

TABLE 2

Psychological Capital	Entrepreneur's Generation	Std. Deviation	Z	Sig
Self-Efficacy	First	.41832	-2.732	.007*
	Second or traditional	.39223		
Optimism	First	.58310	-.237	.813
	Second or traditional	.67237		
Hope	First	.39609	-1.532	.126
	Second or traditional	.41178		
Resilience	First	.54417	-3.144	.002*
	Second or traditional	.54804		

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 2 shows the result of Z test between the entrepreneur's generation and psychological capital. It is used to determine whether the respondent's opinion on psychological capital differed among the respondents based upon first and second generation entrepreneurs. Since, the significant value is less

than 0.05 the null hypothesis is rejected. Conclusion can be made from the table that there occurs a significant difference on respondent's opinion about Self efficacy and Resilience between entrepreneurs based upon their generation.

H3: There is no significant difference between the location of business of entrepreneurs on their scores on Psychological Capital.

TABLE 3

Psychological Capital	Location of Business	Std. Deviation	Z	Sig
Self-Efficacy	Urban	.40513	-2.455	.015*
	Rural	.40762		
Optimism	Urban	.62593	-.642	.522
	Rural	.63692		
Hope	Urban	.41469	.164	.870
	Rural	.38819		
Resilience	Urban	.58510	.058	.954
	Rural	.49119		

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 3 shows the result of Z test result between the location of business of the MSMEs and psychological capital. It is used to determine whether the respondent's opinion on psychological capital differed among the respondents based upon the location of business. Since, the significant value is less than 0.05 the null hypothesis is rejected. Conclusion can be made from the table that there occurs a significant difference on entrepreneurs' Self-Efficacy between urban and rural enterprises.

H4: There is no significant difference between the Business Type of entrepreneurs on their scores on Psychological Capital.

TABLE 4

Psychological Capital	Business Type	Std. Deviation	Z	Sig
Self-Efficacy	Sole trader	.36465	.274	.784
	Partnership	.48365		
Optimism	Sole trader	.58334	-1.634	.103
	Partnership	.70569		
Hope	Sole trader	.38502	2.331	.020*
	Partnership	.43403		
Resilience	Sole trader	.51420	3.104	.002*
	Partnership	.60323		

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 4 shows the result of Z test between the business type of the respondents and psychological capital. It is used to determine whether the respondent's opinion on psychological capital differed among the respondents based upon the business type. Since, the significant value is less than 0.05 the null hypothesis is rejected. Conclusion can be made from the table that there occurs a significant difference on respondent's opinion about Hope and Resilience between entrepreneurs based upon their business type.

H5: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their Age.

TABLE 5

Psychological Capital	Age	Sum of Squares	df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	3.527	3	1.176	7.404	.000*
	Within Groups	57.638	363	.159		
	Total	61.164	366			
Optimism	Between Groups	.404	3	.135	.338	.798
	Within Groups	144.566	363	.398		
	Total	144.970	366			
Hope	Between Groups	.708	3	.236	1.445	.229
	Within Groups	59.298	363	.163		
	Total	60.006	366			
Resilience	Between Groups	1.347	3	.449	1.475	.221
	Within Groups	110.470	363	.304		
	Total	111.817	366			

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 5 shows the one way ANOVA result between the opinion of respondent's about psychological capital and age of the respondents. It could be inferred from the table that for the factors Self-Efficacy F ratio (7.404) is significant ($p=.000$). Hence, the null hypothesis is rejected. This hypothesis holds good and implies that there exists a significant difference on entrepreneur's opinion about self-efficacy and their age.

H6: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their Educational qualification.

TABLE 6

Psychological Capital	Educational Qualification	Sum of Squares	Df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	4.299	3	1.433	9.148	.000*
	Within Groups	56.865	363	.157		
	Total	61.164	366			
Optimism	Between Groups	8.437	3	2.812	7.478	.000*
	Within Groups	136.532	363	.376		
	Total	144.970	366			
Hope	Between Groups	.652	3	.217	1.329	.265
	Within Groups	59.354	363	.164		
	Total	60.006	366			
Resilience	Between Groups	2.132	3	.711	2.352	.072
	Within Groups	109.685	363	.302		
	Total	111.817	366			

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 6 shows the one way ANOVA result between psychological capital and educational qualification of the respondents. The F ratio (9.148) is significant ($p=.000$) at 0.05 levels of self efficacy. The F ratio (7.478) is significant ($p=.000$) at 0.05 levels of optimism. Hence, the null hypothesis is rejected. This hypothesis holds good and it could be inferred from the table that there occurs a significant difference on entrepreneur's "Self-Efficacy and Optimism" and their educational qualification.

H7: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their experience.

TABLE 7

Psychological Capital	Experience	Sum of Squares	Df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	1.711	3	.570	3.482	.016*
	Within Groups	59.454	363	.164		
	Total	61.164	366			
Optimism	Between Groups	4.922	3	1.641	4.253	.006*
	Within Groups	140.048	363	.386		
	Total	144.970	366			
Hope	Between Groups	.741	3	.247	1.513	.211
	Within Groups	59.265	363	.163		
	Total	60.006	366			
Resilience	Between Groups	.619	3	.206	.674	.569
	Within Groups	111.198	363	.306		
	Total	111.817	366			

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 7 shows the one way ANOVA result between psychological capital and experience of the respondents. The F ratio (3.482) is significant ($p=.016$) at 0.05 levels of self efficacy. The F ratio (4.253) is significant ($p=.006$) at 0.05 levels of optimism. Hence, the null hypothesis is rejected. This hypothesis holds good and it could be inferred from the table that there occurs a significant difference on entrepreneur's experience and their "Self-Efficacy and Optimism".

H8: Entrepreneurs would remain homogenous on their scores on Psychological Capital based on their income.

TABLE 8

Psychological Capital	Income	Sum of Squares	df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	.710	3	.237	1.421	.236
	Within Groups	60.454	363	.167		
	Total	61.164	366			
Optimism	Between Groups	3.006	3	1.002	2.562	.055
	Within Groups	141.964	363	.391		
	Total	144.970	366			
Hope	Between Groups	1.497	3	.499	3.095	.027*
	Within Groups	58.509	363	.161		
	Total	60.006	366			
Resilience	Between Groups	3.699	3	1.233	4.139	.007
	Within Groups	108.118	363	.298		
	Total	111.817	366			

* Source: Primary data

* denotes the significance at 5%

Interpretation: Table 8 shows the one way ANOVA result between psychological capital and income of the respondents. The F ratio (3.095) is significant ($p=.027$) at 0.05 levels of hope. The F ratio (4.139) is significant ($p=.007$) at 0.05 levels of resilience. Hence, the null hypothesis is rejected. This hypothesis holds good and it could be inferred from the table that there occurs a significant difference on entrepreneurs' "Hope and Resilience" and their income.

8. RECOMMENDATIONS

1. It is suggested that the entrepreneurs should use their high confidence in setting the work goals to help them to leverage their optimism once goal is set and they start working on attainment of that goal.
2. Psychological Capital is a state-like resource, which can be developed. Short training interventions can be handy in developing positive resource of psychological capital in target audience like established and prospective entrepreneurs.
3. It is suggested that rural entrepreneurs should attend more of awareness and grooming trainings to develop their self-efficacy and optimism.
4. To improving the resilience, entrepreneurs should keep themselves focused on the long term gain and keep their morale high, which will help them to face any setbacks.

9. CONCLUSION

Major findings of the research paper indicate that the respondents differ on their scores on psychological capital. The demographic profiles except the age, educational qualification, years of experience, income, location of business, family type, business type and the entrepreneurial generation no other profiles had a significant difference in the MSME entrepreneur's psychological capital levels. So, hence it becomes necessary for the MSME development authorities, government and entrepreneur development bodies, to take necessary steps like creating a conducive environment, formulate training modules seminars and conferences, providing entrepreneurs with encouragement as growth of MSME entrepreneurs is deemed a vital source of employment creation and holistic development of India.

10. FUTURE SCOPE

Thus, we can conclude as mentioned in literature review some other antecedents can be studied in relation to psychological capital to make the study even more effective.

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FRUIT PROCESSING INDUSTRY IN MURSHIDABAD DISTRICT OF WEST BENGAL - PRESENT STATUS AND FUTURE PROSPECTS

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ABSTRACT

Fruits and Vegetable processing industry is a segment of the whole Food Processing Industry. The State of West Bengal with diverse agro-climatic zones is conducive for growing a wide variety of fruits. The district Murshidabad is rich in production of Mango and litchi and have huge amount of surplus fruits. Accordingly, besides micro and small fruit processing units so many home based fruit processing units have grown up in the district and created immense livelihood opportunities. In this background the present study makes an attempt to explore the problem and prospects of fruit processing industry in the Murshidabad district of West Bengal. The study concludes that there is ample scope of availability of raw material, market opportunity and profitability in fruit processing industry in this district. The basic problem for expansion is the lack of finance inspite of so many Govt. schemes in this regard. The study suggests that government schemes should be properly implemented so that the fruit processing industry can be a sunrise industry in the district.

KEYWORDS

Murshidabad, employment, fruit processing, investment, problem and prospects.

INTRODUCTION

Food processing refers to the application of techniques to foods in a systematic manner for preventing losses through preservation, processing, packaging, storage and distribution to improve the food intake and nutritional standards during the period of low availability. There are so many segments of food processing out of which fruit and vegetable processing is an important one. The present study relates to fruit processing only.

India has great advantage in growing a variety of fruits, such as; Mango, Apple, Banana, Grapes, Orange, Papaya, Pineapple etc. It ranks second in fruit production in World after China. But even today, hardly 2% of the total fruits are used for processing in our country as against 60-70% in other countries of the World (Rolfe, 2006).

The State of West Bengal with diverse agro-climatic zones is conducive for growing a wide variety of fruits. Among fruits, mango cultivation occupies the largest area (42% of the total area) of fruit cultivation in West Bengal. The state contributes 22.88% and 10% of national pineapple and litchi production respectively and thus ranks first and second in production in these two crops. The other important fruit crops are guava, banana, sapota, jackfruit etc. The total production of fruits in the state is increased to 29.53 lakh tones in 2010-11 from 28.61 lakh tones in 2009-10. And the area of fruit cultivation is increased to 2.12 lakh hectares from 2.08 lakh hectares for the same period (ojha, 2013).

Murshidabad, the Gateway of South Bengal, is a Backward District of West Bengal. The district is densely populated and more than 80% of its population is rural. Man-Land Ratio of Murshidabad is 0.09 per hectare as per 2001 census. Murshidabad is also well known for production of mango and litchi and there is huge surplus of these fresh fruits. Therefore, fruit processing industries based on mango and litchi is suitable here. Government of West Bengal also declared Malda and Murshidabad as an Agricultural Export Zone (AEZ) of mango and litchi. The instant study, therefore, deals with the present scenario, problems and future prospects of fruit processing industry in Murshidabad district of West Bengal.

REVIEW OF LITERATURE

So many papers have been published on food processing industries in National and International level. Some of the papers and books reviewed for the purpose of our present study are mentioned below:

1. Jadab Chandra Halder and Dr Pannalal Das in their paper, "Present Status and Futuristic View of Horticulture in West Bengal" (2012) estimated that in 2020-21 the production and consumption of fresh fruits in West Bengal will be 5824.42 thousand tones and 1683.88 thousand tons respectively representing huge surplus of fresh fruits for processing purpose.
2. Saraswati Nayak and A. K. Mukhopadhyay in their article, "Horticulture: Post Harvest Management" (2008), opines that post harvest technology applied to horticulture products adds value to the products, generate employment in the village and re-establishes agro-industries in rural sector.
3. United Nations Industrial Development Organization in their working paper, "UNIDO Technology Manual- Small Scale Fruit and Vegetable Processing and Products" (2004) has emphasized that technical assistance from government is an important tool which contributes to the capacity building activities of fruit and vegetable processing industry.
4. In the paper, Inclusive Growth: A Challenging Opportunity, published by AIMA in 2011 highlights the need for the public the private sector to work in tandem and leverage each other's to build an inclusive India.

From the available literature it is clear that no such district level study has been done till date on role of fruit processing industry of Murshidabad. The present study will try to explore an overview of fruit processing industry of Murshidabad and highlight its role in generating employment opportunities in the district. Here lies the importance of the paper.

OBJECTIVES OF THE STUDY

The basic objectives of the study are as follows:

1. To get an overview of present status and scenario of fruit production and processing in Murshidabad;
2. To analyze the problems and future prospects of fruit processing industries in Murshidabad;
3. To make suggestions based on the study

RESEARCH METHODOLOGY

The study is based on both primary and secondary data. Primary data have been collected through structured questionnaire from fruit processing units of Murshidabad district of West Bengal. The study covers 5(five) nos. of fruit processing units registered under District Industry Centre, Murshidabad and one Co-operative Society viz. Ayesbag Samabay Krishi Unnayan Samity Ltd. Therefore, total 6(six) no. of units, covering both micro and small enterprise, has been considered for the study. Both financial and non-financial data have been collected from the surveyed units during the year 2013. The study is based on financial data of the year 2012-2013. Secondary data have been collected from different reports and other published sources in print and web media. The paper is basically of descriptive type. Information relating to the units is presented in statement and table format.

RESULTS AND DISCUSSION**A. PRESENT SCENARIO OF FRUIT PROCESSING INDUSTRY IN MURSHIDABAD**

As per records of Directorate of Food Processing and Horticulture, Govt. of West Bengal, there are 19 number of fruits and vegetable processing units in Murshidabad up to 31st march, 2012.

But as per records of District Industry Centre (DIC), Murshidabad there was only 5 nos. of fruit processing units in the district in that time. Besides the above units, a new large scale fruit processing cooperative unit viz. Ayesbag Samabay Krishi Unnayan Samity Ltd. was set up in 2013. It should be noted that the directorate listed the name of that industry who take any advantage from the directorate irrespective of registration from DIC. That is why the difference arises in number of fruit processing units in the district between DIC of Murshidabad and Directorate. The names of available fruit processing units and their initial details are as follows:

TABLE -1: LIST OF AVAILABLE FRUIT PROCESSING UNITS OF MURSHIDABAD

Sl. No.	Name and location of the industry	Year of Estd	Products	Initial investment (Rs. in lakh)	Proposed employment (Nos.)
1.	M/S Maxol Food Products, Vill. Goaljan, P.S. Berhampore	2003	Jam and Jelly	2	18
2.	M/s Jalangi Food Processing Industries Co-operative Society Ltd. Vill. Pilkhana, P.S. Murshidabad	2003	Wheat Atta, Chanachur, Jam and Jelly	12	18
3.	M/S Kuheli Food Products, Banshgola Road, Lalbagh.	2008	Jam, Jelly and Pickles	1	4
4.	M/s Mampi & Sarbani Food Products, Tentulia, P.S. Murshidabad.	2012	Pickles, Jam, Jelly and Tomato Sauce	4.25	9
5.	M/s Kiran Food Products, Vill. Boalia, P.S. Ranitala	2012	Pickles, Potato Chips and Bari	6.20	13
6.	Ayesbag Samabay Krishi Unnayan Samity Ltd. Vill. Ayesbag, P.S. Msd.	2013	Pickles, Sauce, Jam and Jelly	35	20

Source: DIC, Murshidabad and Field Survey

Besides the above Department of Agriculture Marketing, Govt. of West Bengal also involved in production of processed fruits, besides their main activity of imparting training of fruit processing. It is situated at Panchanantala, Berhampore and produces pickles, jam and jelly with its 6 permanent employees. Its investment depends upon Govt. grant, which normally varies within Rs.2 lakh p.a. There are also some small processing units at local household level in Murshidabad. Both of them have been excluded from the present study.

As per MSME Development (Amendment) Bill, 2014, Ministry of MSME, Gol, of the 6 units listed above 5 nos. of unit belongs to micro enterprise and one unit viz. Ayesbag K.S.K.U.S belongs to small enterprise.

B. PROFILE OF THE SURVEYED UNITS

During the month of October, 2013, we have conducted a survey to the above mentioned fruit processing units and get the following information:

- The proprietor of M/s Maxol Food Products, Miss Soma Mukharjee informed that they are engaged in production of sauce, jam, jelly, pickles, mango drink, squash etc. throughout the year. Their daily production is around 100 Kg. They have 5 employees out of which 4 are widow. They do not maintain regular accounting records but have records of purchase, labour, fuel, transport, packaging, sales etc. They have also reported that the organization normally earns 10 percent profit on sales during season but the percentage of profit reduces during off-season. And this seasonal character is the major problem of their industry. They have no sufficient storage capacity due to lack of finance. The organization has taken bank loan amounting to Rs. 3 lakhs and unable to pay fully still now. They have also informed that though the organization is registered under DIC, but they did not get any subsidy against bank. The organization has a good market in its own district as well as Nadia and Bankura districts and Tripura. They have also claimed that the organization is presently facing steep competition from local unregistered producers (according to her, they are not established by DIC and they did not maintain food safety norms).
- Nazrul Mallick, one of the members of Jalangi Food Processing Industry Co-operative Society informed that the industry was running good but they compelled to shutdown the project in 2006 due to heavy breakdown of plant and machineries. According to his words, they installed the machineries procured under a govt. scheme which was inferior in quality. All the members of the society were coming from marginal farmers and they had no capacity to reinstall the plant and machineries and compelled to shut down. He also informed that the production capacity of the project was 5 tons daily with 37 regular employees. It had a good market in the district as well as north Bengal. They are trying to reopen the society.
- Smt. Anjana Sarkar, proprietor of M/s Mumpi & Sarbani Food Products informed that they have started the business of fruit processing in a small way during the last mango season (year 2013). It had good market in the locality and was also profitable. But due to lack of finance they were unable to preserve the raw materials and compelled to stop the production. She also informed that they started their business as a registered unit of DIC but did not get any financial assistance. They are waiting for a loan to restart their business.
- Smt. Kajalrekha Bibi, proprietor of M/s Kiran Food Products informed that they have also started their business at home during the last mango season (year 2013) and it was a profitable business but they discontinued production due to some unrest political situation in that area during last Panchayat Election. They also did not get any loan under Govt. scheme. They have informed that they are willing to restart the production very soon.
- Ayesbag Samabay Krishi Unnayan Samity Ltd of Murshidabad is the only small scale Fruit Processing Industry of the District till date, out of 6 fruit processing units mentioned above. It was established in April, 2013 as a Co-operative Society with Govt. loan amounting to Rs.35 lakhs. But within few days Mr. Sibaprasad Saha, then registrar of the society improved the business to a great extent. At present capital employed in business is more than 4 crores. Its factory was constructed on one acre land following relevant factory rules and regulations. Its present production capacity is 4-5 ton per day. It has one food technologist, 43 labours and 4 office staff out of which 40 women employees were selected from Self Help Group. It has a large store house with storage capacity 2500MT. Their brand name is Ayes and Krish. Whole of Ayes Products and 50% of Krish products are marketed directly by the society itself and 50% of Krish Products are supplied to a private company situated at Madhyamgram, 24Pgs (north) for marketing. All types of raw materials are stored. Mangoes are collected from Murshidabad and Malda Districts and other fruits are collected from 24 pgs (south) district. It has a good market in Murshidabad, Malda and North-east India. Society does not make any advertisement as their products are sold directly through whole sale suppliers.
- The district training cum production centre produces some fruit products by using Govt. grant received for this purpose. The grant varies from Rs.2-3 lakh p.a. It produces 10-30 kg. Processed fruit products in a lot. They sale their products as per govt. rate from the centre. It has a storage capacity of 10 quintals raw materials. It has no scope of expansion, because its production depends upon Govt. grant which is very limited.

FINDINGS OF THE STUDY**A. GENERAL OBSERVATIONS**

1. There is a difference in number of fruit processing units as provided by the Directorate of Food Processing Industry and DIC of Murshidabad. The number provided by the Directorate is 19 but it is 5 as per DIC. This is because the Directorate counted the name of that unit who took any advantage from the Directorate irrespective of license from the DIC.
2. Most of the Fruit Processing Units of Murshidabad are operating in household level and basically from home, except two cooperative societies viz. Ayesbag Food Processing Unit and Jalangi food processing unit. Though the later unit was closed in 2006.
3. There is a large gap between initial investment and actual present investment, which is shown in table-3 as follows;

TABLE 3: GAP BETWEEN INITIAL INVESTMENT AND ACTUAL PRESENT INVESTMENT

Name of the Unit	Proposed investment (Rs. in lakh)	Actual present investment (Rs. in lakh)
M/S Maxol Food Products	2	3
M/s Jalangi Food Processing Industries Co-operative Society Ltd.	12	10
M/S Kuheli Food Products	1	0.20
M/s Mampi & Sarbani Food Products	4.25	0.15
M/s Kiran Food Products	6.20	0.15
Ayesbag Samabay Krishi Unnayan Samity Ltd.	35	400
Total	60.45	413.50

Source: Compiled from primary data upto 31.03.2013

It is clear from the above table data that only Ayesbag Samabay Krishi Unnayan Samity Ltd has increased its investment to a great extent showing its success in fruit processing business. Other household units are basically suffering from shortage of finance and are waiting for bank loan or other government assistance.

4. There is also difference in number of proposed employment and actual employment as shown in table 4:

TABLE 4: GAP BETWEEN PROPOSED EMPLOYMENT AND ACTUAL EMPLOYMENT

Name of the Unit	Proposed employment	Actual employment
M/S Maxol Food Products	18	5
M/s Jalangi Food Processing Industries Co-operative Society Ltd.	18	37
M/S Kuheli Food Products	4	3
M/s Kiran Food Products	13	4
M/s Mampi & Sarbani Food	9	4
Ayesbag Samabay Krishi Unnayan Samity Ltd.	20	47
Total	82	100

Source: Compiled from primary data upto 31.03.2013

The table shows increase in number of employment from proposed figure, which is basically due to success of two cooperative societies. Of the two societies Jalangi Food Processing Industries Co-operative Society is presently closed.

5. It is clear that the actual position of small scale unit is far better than proposed position. On the other hand, the actual position of household units is far behind from the proposed position basically due to lack of required investment.
6. All the units (both small scale and household units) have good market position, and they are not facing any problem in selling their products.
7. Actual productions of household units are much lower than small scale units.
8. Most of the proprietors of the above units have come from poor families so they sought necessary financial support from Government to run their business.
9. It is very important to note that most of the employees of the above units have been taken from the Self-help Groups and 4 women employees of Maxol Food Products are widow. Therefore, the industry has a good impact on the livelihood of the marginal and distressed community people.

B. PROBLEMS OF FRUIT PROCESSING INDUSTRIES IN MURSHIDABAD:

1. The foremost problem of the fruit processing industry of this district is that all units except Ayesbag unit are suffering from acute financial crisis. Jalangi Food Processing unit has compelled to shut down the project due to lack of finance and Mumpi & Sarbani Food Products has compelled to stop production in off-season due to lack of finance.
2. There is no special facility in getting loan from bank for setting up fruit processing unit. One has to fulfill all normal requirements of bank for getting loan.
3. There is also unhealthy competition from unauthorized food producers as faced by Maxol Food Products.
4. There is a lack of co-ordination between Govt. authorities and proprietors of fruit processing units. They do not know how to start the business in formal way and to whom they meet for assistance in this regard. There is a Food Processing Development Officer in the district but none of the proprietors have knowledge about it. And there is no co-ordination between Fruit Preservation cum Training Centre and Food Processing Development Office. As a result, the Training Centre is unable to send their trainees to the Food Processing development Office for assistance to set up a fruit processing unit.

C. FUTURE PROSPECTS OF FRUIT PROCESSING INDUSTRIES IN MURSHIDABAD:

From the study of the units it has been found that there are ample marketing opportunities of fruit products in Murshidabad as well as others districts of West Bengal. Murshidabad district is well known for Mango and Litchi production and Govt. of West Bengal has identified the districts Malda and Murshidabad as Agri-Export Zone for mango and Litchi. It is clear from analysis of responses of owner of sample units that there is no problem of raw material, marketing of products and profitability in this sector. But, most of the units are unable to expand their production capacity due to lack of fixed capital. Therefore, if the fruit processing units of Murshidabad are given financial support by the Govt., then fruit processing industry would be a sun rising industrial sector of Murshidabad.

CONCLUDING OBSERVATIONS

From the above study we have seen that there are two different types of picture of fruit processing industry in the district. Household units are suffering from acute financial crisis and they compelled to reduce production or stop production during off-season. On the other hand, relatively large scale unit i.e. the Ayesbag Food Products has a prosperous history of production from the very beginning of the industry. It has no capital problem and they are trying to diversify their product portfolio. Therefore, if fruit processing industry is set up in the district at relatively medium or to some extent large scale with adequate capital investment there will be good prospects. They industry have also high importance in generating employment potential in the district. There are so many government schemes for development of fruit processing industry. But there is a communication gap between government authorities and the targeted people. Therefore, to solve this problem, government schemes and facilities should be advertised properly and should be communicated at the grass root level. Necessary financial, technological and marketing support should be provided to foster the growth of fruit processing industry in Murshidabad district of west Bengal.

STUDY LIMITATIONS

The study is based on information provided by the owner of the surveyed units. We have considered one year financial data for our analysis. We have not separately study the market opportunities of processed fruit in the concerned district and in West Bengal also. Some more micro level home based fruit processing units also

operate in Murshidabad districts but the details of those units are not available to DIC and we have failed to trace them inspite of our earnest effort. Detailed entire state wise study is necessary to get an in-depth picture of fruit processing industry in West Bengal.

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A COMPARATIVE STUDY ON REPORTING OF MERGERS AND ACQUISITIONS ACTIVITIES UNDER IGAAP AND IND AS

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ABSTRACT

The study finds out that there are large numbers of differences between the existing AS 14 and the Ind AS 103 in accounting for mergers and acquisitions activities. The differences are large enough to bring changes in the reported performance indicators of companies. Though, the differences are accounting differences and will not have any impact on business fundamentals yet the corporates should be very much concerned about the planning of the mergers and acquisitions deal, execution of the deal and at the stage of post-acquisition. It is critical that organisations consider IND-AS accounting implications in each of the acquisition phases to avoid any accounting hurdle subsequently. Organisations should sensitise all departments – legal, tax, Mergers & acquisition team and other relevant stakeholders about nuances of IND-AS so that they are mindful of accounting issues and involve relevant experts in each phase of transaction.

KEYWORDS

IGAAP, IND AS, mergers, acquisitions.

INTRODUCTION

The process of mandatory implementation of Ind AS has already started in phased manner starting from the financial year 2016-17. In the first phase, the listed and unlisted companies having net worth of more than INR 500 crores have prepared their financial statements as per Ind AS for the financial year 2016-17. In the second phase, all listed companies and unlisted companies having net worth of more than INR 250 crores will follow Ind AS for preparation and presentation of their financial statements for the financial year 2017-18 onwards. All other companies will follow Ind AS from the financial year starting from 1st April, 2018. However, this roadmap does not include banking companies, insurance companies, NBFCs and SMEs which are exempted from the same for the time being.

Though the business fundamentals remain the same, adoption of Ind AS will impact businesses by impacting the reported values of net profit, net worth and similar other performance indicators. Recent studies showed that accounting for business combinations is one of the most important areas which have been impacted largely due to adoption of Ind AS. **PWC (2016)**, found that business combinations and consolidations were the important areas where significant adjustments were noted on account of Ind AS adoption. Of the total population of 75 companies covered by the study, 16 % of the companies had adjustments in this area and there was an increase of overall INR 690 crores (for the Q1, 2015) in net profit due to adjustments in the area of business combinations. Further, the adjustments in the area of business combinations have also resulted in an increase of 3.1% in the reported values of equity as on March 31, 2016 (equity as per IGAAP restated as per Ind AS). The study made by **Ernst and Young (2016)**, which was based on a sample of 60 companies also found that 15% of the companies under study were impacted on account of adjustments in the area of business combination. Moreover, the study conducted by **KPMG (2016)** which was based on a sample of 71 companies listed in BSE; found that 24 out of the total companies reflected an increase in revenue by around 8.51% while 34 companies reflected a reduction in revenue by around 3.74%. According to the study, EBITDA showed a marginal reduction for the covered companies as a whole. Of the 71 companies that have reported their results as per Ind AS, 38 saw an increase in EBITDA by 4.68% whereas 33 saw a reduction in their EBITDA by 6.42%. The key changes that impacted EBITDA were the changes in accounting for revenues, foreign currency fluctuations, financial instruments, business combinations etc.

Under the existing GAAP, accounting for business combinations was driven multiple accounting guidance. Accounting for amalgamations was covered by AS 14, accounting for consolidation was covered by AS 21 and accounting for acquisition of assets group was covered under AS 10. However, under the new Ind AS regime, accounting for all forms of business combinations is taken care of by Ind AS 103 on business combinations. As such, the accounting for business combinations will change fundamentally for all those companies looking to grow by acquiring more businesses in future.

OBJECTIVES OF THE STUDY

The present study is designed with the objective of making a comparative discussion of accounting for mergers and amalgamations activities under AS 14 and Ind AS 103.

SCOPE OF THE STUDY

In accounting, AS 14 deals with amalgamation activities of companies including mergers and acquisitions though this standard does not deal with acquisition of stake of one entity by another entity. Accounting for such acquisitions are covered by AS 21, AS 23 and AS 27 depending on the degree of control acquired. AS 21 covers accounting for holding and subsidiary companies, AS 23 covers joint ventures while AS 27 deals with accounting for associates. The scope of this paper is limited to the extent of a comparative study between AS 14 and Ind AS 103.

RESEARCH METHODOLOGY

The study is basically qualitative in nature and does not use any quantitative tool to analyse data. It has been conducted mainly on the basis of literature survey and secondary information. Various journals, newspapers, magazines and books have been referred to in writing this paper. Moreover, information published in the various websites including the official websites of ministry of corporate affairs and the ICAI relating to various accounting and reporting issues in India have been used extensively for the study.

ACCOUNTING FOR MERGERS AND ACQUISITIONS UNDER IND AS 103

Definition of Business

Business combination as defined and prescribed under Ind-AS 103 covers a much wider aspects than the erstwhile accounting standard i.e. AS 14 which used to talk about amalgamations only.

As per Ind-AS 103, a business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing returns. The returns can be provided in the form of dividends, profits, lower costs or other economic benefits. A business is generally a set of inputs on which processes are applied that has the capability to create outputs.

Ind-AS defines business combination as a transaction in which an acquirer obtains control over one or more businesses. The control over one or more businesses can be obtained through issue of cash, assets and equity instruments or by incurring liabilities. When we talk about business as acquired under Ind-AS 103, the determination of whether the acquired assets is business or not is seen from the view of a market participant and not as per the acquirer or seller. It is not

important if the seller of the assets was using the set of assets as business and it is again not important if the acquirer is going to use the assets as business or not. The definition of business is seen from the view point of a market participant or the people in general rather than the buyer and seller.

Ind-AS 103 talks about initial recognition and measurement of business combination. When the standard talks about business combinations, it can be in the form of mergers, acquisitions of subsidiary and any other acquisitions of control over a business. It is not restricted to only mergers and amalgamations as in the case of AS14. It means, Ind-AS 103 covers initial recognition and measurement of any control that is acquired over a business. For all such acquisitions, we have to first come to Ind-AS 103, do initial recognition and measurement in Ind-AS 103, calculate goodwill and non-controlling interest, if any, then go to other standards.

Method of Accounting

Ind-AS 103 prescribes mandatory use of acquisition method for accounting of business combinations. This is in contrast with the existing provisions where in amalgamations are accounted for either by pooling of interest method or by purchase method. The standard has said that there are certain steps we have to follow for accounting for business combinations. These steps are:

1. Identification of the Acquirer and Determine the acquisition Date
2. Identify and Measure the Consideration Transferred.
3. Identify and Measure Identifiable Assets and Liabilities.
4. Measure Non-Controlling Interest.
5. Determine Goodwill or Gain on Bargain Purchase.

Identification of acquirer becomes important as the standard insists on substance over form. It means an entity going and merging with some other entity does not necessarily mean that the latter is the acquirer and the former is the transferor. It might so happen that the entity merging with the other is the acquirer and the entity to whom it is merged is the transferor. Hence, it is important to understand who is the acquirer and who is the transferor. Identification of the acquirer is important as the accounting treatment for business combinations prescribed under Ind-AS 103 is for the books of accounts of the acquirer and not the transferor. The standard says that all the assets and liabilities of the transferor must be fair valued and accounted for in the books of the acquirer.

Acquirer is the entity that obtains control of businesses. Definition of control is given in standards on consolidation i.e. Ind-AS 110 which says that control is the power to manage or exercise over the transferor company so that it is possible to manage the returns out of that company along with exposure to the risk of variable returns. Ind-As 103 provides some additional factors also which should be considered for identification of the acquirer. These are:

- a. Acquirer is usually the entity that transfers cash or assets and incur liabilities.
- b. Relative voting rights in the combined entity.
- c. Composition of Board of Directors of the combined entity.
- d. Relative size of entities.

Determination of **acquisition date** is also important because all the transactions take place on the acquisition date. The accounting takes place on the acquisition date. Acquisition date is the date on which the acquirer obtains control of the transferor. In Indian GAAP, it is the high court which decides the acquisition date and it is normally the effective date of the consolidation which is considered as the acquisition date. However, Ind-AS 103 says that all the accounting entries must be done on the acquisition date on which-

- a. All the assets and liabilities acquired must be fair valued.
- b. Fair value of the purchase consideration transferred is calculated.
- c. Goodwill is calculated.

IDENTIFY AND MEASURE THE CONSIDERATION TRANSFERRED

Purchase consideration can include assets transferred, liabilities incurred to previous owners, equity instruments issued etc. Here, it is required to identify any items that are not part of the business combination and account for such items separately from the same for instance acquisition related costs. Purchase consideration also includes contingent consideration. Contingent consideration is any consideration which is dependent on happening or non- happening of a future event. According to Ind-AS 103, we need to find out the probability of happening or non- happening of the event and then multiply the contingent consideration by that probability to calculate the amount of contingent consideration to be included in the purchase consideration. On the happening or non- happening of that event, the excess or deficit of contingent consideration included in the purchase consideration over the actual consideration paid is transferred to profit and loss account of the year in which the payment is made.

IDENTIFY AND MEASURE IDENTIFIABLE ASSETS AND LIABILITIES

Identifiable assets and liabilities mean those which can be separated or those which can be sold, transferred or otherwise separable out of the company. For recognition, these assets and liabilities must meet the definition of assets and liabilities at acquisition date and these must be exchanged as a part of acquisition. While recognising, those assets are also recognised which were not recognised by the transferor. The identifiable assets and liabilities must be measured at fair value at acquisition date.

As mentioned above, Ind-AS requires recognition of even those assets which were not recognised by the transferor previously. It also says that all the intangible assets such as trade mark, customers list, patented technology which are identifiable and meet the definition of assets as prescribed should be recognised by the acquirer separately apart from goodwill. The separation of such intangible assets from goodwill is necessary because these intangible assets (other than goodwill) are amortised over their expected useful life whereas goodwill is tested for impairment.

Though, only those assets and liabilities which meet the definition of the same as prescribed under Ind-AS are recognised by the acquirer, there is an exception to this recognition rule. The exception is that Ind-AS prescribes that contingent liabilities should also be recognised if-

- a. It is a present obligation from a past event.
- b. Fair value can be measured reliably.

Measure Non-Controlling Interest

Under Ind-AS 103, non-controlling interest is measured either by the following two methods-

- a. Proportionate interest in fair value of identifiable net assets.
- b. Fair valuation of the non-controlling interest itself.

These methods for measuring non-controlling interest can be applied by the acquirer on a transaction-by-transaction basis. It means the entity has the option to select either of the two methods in different combinations. It is not required to follow one method consistently.

Determine Goodwill or Gain on Bargain Purchase

Under Ind-AS 103, goodwill is measured as the difference between the sum of-

- a. Fair value of consideration transferred
- b. Recognized amount of non-controlling interest in the transferor

And recognised amount of the identifiable assets acquired and liabilities assumed. If this difference is positive, the resultant amount is goodwill and if the difference is negative, the amount so obtained is called gain on bargain purchase. As mentioned above, unlike the Indian GAAP where goodwill was normally amortised over a period of five years, the same is to be tested for impairment under Ind-AS. Under Ind-AS, the gain on bargain purchase is transferred to capital reserve as was done under IGAAP. It is pertinent to note that, gain arising on bargain purchase is transferred to profit and loss account under IFRS. This is one of the major curve-outs existing in between IFRS and Ind-AS.

SUMMARY AND CONCLUSION

There are large numbers of differences between the exiting AS 14 and the Ind AS 103 in accounting for mergers and acquisitions activities. The differences are large enough to bring changes in the reported performance indicators of companies. The major differences are summarised below:

- Ind AS 103 prescribes mandatory use of purchase method of accounting whereas under AS 14, accounting for amalgamations could be done under pooling of interest method as well as purchase method. This may impact the MAT liabilities as well as the combine earnings of the amalgamated entities.
- Ind AS 103 gives a clear cut definition of business which was not there under AS 14. Definition of business is important in the sense that it may impact the reported value of goodwill since goodwill can be recognized only when there is an acquisition of business distinguished from the acquisition of assets.
- Identification of the acquirer is an important area where the Ind AS 103 is different from the AS 14. In fact, under AS 14 there is no such provision for identification of the acquirer. Identification of the acquirer and the acquired is significant since Ind AS prescribes fair valuation of all assets and liabilities of the acquired and not the acquirer on the date of acquisition.
- Under Ind AS 103, transaction cost is treated as an expense and is transferred to profit and loss account which was earlier included in the cost of acquisition under AS 14. This may impact the amount of profit or loss and goodwill on amalgamation.
- Under the Ind AS 103, the amount of contingent consideration is calculated using fair value method on the date of acquisition itself and is transferred to profit and loss account which was not considered relevant under AS 14. This will impact reported net profit of the combining entities.
- Ind AS 103 requires testing of goodwill arising on amalgamation for impairment whereas the same was used to be amortized over a period of five years normally. This will significantly impact the amount of reported profitability and net worth of the combining entities.

Though, the differences stated above are accounting differences and will not have any impact on business fundamentals yet the corporates should be very much concerned about the planning of the mergers and acquisitions deal, execution of the deal and at the stage of post-acquisition. It is critical that organisations consider IND-AS accounting implications in each of the acquisition phases to avoid any accounting hurdle subsequently. Organisations should sensitise all departments – legal, tax, Mergers & acquisition team and other relevant stakeholders about nuances of IND-AS so that they are mindful of accounting issues and involve relevant experts in each phase of transaction.

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CULTURAL INTELLIGENCE: AN INTEGRAL PART OF CROSS CULTURAL ORGANISATIONS

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ABSTRACT

With the increasing globalization it has become very important to understand the need of the organization with intercultural context. Cultural intelligence or cultural quotient is the capability to relate and work effectively across cultures. It helps to understand the ability to perform and function in an organization which has different cultural quotient. In this article we look upon the growing stream of cultural intelligence and its importance. We will review the models, the research work, importance, and the techniques used to measure the level of cultural intelligence. In the end we will conclude by discussing theoretical research work done and future research opportunities available in this context.

KEYWORDS

cultural intelligence, importance of CQ, model of CQ, cross cultures.

INTRODUCTION

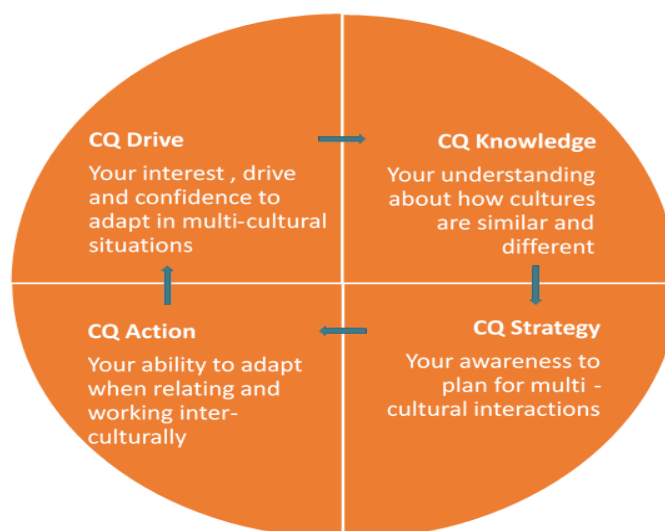
Cultural intelligence (CQ) is a person's ability to work effectively in culturally diverse contexts (Van Dyne, 2008). This definition shows a person's potential to be effective in cross cultural environment. Cultural intelligence does not show the ability to work effectively in a particular culture instead it depicts the ability to work effectively across cultures and in multicultural environment. Cultural intelligence does not merely refer to intelligence in context to different cultures, instead it explains the intelligence level with the presence of knowledge of different cultures.

CULTURAL INTELLIGENCE AND OTHER FORMS OF INTELLIGENCE

Cultural intelligence is similar to social and emotional intelligence. Social intelligence is a broader form that enables to manage and understand others. Emotional intelligence is the ability to deal with emotions of self and others. Cultural intelligence shares the similarity to understand, manage and deal with emotions of others. However unlike social and emotional intelligence it deals explicitly with intercultural aspects. Cultural intelligence is also similar to some extent to general cognitive ability. General cognitive activity is the key predictor of job performance whereas cultural intelligence predicts performance in cross cultural organization. (Van Dyne, 2008).

MODELS OF CULTURAL INTELLIGENCE

While conceptualizing cultural intelligence research suggest that it is multifaceted. (Earley, 2003) gave the cultural intelligence model explaining the (Sternberg, 1986) multiple loci view. It says that cultural intelligence comprises of four factors:

FIG. 1

- 1) **META COGNITIVE CULTURAL INTELLIGENCE:** it reflects individual's mental capability to acquire and understand cultural knowledge. It is also termed as CQ strategy. The awareness to plan the interaction in cross cultural environment.
- 2) **COGNITIVE CULTURAL INTELLIGENCE:** It is also known as CQ knowledge and helps us to understand the similarities and differences in different cultures. The model says that cultural intelligence shows the knowledge about the requirements to work effectively in multicultural environment.
- 3) **MOTIVATIONAL CULTURAL INTELLIGENCE:** It shows individuals capability to direct and sustain efforts towards functioning in intercultural situations. It is also known as CQ drive.
- 4) **BEHAVIORAL CULTURAL INTELLIGENCE:** it shows the capability of behavioral flexibility in cross cultural interactions. Also termed as CQ Action. It helps to study the degree of adaption when working in across cultures.

While initially cultural intelligence did not include biological aspects but recently it has been embraced with biological foundations. This research considers intelligence in terms of structural aspects (hemispheres of brain), process aspects (e.g., processes which give rise to brain activities) or the interaction between structural and process (e.g., how the regions of brain generate particular activities)

(Rockstuhl, T., Hong, Y.-Y., Ng, K. Y., Ang, S., Chiu, C.-Y., 2010) It has been found the theoretical foundations of culturally intelligent brain from sociocognitive neuroscience. He also stated that (a) neurological responses can change as individuals adapt to new cultural contexts; and (b) people with higher overall cultural intelligence show greater neurological flexibility in response to varying demands across the cultures.

SOME STUDIES RELATED TO CULTURAL INTELLIGENCE

Cultural intelligence has received worldwide interest. Studies have been conducted in North America, South America, Europe, The Middle East, Asia, Australia and New Zealand. Across the collected samples, scholars have studies

- (1) **Antecedents of cultural intelligence:** It has dominantly examined the personality traits and international experiences. Stating that Openness to experience refers to a person's tendency to be creative, imaginative, and adventurousness. (Costa, P.T., McCrae, 1992)
- (2) **Outcomes of cultural intelligence:** research shows that cultural intelligence relates to a wide range of cognitive, affective, behavioral outcomes of intercultural contexts. It states that meta cognitive and cognitive cultural intelligence predict cognitive outcomes stronger than motivational and behavioral cultural intelligence.
- (3) **Cultural intelligence as a mediator:** Personality and international experience are widely studied as antecedents of cultural intelligence. The research has tested the effects of cultural intelligence on outcomes such as cultural adjustment, job performance and global leadership. Hence showing that cultural intelligence mediates the effects of personality traits.
- (4) **Cultural intelligence as moderator:** the following studies have examined cultural intelligence as moderator (a) leaders with high cultural intelligence magnify the effects of leadership on innovation at organizational lever and (b) cultural intelligence moderates the effects perceived by voice instrumentality on cultural diversity.
- (5) **Boundary conditions of the effects of cultural intelligence:** Research on boundary conditions of effects of cultural intelligence has outcomes which are hypothesized and tested through both suppressors and enhancers of effects of motivational cultural intelligence.

Thus several studies have highlighted the crucial role managing subordinates and vendors from different cultures. Substantial research proves that the cultural intelligence is important for global leaders as it:

- 1) Predicts the performance of subordinates and leaders in multicultural teams.
- 2) Predicts cross border leadership effectiveness.
- 3) Measures international leadership potential.

HOW CAN CULTURAL INTELLIGENCE BE MEASURED?

Cultural intelligence being an important aspect for an individual in this cross cultural society needs to be assessed to find out the impact on the growth of the organization. Following are the methods are evolved to measure the individual differences in cultural intelligence:

- 1) **Self reports:** Self reported measures of cultural intelligence present respondent with a list of statements relevant to multiple dimensions of cultural intelligence. The most empirical research uses 20 item four factor cultural intelligence scale (CQS) introduced by (Ang, S., Van Dyne, L., Koh, C., Ng, K.Y., Templer, K.J., Tay, C., 2007).
- 2) **Observer –reports of cultural intelligence:** These are fundamental source of information about a person's external manifestation and reflect a person's CQ reputation. In this method acquaintances summarize their perception of someone's cultural intelligence reputation. (Van Dyne, 2008)
- 3) **Test of cultural intelligence:** this is based on the performance of the individuals in laboratories or other controlled conditions. (Rockstuhl, 2013) Introduced a situational judgment test to measure meta cognitive cultural intelligence. These tests present the respondents with multimedia challenges and record their responses. Records are then scored in terms of effectiveness.

CONCLUSION AND FUTURE RESEARCH

Cultural intelligence refers to potential of working in a cross cultural organization effectively and efficiently. It is the distinct capability of performing in intercultural context. It is an important measure as it will help the organizations to measure the capability of working and adapting the cross cultural environment. It being an important aspect in today's highly globalised economy need a good and accurate way of measurement. Hence we believe that the future research should focus on increasing diversity in tools to measure cultural intelligence. The future work can explore the team composition of cultural intelligence i.e. how cultural intelligence can be distributed in a team.

Several qualitative studies highlight the crucial role that cultural intelligence plays in managing subordinates and offshoring vendors from different cultural backgrounds. Quantitative studies confirm the importance of cultural intelligence for global leaders. Specifically, studies show that cultural intelligence predicts (1) subordinate-rated leader performance in multicultural teams, (2) peer-rated leadership emergence in multicultural teams, (3) peer-rated cross-border leadership effectiveness but not general leadership effectiveness, and (4) peer-rated international leadership potential. At the dyadic level, cultural intelligence of the lower of two negotiation partners.

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BILATERAL RELATION BETWEEN INDIA AND THAILAND**DR. SHEETAL ARUN KHANDRE****RESEARCHER****NANDANVAN COLONY, PLOT NO. 260, BHUSINGPURA ROAD
AURANGABAD****ABSTRACT**

The purpose of the research is in the current year India and Thailand are celebrated the 70th anniversary of the establishment of bilateral diplomatic relations. As such this paper aims to describe the trade relation between India and Thailand and to study of impact of FTA. Thailand is a key developing exporting country from Asia on the other hand, India is important its position with strong domestic and external demand, the developing countries considered are creation efforts to develop their exports during different paths with direct and indirect influence of government throughout innovative policies and trade liberalization programme. India has aimed to develop the relation and promote to increase a bilateral relation of India and Thailand. In 2016 PM Modi should tried to developed this relation that time the both countries PM was signed lot's of agreement and try to promote trade and cultural relationship.

KEYWORDS

FTA, bilateral.

INTRODUCTION

Like bilateral is an adjective that modifies interstate in general and phonologically hints at the number of parties involved. For example, in the realm of diplomatic relations, 'bilateral diplomacy' is defined as "the conduct of relations" or "communication limited to two parties at any one time". The term 'bilateralism', however stands for an organizing principle of bilateral conduct and, as postulated in political science literature, appears to have a more implicit meaning on institutional form than just 'relation involving two states or parties'. As Baumann indicated in the context of multilateralism, bilateralism may carry with it two generic sense first one refer to the pattern of relations among states in international relations while the second describes the orientation of state's foreign policy conduct.

In a more systematic way, according to Pasvolksy (1936), Diebold (1988) and later Ruggie (1993), there are basically at least two ways to define terms such as unilateralism, and pluri and multilateralism. The authors call this first version a 'formal' or 'nominal' definition whereby the number parties appear to be the primary criterion for categorization. Keohane (1990) offered a well – know definition of multilateralism "the practice of coordinating national policies in groups of three or more states, so that, analogous to this definition, bilateralism may also be defined as a parties of coordinating national policies between two states or parties. The second version is called a 'substantive' or 'qualitative' definition which takes into account the different 'kinds of relations' between any given number of players, stressing the qualitative dimension of institutional principle. Bilateralism is sharply differentiated from multilateralism in the second definition in terms of the operating principle of coordination such as 'specific' versus 'diffuse' reciprocity or 'discriminatory' versus 'nondiscriminatory' character.

The terms "New Bilateralism" began to increase in the late 1990s, especially in the field of international economic relations, as several bilateral trade negotiations have taken place on the 'side – line' of those at the multilateral level. The politics of 'new bilateralism' become leading economic policy trend, a number of countries in the Asia pacific region turned to it in the aftermath of so called 'trade institution failures' – especially after multilateral trade negotiations at the WTO slowed down and the IMF crisis management misconduct in the Asian Financial crisis was exposed. In response to these developments in the world economy, it would not be surprising to discover that, in an effort to push trade liberalization forward, a 'new bilateralism' has been pursued as an instrument of discriminatory preferential trading arrangement. With regard to the two definitions of bilateralism mention above, the term 'new bilateralism' clearly transcends the definition of 'formal bilateralism' moving towards a definition of 'substantive bilateralism' due to the relevance of the operating principles attached to bilateral free trading arrangements or the principle of specific reciprocity.

REVIEW OF LITERATURE

Lee and Liew (2007) also challenged to determine the impact of the then proposed India- ASEAN Free Trade Area (FTA). They used the Augmented Dickey-Fuller (ADF), and the Phillips and Perron (PP) test consequences to specify that India and ASEAN were comparatively incorporated with observe to goods and services markets; however, they establish that the Purchasing Power Parity (PPP) substantiation to be moderately weaker. Financial market incorporation, however, was found to be considerably incomplete. The major proposition of this judgment is that the impact of liberalization will be great on financial markets. Due to the weak PPP substantiation, the goods and services markets will also be understanding a considerable impact from liberalization. Therefore, it was recommended that the two regions can additional exploit their FTA partnership in their corresponding areas, for the most part in both the goods and services markets, and financial markets.

Sen, Asher and Rajan (2004) studied the then position and future scenario of India-ASEAN economic relationships, and recommended that significant prospective existed for superior economic collaboration between the two sides. However, their study was not base on any theoretical model- structure exercise.

Karmakar (2005) considered the opportunities in services trade that strength take place out of Indian-ASEAN economic collaboration, and evaluated the net increases that could arise from liberalization of the service sector. They considered the economic development in the Asia-Pacific region and took a macro indication of the trade conception potential of conformity on trade in services between India and the members of ASEAN. They recommended that, at least in the medium term, a great deal could be increased from a bilateral commitment between India and ASEAN in services, particularly as the concluding region remains comparatively closed to Foreign Service contributors. However, their study was also not based on any theoretical representation. Though some studies challenge to study the possible impact of the India-ASEAN FTA, hardly any were based on theoretical model- building.

OBJECTIVES

- 1) To study of the historical relationship between India and Thailand.
- 2) To analysis export and import of India and Thailand.
- 3) To study the FTA impact of International trade in India and Thailand.

RESEARCH METHODOLOGY

Research Type: Descriptive Research

Type of Data / Data Source used: Secondary Data / Data source.

The present study is based on secondary data. Basically, the required information has been derived from

- 1) Various reference books
- 2) Articles from Newspapers, Magazines and Journals
- 3) From the various related web-sites which deal directly or indirectly with the topics related to FDI and Indian retail sector. After searching the important web-sites, relevant information was down loaded and analyzed to address the objectives of present study.

REASON FOR THE STUDY

The main and important reason of the study India and Thailand have enjoyed economic and cultural relation since time immemorial. That's reason I have to study the scenario of India and Thailand Bilateral Relationship.

- 1) Does the study of historical relation of India and Thailand and the similarity and differentiation social and culture of India and Thailand?
- 2) Does India and Thailand are Completed 70th anniversary of the establishment of bilateral diplomatic relations so that's reason to analyze the actual situation of trade?
- 3) What is an export and import of India and Thailand?
- 4) Does analyze the India's global trade and India's total trade in Thailand?
- 5) How much trade is affected after FTA between India and Thailand?

HISTORICAL RELATION BETWEEN THAILAND AND INDIA

This close and cordial relationship between India and Thailand is rooted in centuries of continuous interaction. The importance of the influence of Indian culture on the development of Thai culture cannot be over emphasized. Thailand's relationship with India spans over a thousand years and understandably this resulted in an adaptation of Indian culture to suit the Thai environment. Evidence of strong religious, cultural and linguistic links abound.

The single most significant cultural contribution of India, for which Thailand is greatly indebted to India, is 'Buddhism'. Propagated in Thailand in the 3rd Century Buddhism Century (B.C.) by Buddhist monks sent by King Asoka, it was adopted as the state religion of Thailand and has ruled the hearts and minds of Thais ever since. Presently 58,000,000 Thais, an overwhelming 94% of the total Thai populace adheres to Buddhism. Due to King Asoka's missionary zeal Buddhism quickly spread out through the length and breadth of Asia particularly to China, Japan, Myanmar, Laos, Kampuchea, Vietnam and Thailand. Tradition credits the Indian Bhikkus Sona and Uttara sent by King Asoka with introducing Buddhism into Thailand.

Historically, the cultural and economic interaction between the two countries can be traced to roughly around the 6th Century B.C. However, direct contact can be said to have begun only in the 3rd Century B.C. when King Asoka sent Buddhist monks to propagate Buddhism in the Indo-Chinese peninsula. Besides Buddhism, Thailand has also adopted other typically Indian religious and cultural traditions. The ceremonies and rites especially as regards the 'Monarchy' evidence a strong Hindu.

Buddhism as a religion promotes liberty and freedom. It respects the rights of a person to his/her beliefs and practices. I believe India and Thailand are basically tolerant counties, partly because of the influence of Buddhism. Though Buddhism all but vanished from India, its best precepts have been adopted by and incorporated into Hinduism. Mahatma Gandhi's philosophy of Ahimsa or Non-violence echoes the teachings of the Lord Buddha. It is interesting to note that though both countries have one religion, which is adhered to by an overwhelming majority of the total population, both permit and promote all religious communities and beliefs.

The Indians who moved into Thailand in the Sukhothai period (1275-1350) were either merchants who came to Siam or Thailand, for the purpose of trading or Brahmins who played an important role in the Siamese court as experts in astrology and in conducting ceremonies. The first group of Indian Brahmins who entered Siam before the founding of Sukhothai as the first capital of Siam (1275 – 1350) popularized Indian beliefs and traditions. During the Sukhothai period Brahman temples already existed. Brahmins conducted ceremonies in the court. The concepts of divine kingship and royal ceremonies are clear examples of the influence of Brahmanism.

The ceremonies of Coronation of Thai kings are practiced more or less in its original form even up to the present reign. The Thai idea that the king is a reincarnation of the Hindu deity Vishnu was adopted from Indian tradition. Though this belief no longer exists today, the tradition to call each Thai king of the present Chakri dynasty Rama (Rama is a reincarnation of Vishnu) with an ordinal number, such as Rama I, Rama II etc. is still in practice.

In the Ayutthaya period (1350-1767), more Indian merchants entered the South of the country by boat as evidenced by the statues of Hindu gods excavated in the South.

After the year 1855, the Indians who migrated to Thailand can be classified into three groups according to the religion they believed in, namely, Hinduism, Islam and Sikhism.

Those who practiced Hinduism came from the North and South of India and the Punjab. Few northern Hindus engaged in trade in Thailand. Some who were well educated worked in Indian or British companies while others worked as middlemen between Indian merchants and government agencies or as exporters and importers. The poorer and uneducated ones made a living by selling cow milk or newspapers or by working as servants and watchmen.

The Hindus from the South of India were mostly Tamilians. They became teachers and company officers in Thailand. Those with a good financial status did Jewelry and export business. The temple, which is the center of faith of Thai Hindus, is Maha Uma Devi Temple or Wat Khaek in Silom District in Bangkok.

Those from Punjab traded in textiles in Phahurat and Sampheng Districts. Their religious center is Devasathan or temple in the Giant Swing District, Bangkok. There are many sects in Brahmanism-Hinduism, each having a different supreme god but with the same highest goal to attain salvation. The religion teaches that 'karma', i.e. the totality of a person's actions in his or her former and present life, plays a significant role in the humans' fate, a belief very similar in content to Buddhism. According to this philosophy, both happiness and sorrow in the present life are a consequence of actions in one's past life.

Muslims from India are mixed with those from Persia, the Malay Peninsula and Khmer in Thailand. It is hard to distinguish them from one another. Muslims live mostly in the Southern province bordering Malaysia. Indian Muslims were engaged in trading and agriculture in Thailand. In Bangkok, they mostly inhabited Si Phraya District. Some merchants settled on the west Bank of the Chao Phraya River. Affluent Muslims owned jewelry, stationery and import & export business.

The Indian Sikhs migrated from Northwest India, Rajasthan, Punjab, Himachal Pradesh and Pakistan-occupied-Punjab. They went to Thailand with the hope of a commercially prosperous life. Today, many of them do textile business in Sampheng and Phahurat Districts. Their religious center is Guru Singh Sabha located in Phahurat. The Sikhs believe in one supreme God. According to Sikh tradition God's purpose in allowing us to be born into a human form is for the human being to return and become one with God.

Many Indian descendants still zealously retain their customs and traditions, adhering strictly to the religious tenets of their faith. According to the latest statistics of the department of Religious Affairs, there are 21, 125 Sikhs, Brahmins and Hindu in Thailand. Muslims are around 2,977,434 in number. It is unknown though, how many Thai Muslims are of Indian origin.

EXPORT - IMPORT ANALYSIS

Thailand is India's twenty – six major trading collaborator. The Thai government joint India's eastward looking policy with its have possession of looking west policy in 1996, signing a trade agreement with India under an Early Harvest Scheme in 2004. Under the Early Harvest Scheme agreement there are 82 items of mutual interest for which together side have assume tariff special consideration during 2004 – 06 in a phased manner. Bilateral trade increased six creases since 2000 and cross the US \$ 6 billion mark in 2010. As per the information "the bilateral trade has increased eight times since 2000 to reach US \$ 8.69 billion in 2013. During the period of January – October 2014, two-sided trade is US \$ 7.37 billion (export from India – US \$ 2.61 billion and export from Thailand is US \$ 4.76 billion).

Following Tables and Chart show the current trend in India and Thailand trade. Thus, a general tendency in the growth of exports and imports among India and Thailand illustrate that the growth in both exports and imports has been at quicker rate after the structure agreement was signed between the two countries.

TABLE 1: INDIA EXPORTS TO THAILAND (In US \$ Millions)

Year	India Export	Global Export	% Share	% Growth
2000 – 2001	449.56	36822.49	1.22	40.06
2001 – 2002	530.12	44560.29	1.18	17.91
2002 – 2003	633.13	43826.72	1.44	19.43
2003 – 2004	711.20	52719.43	1.34	12.33
2004 – 2005	831.68	63842.55	1.30	16.94
2005 – 2006	901.39	83535.94	1.07	8.38
2006 – 2007	1075.31	103090.53	1.04	19.29
2007 – 2008	1445.54	126414.05	1.14	34.43
2008 – 2009	1810.87	163832.18	1.11	25.27
2009 – 2010	1938.31	185295.36	1.04	7.04
2010 – 2011	1740.16	178751.43	0.97	-10.22
2011 – 2012	2274.21	249815.55	0.91	30.69
2012 – 2013	2961.01	305963.92	0.97	30.20
2013 – 2014	3733.17	300400.58	1.24	26.08
2014 – 2015	3703.27	314405.30	1.17	-6.44
2015 – 2016	3464.83	310338.48	1.11	-13.77

Source – Government of India Ministry of Commerce and Industry

The table of India's Export of Thailand is show in 2000 - 2001 the India's Global export (total export) is US \$ 36822.49 million and India's total export of Thailand is US \$ 449.56 million, the share of India's export of Thailand is 1.22 percent. Since the Thailand-India FTA frame was concluded in October 2004, two-sided trade between them has tripled. In 2004 - 2005 India's total export of Thailand US \$ 831.68 million and the share is 1.30 percent and growth 16.94 percent. In 2015 - 2016 India's total export is US \$ 310338.48 and the share is 1.11percent and growth is -13.77, the growth is negative because the total export of Thailand is decrease in US \$ - 238.44 million.

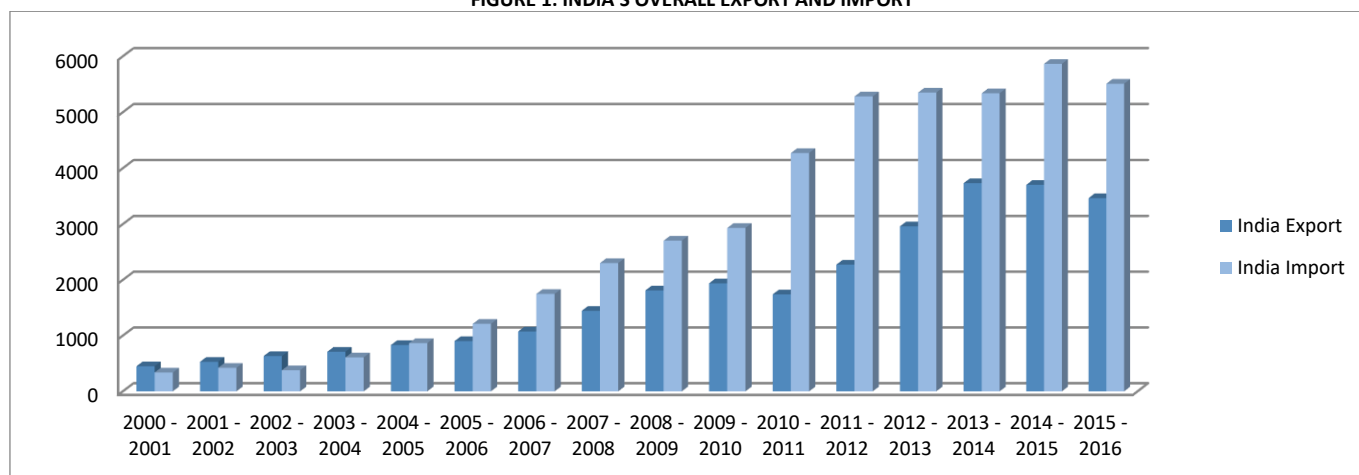
TABLE 2: INDIA IMPORTS TO THAILAND (In US \$ Millions)

Year	India Import	Global Import	% Share	% Growth
2000 – 2001	337.92	50536.45	0.66	3.65
2001 – 2002	423.09	51413.28	0.82	25.20
2002 – 2003	379	61412.14	0.61	-10.42
2003 – 2004	609.05	78149.11	0.78	60.70
2004 – 2005	865.88	111517.43	0.78	42.17
2005 – 2006	1211.58	149165.73	0.81	39.93
2006 – 2007	1747.75	185735.24	0.94	44.25
2007 – 2008	2300.93	251654.01	0.91	31.65
2008 – 2009	2703.82	303696.31	0.89	17.51
2009 – 2010	2931.52	288372.88	1.02	8.42
2010 – 2011	4272.09	369769.13	1.15	45.73
2011 – 2012	5283.84	489319.49	1.08	23.68
2012 – 2013	5352.61	490736.65	1.09	1.30
2013 – 2014	5340.20	450199.79	1.18	-0.23
2014 – 2015	5865.88	448633.41	1.30	9.84
2015 – 2016	5510.16	381006.63	1.44	-6.06

Source – Government of India Ministry of Commerce and Industry

The table of India's Import of Thailand is show in 2000 – 2001 the India's Global import (total import) is US \$ 50536.45 million and India's total import of Thailand is US \$ 337.92 million, the share of India's import of Thailand is 0.66 percent. In 2015 – 2016 India's total import of Thailand is US \$ 5510.16 million, the highest share in 1.44 percent.

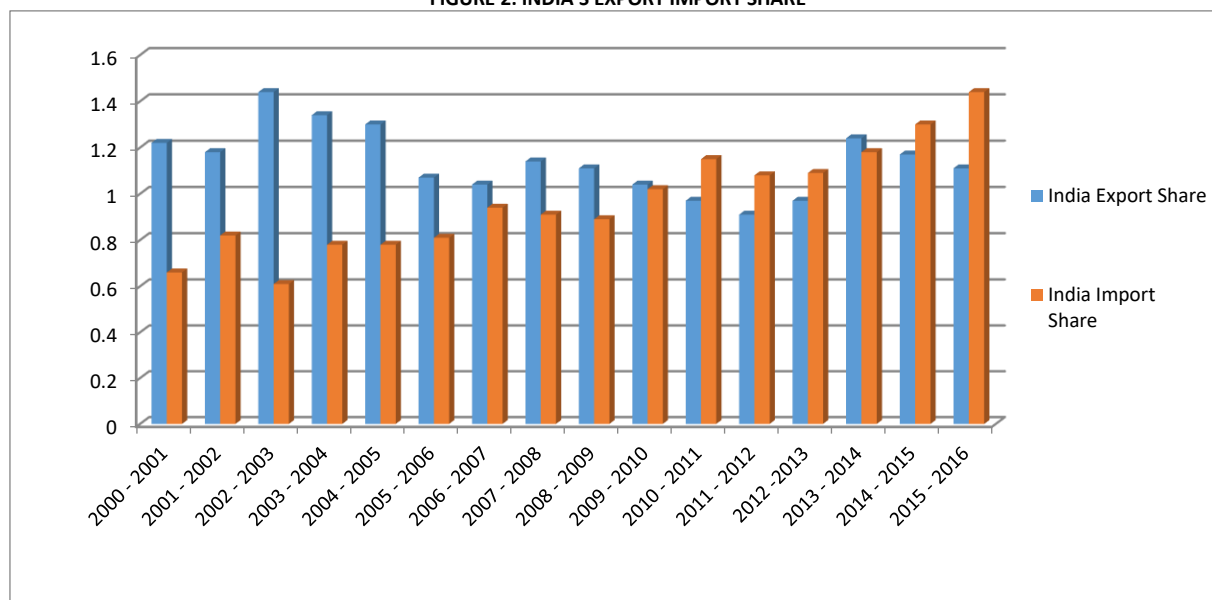
Although it is seen that the current level of India – Thailand trade is low, it is increasing more than time. India's total trade among Thailand has increased particularly since 2003 – 2004 during which the structure concurrence for a FTA between the bilateral was signed India and Thailand. Imports from Thailand have been increasing at a more rapidly rate than the increase in exports. India has benefit from a trade surplus since 2004 – 2005 after which imports have been largest. Thailand's import demands are high and India has huge capability to meet export supply for a huge number of commodities of Thailand's import demands. Thailand's Ratio of exports to GDP is 30.8 and Ratio of imports to GDP is 30.3 in 2015.

FIGURE 1: INDIA'S OVERALL EXPORT AND IMPORT

Source - Export Import Bank, Ministry of Commerce, Government of India

This Figure 1 India's overall Export and Import is showing the total export and import of Thailand. In the year 2013 – 2014 is India's total export of Thailand is the highest export US \$ 3733.17, but the compare of export import is rapidly.

FIGURE 2: INDIA'S EXPORT IMPORT SHARE



Source - Export Import Bank, Ministry of Commerce, Government of India

This Figure 2 India's Export Import Share clearly show the previous period the ratio among export and import is higher as the FTA progress it become to 0.65 increasing. This might be a reason Thailand investing more in India vis-a-vis India importing greater than the exports.

TABLE 3: INDIA'S RECENT TRADE PERFORMANCE (In US \$ Millions)

S. No	Year	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
1.	EXPORT	2,961.01	3,733.17	3,703.27	3,464.83	2,987.86
2.	%Growth		26.08	-0.80	-6.44	-13.77
3.	India's Total Export	305,963.92	300,400.58	314,405.30	310,338.48	262,290.13
4.	%Growth		-1.82	4.66	-1.29	-15.48
5.	%Share	0.97	1.24	1.18	1.12	1.14
6.	IMPORT	5,283.84	5,352.61	5,340.20	5,865.88	5,510.16
7.	%Growth		1.30	-0.23	9.84	-6.06
8.	India's Total Import	489,319.49	490,736.65	450,199.79	448,033.41	381,006.63
9.	%Growth		0.29	-8.26	-0.48	-14.96
10.	%Share	1.08	1.09	1.19	1.31	1.45
11.	TOTAL TRADE	8,244.85	9,085.78	9,043.47	9,330.71	8,498.03
12.	%Growth		10.20	-0.47	3.18	-8.92
13.	India's Total Trade	795,283.41	791,137.23	764,605.09	758,371.89	643,296.75
14.	%Growth		-0.52	-3.35	-0.82	-15.17
15.	%Share	1.04	1.15	1.18	1.23	1.32
16.	TRADE BALANCE					
17.	India's Trade Balance	-183,355.57	-190,336.07	-135,794.49	-137,694.93	-118,716.50

Source - Export Import Bank, Ministry of Commerce, Government of India

In this table India's Recent Trade Performance Show the India's Major sources of export and import in Thailand. During the period 2011 – 2012 and 2012 – 2013 the rate of growth of to India's export is increased by 26.08 percent and the other side, India's import share is 1.24 percent. In the last year 2015 – 2016 India's export growth rate is -13.77 percent and the import is -6.06 percent. India's export and import to Thailand show declining tendency.

These apprehensions are performing as barrier in the way of India – Thailand FTA negotiations. However, the discussions are still on the process, which is likely to be completed soon. The construction of India – Myanmar – Thailand trilateral highway is measured to be a progressive footstep en route for the negotiations, as it will make easier flow of good between India and Thailand.

RECENT DEVELOPMENTS AND SOME IMPORTANT ISSUES IN INDIA AND THAILAND

H.E. General Prayut Chan-o-cha, Prime Minister of the Kingdom of Thailand, accompanied by his spouse Associate Professor Naraporn Chan-o-cha paid a State Visit to the Republic of India from 16 to 18th June 2016 at the invitation of H.E. Shri Narendra Modi, Prime Minister of the Republic of India.

The India and Thailand Minister agreed to support more investments from both investors in India and Thailand. India and Thailand will also be renegotiating a new "Bilateral Investment Treaty". The PM of India welcomed Thai investments in India in the potential areas under the 'Make in India' initiative. The PM of Thailand invited Indian investments to Thailand under the cluster development policy, which is a newly – initiated program aimed at attractive investment in focused areas. The India and Thailand Prime Ministers is appreciated the recommendation presented by the first meeting of the India-Thailand Joint Business Forum and recommended the private sector of both countries to create the most of the established favorable climate to develop bilateral trade and investment and support business partnerships. They expressed the expectation that the Thailand-India Business Forum will prolong to facilitate the private sectors of the two countries.

The Indian and Thailand agreed to pursue discussions on the following MoUs/ Agreements.

- Memorandum of Understanding to Prevent/ Counter Smuggling and Circulation of Fake Indian Currency Notes
- Memorandum of Understanding on Combating Human Trafficking
- Memorandum of Understanding between India and Thailand on Cooperation in the fields of Information and Communications Technology and Electronics
- Memorandum of Understanding on White Shipping Information
- Memorandum of Understanding between Central Drug Standards Control Organization (CDSO) of India and Thai Food and Drug Administration

- f) Agreement between India and Thailand on Juridical and Judicial Cooperation in Civil and Commercial Matters for the Service of Summons, Judicial Documents, Commission, Execution of Judgments and Arbitral Awards (MLAT on Civil and Commercial Matters)
- g) Revision of Air Services Agreement
- h) Programme of Cooperation (PoC) on Science and Technology,
- i) India Thailand Free Trade Agreement
- j) Bilateral Investment Treaty (BIT)
- k) Memorandum of Understanding for Cooperation in Controlling Narcotic Drugs, Psychotropic Substances, their Precursors and Chemicals and Drugs Abuse
- l) MoU between Thailand's Computer Emergency Response Team (Thai CERT), Electronics Transaction Development Agency (ETDA) and the Department of Electronics and Information Technology (DeiTY)

Together sides noted that the visit will give improve to the preparations for the 70th anniversary of the establishment of bilateral diplomatic relations in present year. That time PM of India and PM of Thailand announced celebrate the "Festival of India" in Thailand and the "Festival of Thailand" in India, which are name "Sawasdee India Year" and "Namaste Thailand Year" respectively, will be held simultaneously in 2017 to commemorate this occasion, while several key events are to be held on 1st August to commemorate this auspicious occasion.

CONCLUSION

The research of study indicates the India has had a negative trade balance with Thailand. India's total export share of Thailand growth falling and import growth rising, so that's reason India's trade balance is negative. Negative trade balance strength has suggestion for India's overall trade balance and the current account of its balance of payments.

In the last year India and Thailand was signed a New Bilateral Investment Treaty (BIT) and also signed other agreements to improve the bilateral relation of India and Thailand. The construction of highway is measured to be a progressive footstep en route for the negotiations, as it will make easier flow of good between India and Thailand.

Also India and Thailand are try to developed their relation. In the current year they are celebrate the 70th anniversary of the establishment of bilateral diplomatic relations. That's reason the India and Thailand relation and trade will definitely improve. Therefore, it's clear from above evaluation Thailand became an ideal trading partner for India to liberalize its economy and required to integrate itself into the global economy. On the other hand, Thailand recognized India's huge economic potential and eagerly engaged with India.

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AN EVALUATION OF THE STATUS OF HIGHER EDUCATION IN INDIA

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ABSTRACT

Higher education system of India is the world's third largest in terms of students, next to China and the United States. India educates approximately 11 per cent of its youth in higher education as compared to 20 per cent in China. Apart from these higher education institutes there are several private institutes in India that offer various professional courses in India. Further, the main intension of the paper is to analyze the status of higher education in India and to capture the shortcomings of higher education system in India. The study has been prepared purely on the basis of secondary data and also used simple averages, analytical tables to assess the current issue. Finally, the paper concluded that, the overall scenario of higher education in India does not match with the global quality standards. Hence, there is enough justification for an increased assessment of the quality of the country's educational institutions.

KEYWORDS

higher education, universities, student's enrolment.

INTRODUCTION

Higher education system of India is the world's third largest in terms of students, next to China and the United States. Unlike China, India has the advantage of English being the primary language of higher education and research. India educates approximately 11 per cent of its youth in higher education as compared to 20 per cent in China. The main governing body at the tertiary level is the University Grants Commission (India), which enforces its standards, advises the government, and helps coordinate between the centre and the state. Universities and its constituent colleges are the main institutes of higher education in India. At present in 2011, there are 227 government-recognized Universities in India. Out of them 20 are central universities, 109 are deemed universities and 11 are Open Universities and rest are state universities. Most of these universities in India have affiliating colleges where undergraduate courses are being taught.

Apart from these higher education institutes there are several private institutes in India that offer various professional courses in India. Distance learning is also a feature of the Indian higher education system. Some institutions of India, such as the Indian Institutes of technology (IITs), have been globally acclaimed for their standard of education. The IITs enroll about 8000 students annually and the alumni have contributed to both the growth of the private sector and the public sectors of India. However, India has failed to produce world class universities like Harvard and Cambridge. According to the London Times Higher Education (2009)-Quacquarelli Symonds (QS) World University rankings, no Indian university features among the first 100. But universities in East Asia have been included in the first hundred. Hong Kong has three, ranked at 24, 35 and 46; Singapore two ranked at 30 and 73; South Korea two ranked at 47 and 69 and Taiwan one in the 95th position. Notably, China's Tsinghua University and Peking University are ranked at 49 and 52 respectively. There is no Indian university in the rankings from 100 to 200. It is only when one moves on to the next 100 that we find the Indian Institute of Technology, Kanpur at 237; IIT Madras at 284 and the University of Delhi at 291. A recent evaluation of universities and research institutes all over the world, conducted by a Shanghai university, has not a single Indian university in the world's top 300 while China has 6. The Indian Institute of Science, Bangalore, comes in somewhere in the top 400 and IIT, Kharagpur, makes an appearance after that. Yet this decisive edge also has its shortcomings. Besides top rated universities which provide highly competitive world class education to their pupil, India is also home to many universities which have been founded with the sole objective of making easy money.

UGC and other Regulatory authorities have been trying very hard to extirpate the hazard of private universities which are running courses without any affiliation or recognition. Students from rural and semi urban background often fall victim to these institutes and colleges. Today, Knowledge is power. The more knowledge one has, the more empowered one is. According to the University Grants Commission (UGC), India needs 1500 more universities with adequate research facilities in order to compete in the global market. The country lacks the critical mass in higher education. Its gross enrolment ratio (GER) is a mere 11 per cent compared to China's 20 per cent, the USA's 83 per cent and South Korea's 91 per cent. This means that in comparison to India, China has double the number of students pursuing higher education. The Eleventh Five Year Plan envisages increase in the Gross Enrolment Ratio (GER) in higher education to 15 per cent of the population in the age cohort group of 18-24 years by 2011-12 but it has achieved only 12 per cent. During the 12th Five Year Plan the government has a target of achieving 30 per cent GER. In consonance with the target of the 12th FYP, the University Grants Commission has launched a national level mission called Rastriya Uchchatar Shiksha Abhiyan (RUSA) to achieve quality higher education with access and equity. The major objectives of RUSA include: to achieve 32 per cent GER by 2022 (at the end of the 13th FYP). This requires a substantial increase in the number of institutions and consequently would require an adequate number of teachers for imparting education. Failure to redress the faculty shortage would hamper the achievement of the targets for increase in GER set out by Government. However, the overall scenario of higher education in India does not match with the global quality standards. Hence, there is enough justification for an increased assessment of the quality of the country's educational institutions.

Hence, the present study tries to analyze the status of higher education in terms of growth of no of universities and colleges, enrolment, state level details of higher education and some of the shortcomings and reforms of higher education in India.

OBJECTIVES OF THE STUDY

1. To analyze the status of higher education in India
2. To capture the shortcomings of higher education system in India

METHODOLOGY

The present study has been used secondary data collected from Ministry of Human Resource Development and All India Survey on Higher Education 2014-15. Further it has been used averages, analytical tables to present the work more scientifically and systematically.

GROWTH OF HIGHER EDUCATION IN INDIA

This is the time of growth of higher educational institutions and increase in the number of students' enrolment in regional and national levels. It has seen that every country gave due importance to higher education and considers it as the basic for human resource and economic development. However, the number of higher educational institutions and students' enrolment vary from states to state. So an attempt is made to find out the status of Indian higher educational system in the Indian scenario.

TABLE 1: DECADAL GROWTH OF HIGHER EDUCATION IN INDIA

Year	No of Universities	No of Colleges	Total
1950-51	30	695	725
1960-61	55	1542	1597
1970-71	103	3604	3707
1980-81	133	4722	4855
1990-91	190	7346	7536
2000-01	256	12806	13062
2010-11	634	31324	31958

Source: Selected educational statistics, Various Issue FICCI Higher Education Summit 2012 Website: www.ugc.ac.in

The table 1 shows the decadal growth of higher education in India since 1950-51 to 2010-11. According to the table, during the period 1950-51 there were only 30 universities existed and 695 colleges were working and total of 725 higher education institutions were existed in India. After six decades i.e., in the year 2010-11, there was enormous increase in the growth of higher education in India it means that there were around 634 universities, 31324 colleges and total of 31958 higher education institutions were existed in India during the year 2010-11.

TABLE 2: DECADAL GROWTH OF ENROLMENT OF HIGHER EDUCATION IN INDIA

year	No of students in Million
1950-51	0.4
1960-61	1.1
1970-71	2
1980-81	2.8
1990-91	4.9
2000-01	9.8
2010-11	17

Source: FICCI higher education Summit 2012

The table 2 illustrates the decadal growth of enrolment of higher education in India since 1950-51 to 2010-11. As per the given table, the total enrolment of higher education was only 0.4 million in the year 1950-51. But it was slowly increased in subsequent decades, after six decades the total enrolment of higher education in India was increased to 17 million in the year 2010-11. But the growth of enrolment was very slow in India when compared to other neighbor countries.

TABLE 3: TYPES OF HIGHER EDUCATION INSTITUTIONS IN INDIA

Type of Institution	2012-13	Percent
State Universities	306	43.4
Central Universities	44	6.24
Deemed Universities	130	18.49
Private Universities	154	21.84
Institute of National Recognition	39	5.59
National institute of technology	32	4.54
Total	705	100

Source: UGC, MHRD Annual Report 2011-12

The table 3 clearly represents the type of higher education institutions existed in India during the period 2012-13. According to the table, there was 43.4 percent of state universities, 6.24 percent of central universities, 18.49 percent of deemed universities and 21.84 private universities existed in India during the year 2012-13. Further, only 5.59 percent of institutes were national recognized and only 4.54 percent of national institute of technology were working in India during the same period. As per the given table, the percentage of private and deemed universities was very high in India.

TABLE 4: STATE-WISE TOTAL NO OF HIGHER EDUCATION INSTITUTIONS AND ENROLMENT IN INDIA 2012-13

Name of the States/Union Territories	Total No of Higher Education Institutions	Percent	No. of Students	Percent
Andhra Pradesh	4597	12.74	217542	11.96
Arunachal Pradesh	21	0.06	20154	0.11
Assam	522	1.45	279243	1.54
Bihar	728	2.02	390144	2.13
Chattisgarh	700	1.94	334317	1.84
Delhi	268	0.73	293081	1.61
Goa	62	0.17	27791	0.15
Gujarat	1892	5.24	923914	5.08
Haryana	1003	2.78	452690	2.49
Himachal Pradesh	371	1.08	144503	0.79
Jammu and Kashmir	325	0.9	206129	1.13
Jharkhand	245	0.68	29198	0.16
Karnataka	3414	9.27	1005572	5.53
Kerala	1062	2.84	504139	2.77
Madhya Pradesh	2351	6.62	1165173	6.39
Maharashtra	4881	13.52	2415711	13.28
Manipur	83	0.23	36968	0.2
Meghalaya	79	0.22	44006	0.24
Mizoram	31	0.09	15843	0.09
Nagaland	62	0.17	24207	0.13
Odisha	1136	3.15	513479	2.82
Puducherry	90	0.25	49287	0.27
Punjab	1001	2.77	479136	2.63
Rajasthan	2812	7.79	790114	4.34
Sikkim	20	0.05	12788	0.07
Tamil Nadu	2469	6.84	1492740	8.21
Tripura	43	0.12	33104	0.18
Uttar Pradesh	4501	12.39	3021326	16.61
Uttaranchal	436	1.21	291104	1.6
West Bengal	969	2.68	945077	5.19
Chandigarh	30	0.08	67205	0.37
Andaman and Nicobar Islands	6	0.02	3658	0.02
Lakshadweep	3	0.01	429	0.003
Daman and Diu	4	0.01	947	0.005
D and N Haveli	4	0.01	2170	0.01
Total	36095	100	18190689	100

Source: UGC Report and Higher Education in India at a glance 2013

The table 4 clearly exhibits total no of higher education institutions existed and total enrolment in the states and union territories during the period 2012-13. It is very important to note that more than 60 percent of the education institutions and the enrolment were found in six states namely; Maharashtra (13.52%), Andhra Pradesh (12.74%), Uttar Pradesh (12.47%), Karnataka (9.36%), Rajasthan (7.79%), Tamil Nadu (6.84%) and Madhya Pradesh (6.73%) rest of the table have less no of educational institutions. Further, in total enrolment also, around 50% of the total enrolment was found in four states namely; Uttar Pradesh (16.61%), Maharashtra (13.28%), Andhra Pradesh (11.96%) and Tamil Nadu (8.21%) rest of the table have less no of enrolment during the period 2012-13. However, it is observed that higher education has been given due importance in most of the states in the country.

SHORTCOMINGS IN HIGHER EDUCATION IN INDIA

India has been witnessing a healthy growth of higher education institutions as well as students' enrolment 1950-51. The students' enrolment from 1950-51 to 2012-13. Though there is a positive trend in the growth of higher education, several studies are also found some of the important shortcomings which have to be considered seriously. They are as follows,

- However, higher education system in India continues to be afflicted with the three major problems of access, equity and quality.
- Extensive disparities have been existed in enrolment percentages among the States and between urban as well as rural areas.
- Disadvantaged sections of society and women have significantly lower enrolments than the national average.
- The higher education sector is plagued by a shortage of well-trained faculty, poor infrastructure, outdated and irrelevant curricula activities.
- The use of technology remains inadequate and standards of research and teaching at Indian universities are far below compared to international standard.
- Curricular reforms leading to regular revision and upgrading of curricula, introduction of semester system, choice-based credit system, and examination reforms are yet to take place in higher educational institutions across the country.
- Exceptions apart, majority of Indian higher education institutions perform poorly in the area of quality on a relative global scale.
- In recent years, the massive expansion in enrolment in higher education in the country has resulted in unbearable burden being put on the physical and pedagogic infrastructure of colleges and universities. This is reflected in overcrowded classrooms and distortion of desirable student-teacher ratios, overall shortage of teaching and tutorial space, overloading of laboratory and library facilities, and often a lowering of quality of teaching. All these issues require urgent correctives.

REFORMS NEEDED IN HIGHER EDUCATION SECTOR

- Curricular and academic reforms are required to improve student choices, with a fine balance between the market oriented professional and liberal higher education.
- Higher education must be aligned to the country's economy and also to the needs of the global market. Innovative and relevant curricula should be designed to serve different segments of the job market or provide avenues for self-employment. And emphasis must be given to the expansion of skill-based programmes in order to make our youth employable in the job market.
- Fact remains that today, around 60% of total enrolments in higher education are in private institutions. Some of them excel in their chosen areas. There also exist legitimate concerns about many of these institutions being substandard, exploitative and suffering from the general shortcomings mentioned earlier. Governance reforms are required to enable these institutions to have their autonomy to develop distinctive strengths, while being held accountable for ensuring quality and fulfilling their responsibility to society.

CONCLUSION

Higher education has been playing a vital role in improving the status of human development in the country. The status of higher education institution and the overall enrollment in India has been growing steadily but only a few states have been performing well in terms of no of intuitions and enrolment but much attention is required towards the remaining states which are less performed. Though there was a steady growth in higher education sector, there are also some shortcomings which should be taken into consideration and reforms of the sector is also much needed to overcome from such shortcomings. However, the overall scenario of higher education in India does not match with the global quality standards. Hence, there is enough justification for an increased assessment of the quality of the country's educational institutions.

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STOCK PERFORMANCE OF AMERICA'S LARGEST BANKS AFTER MERGERS & ACQUISITIONS

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ABSTRACT

Since the dawn of the Great Recession, there has been much discussion and disagreement about the health of the banking system in the United States. Many of the nation's largest institutions were recipients of governmental funding through The Troubled Asset Relief Program (TARP) during the financial crisis and earned the moniker of too-big-too-fail (TBTF) (Brewer & Jagtiani, 2013). Even as large banks used bailout funds for liquidity purposes, they still managed to grow in size due to mergers and acquisitions of other firms. The research presented here explores the impact that these mergers have had on the stock performance of these large banking institutions when they acquire smaller organizations. By examining the stock price, quarterly dividend payments, and earnings per share (EPS) of ten largest bank in the nation, it is determined, that the overall impact of mergers on stock performance varies based on the variable tested. Stock price is not statistically affected by mergers/acquisitions; however, both dividend and EPS are significantly affected. This study affirms the findings of previous researchers in terms of limited stock price affect, however it also brings to light new information about how bank dividends and EPS are affected within this sample.

KEYWORDS

banks, mergers & acquisitions, stock price, stock performance.

INTRODUCTION

For nearly the past century, for-profit businesses have operated under the legal precedent that the ultimate goal of an organization is to maximize shareholder value (Dodge v Ford, 1919). In the banking industry, the goal is no different. Since the creation of the First Bank of United States in 1791, banking institutions have been entrusted by generations of Americans with the responsibility of properly managing and protecting the deposits of citizens, businesses, and governments alike. As history has shown, in times of economic turmoil, the banking industry becomes the unwilling recipient of strict governmental regulation through quick-fix legislation, which ends up breeding complexity and unintended chaos (Smith & Muñoz-Fraticelli, 2013). Current and past regulation of the American banking system was not designed to be detrimental to the industry, but rather put in place specific safeguards to defend the industry and financial wellbeing of the country from undue and costly financial risks (Boyd & De Nicolio, 2005). Even through governmental restriction, banks still have a duty to maximize their shareholder profit.

To manage the financial impact that this regulatory environment creates, some banks have chosen to adopt an aggressive merger and acquisition strategy in hopes of growing their footprint amid economic uncertainty, while generating both new revenue streams and business lines (Kowalik, Davig, Morris, & Regehr, 2015). Some of the nation's most stable banks were even able to acquire struggling institutions free of charge using governmentally assisted transactions. Additionally, voluntary mergers helped solve the growth management dilemma that many firms faced by utilizing excess cash to help expand in both market share and/or market capitalization (Higgins, 2012). Presented here is a quantitative research study that seeks to answer the question: *how do mergers and acquisitions (M&A) affect share performance of the nation's largest banks?* Researching the answer to this question is one of potential importance to all consumers of banking services, portfolio managers, and individual investors interested in the performance of a bank's common stock.

To answer the research question at hand, this paper will examine the past common stock performance of the ten largest American banking institutions to determine if M&A had any statistical impact on stock price, earnings per share, and/or quarterly dividend payouts. This research will focus on exploring both correlation and causality. Recent data has shown that nearly 50% of the national deposit market share is held within these ten banks (Cox, 2015), more accurately presented as 46.94% (FDIC, 2015). Past research on stock performance, both pre- and post-acquisition, has been inconclusive as to the affect that M&A activity has on the stock performance in a publically traded company and requires additional examination. Due to the financial prominence and prowess of the ten largest banks in the United States, it seems prudent that a study examines the direct impact of bank-to-bank mergers on the acquiring firms share performance. The prominence of this subject matter requires additional investigation into past research, relying upon peer-reviewed journal findings and unbiased financial data from reputable sources.

LITERATURE REVIEW

The impact that merger and acquisition (M&A) activity has on share performance of acquiring firms is not a new subject matter, and has been analyzed by researchers for decades (Hackbarth & Morellec, 2008; Lee, 2013; Melicher & Harter, 1972; Mortal & Schill, 2015; Nielsen & Melicher, 1973). Within past literature, there have been many insights gained into the impact of premiums paid by companies that were merging (Nielsen & Melicher, 1973), the importance that method of acquisition payment plays on stocks (Chronopoulos, Girardone, & Nankervis, 2013; Mortal & Schill, 2015), and the ability of financially constrained firms to make wise merger decisions (Brune et al., 2015). When a company buys a firm through a purchase acquisition or via a hostile takeover, the financial impact of such reorganization creates a competitive edge for the acquiring company and creates costs for industry competitors (Largay & Zhang, 2009).

Recent reports have shown that the five largest banks operating in the US comprise just over 35% market share of the nation's deposits (Cox, 2015), while the top ten banks control just under 50% of banking market (Arnold, 2014). This is due in part to bank consolidations, failures, and the need to eliminate work duplication (Brewer & Jagtiani, 2013). Over the past 30 years, the number of banks has fallen to less than half of what it was in the 1980's (Kowalik et al., 2015), and mergers are allowing for less competition within the banking industry by forming oligopolies (Chehab, 2002). With nearly half of the nation's deposit housed in just ten of the nation's 6,273 registered banks (FDIC, 2015), it is of economic importance that the impact of M&A activity on bank stock prices be examined. As a matter of consumer and commercial finance, over 92% of the United States households use some kind of banking service, and thus necessary to further explore a topic that has far-reaching relevance (Burhouse, Chu, Goodstein, Northwood, Osaki, & Sharma, 2014). Research has shown that since the enactment of the Gramm-Leach-Bliley Act (1999), which modernized the longstanding rules set forth in the Glass-Steagall Act of 1933, there have been a plethora bank mega-mergers which have dominated the banking industry (Soper, 2001). These mega-banks have earned the moniker of being too-big-too-fail (TBTF) as they all have assets in excess of \$100B (Brewer & Jagtiani, 2013). Some of these banks have merged willingly, while others were part of governmentally assisted transaction to help form these TBTF organizations, and create a competitive edge in the banking marketplace (Largay & Zhang, 2009). It is this idea of competitive edge derived from mergers, which requires exploration of the research question at hand.

The past decade has been a roller coaster ride for the American banking system with unprecedented income gains, large loan losses, and overall financial volatility that led to congressional passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010). The reforms in this act were designed to protect the American economy from being negatively impacted by the systematic financial risks taken by many of the nation's banking institutions (Smith & Muñoz-Fraticelli, 2013) and put an end the idea that banks were TBTF (Brewer & Jagtiani, 2013). To manage the financial impact that this regulatory environment created, some firms chose to adopt an aggressive merger and acquisition strategy in hopes of growing assets, diversifying their portfolios, and entering into new geographic markets (Daddikar & Shaikh, 2014). This type of approach solved the management dilemma that many firms faced by utilizing excess cash to help expand in both market share and/or market capitalization (Higgins, 2012).

Past research has focused on the impact that merger announcements have played on stock prices of merging firms, demonstrating that news of a merger will impact the target company's stock price positively, while having little impact on the acquiring firm's stock price (Hackbarth & Morellec, 2008; Largay & Zhang, 2009). The public pronouncement of an upcoming merger is an important factor in the share performance of consolidating firms; however, the focus of this research goes beyond just the announcement of a merger, and addresses the actual impact of a closed business transaction. Stock price increases based on announcement alone demonstrate a level of efficiency in the United States capital market by movement through information (Fama, 1970), but do these speculative increases translate into specific and measureable shareholder gains? Past research on stock performance, both pre- and post-acquisition, has created competing conclusions on this matter, and a generally accepted position awaits discovery. Established research has indicated that the stock prices of the acquiring firm will increase after a merger (Chehab, 2002; Melicher & Harter, 1972), whereas contemporary scholars argue that company procurement has minimal and near zero impact on stock prices (Bhabra, 2008; Bozos, Koutmos, & Song, 2013). Other researchers have pointed out that even as the purchase of companies may create growth, M&A activity creates a mediocre or losing proposition for shareholders (Higgins, 2012).

Research that infers positive stock price movement, is founded in the understanding that post-merger benefits arise from above market acquisition costs necessary for purchase of another business (Melicher & Harter, 1972). The reasons why companies merge, specifically banks, provides insight as to why decades old research provides contradictory results in identifying the direct correlation between stock price movement and M&A activity. As argued by Zhang (1998) while exploring bank mergers, "In theory, three major motives have been put forward: synergy, agency, and hubris. The synergy motive suggests value gains resulting from takeovers. The agency motive describes welfare-enhancing takeovers for the acquirer management at the expense of the acquirer shareholders. The hubris hypothesis explains the mistakes in the acquirer management's valuation of the takeover" (p. 1025). The findings in this study shows that motivating factors for M&A will impact the acquiring firms financial gain either positively or negatively based on the catalytic desire for unification, however most banks will merge for the purpose of synergy (Zhang, 1998). The unification of once competing firms, has allowed banks to create economies of scale, increase revenues, lower costs by operational efficiencies, diversify by expansion, and result in an efficient banking system that can benefit the domestic economy (Kowalik et al., 2015). This efficiency has also been linked to larger market gains, and abnormal stock price fluctuations (Aamir, Kouser, & Mujtaba Chaudhary, 2014; Agrawal, Jaffe, & Mandelker, 1992; Chehab, 2002). With a company restructured through synergy, "evidence exists to suggest that managers and investors factor post-merger profit efficiency and to a lesser extent cost efficiency opportunities into the offering prices" (Chronopoulos et al., 2013, p. 259).

Other researchers acknowledge that while a merger announcement may create a temporary increase in stock prices for the involved firms, there is no overall increase in performance for a post-merger firm, especially on stock purchase deals (Mortal & Schill, 2015). Additionally, in their study of non-financial firms, Mortal & Schill conclude that companies who grow their asset size organically have similar growth as merged firms, and that post-merger returns are undifferentiated from zero (2015). Other researchers argue that the stock prices will most likely show negative returns post-merger based on higher than market value premiums paid to acquire target companies (Largay & Zhang, 2009). In examining the long term shareholder impact of mergers, researchers have shown that stockholders of acquiring companies will be negatively impacted by a loss of wealth of about 10% over the five years post-merger completion (Agrawal, Jaffe, & Mandelker, 1992). While stock performance may also be attributed to external market factors outside of M&A activity, other researchers argue that the most important financial metric used in the acquisition of another company is not just company stock price, but stock dividend is of the highest importance then followed by P/E (Lee, 2013). This review of past literature has identified some areas of research disagreement, causing a need for further exploration.

OBJECTIVES

As demonstrated, a majority of past research has focused their attention on M&As of non-financial companies, the effect of equity vs. cash purchases, and the effect of merger announcement on both target and acquiring company stock prices. There appears to be a void in past research to discover the affect that mergers and acquisitions have on the stock performance of the largest banks in this nation, specifically those with the fiduciary responsibility for nearly half of all deposits in the United States (over \$5T). To fill this gap in literature, there is a prudent need to research the relationship that exists between M&A and bank stock performance. The objective of this study is two part. First, this research aims to identify what impact bank mergers have on company stock performance. This occurs by testing pre-merger stock performance data with post-merge stock performance data. Secondly, this paper will identify those findings that are of benefit to investors and analysts of bank stock performance.

HYPOTHESIS

Based upon the research of previous scholars, to test the research question at hand, the overarching hypotheses of this study is:

$H_1 = \text{M\&A activity directly affects share performance in the nation's largest banks}$

$H_0 = \text{M\&A activity does not directly affect share performance in the nation's largest banks}$

RESEARCH METHODOLOGY

SAMPLING TECHNIQUE

To gather information on the specific population used in this study, a convenience sample technique was utilized based on the market share of the chosen institutions. Data on these well-known and financially sound institutions is easy accessible to find, interpret, and analyze through variety of ways. For this research, all data was found using online databases that report stock performance information on a multitude of firms in a standardized format.

SAMPLE SELECTION

The ten institutions used in this report were chosen based on a recent report by the Federal Deposit Insurance Corporation (FDIC) identifying national deposit market share ranking as of June 2015. Considered for this study are the ten largest banking institutions, based on their fiduciary role of maintaining nearly 50% of all the nation's deposit dollars, totaling over \$5 trillion of the nation's \$10 trillion. Only these ten banks will be examined, as the remaining 53% of the nation's bank deposits are held amongst 6,173 regional and community banks. For the purpose of economic importance, only these firms ten will be included.

SCOPE

Based on market share data found within the FDIC BankFind database, the scope of this paper will examine the common stock performance of the ten largest FDIC insured, American-banking institutions (ranked in order of largest to smallest market share amongst the TBTF banks):

- BAC - Bank of America, National Association (FDIC #: 3510)
- JPM - JPMorgan Chase Bank, National Association (FDIC #: 628)
- WFC - Wells Fargo Bank, National Association (FDIC #: 3511)
- C - Citibank, National Association (FDIC #: 7213)
- USB - U.S. Bank National Association (FDIC #: 6548)
- PNC - PNC Bank, National Association (FDIC #: 6384)
- COF - Capital One, National Association (FDIC #: 4297)
- TD - TD Bank, National Association (FDIC #: 18409)
- STI - SunTrust Bank (FDIC #: 867)
- BK - The Bank of New York Mellon (FDIC #: 639),

Analysis of these sample institutions will determine if M&A had any statistical impact on stock price, quarterly dividend payouts, and earnings per share.

To isolate the impact of M&A on bank stock performance, the data will only include information found within the following parameters:

- Focusing on the ten largest banks in the US (ranked by domestic market share) as of the June 30, 2015 FDIC market share report. Asset and market capitalizations are not included in the ranking of the firm chosen.

- Mergers and acquisitions from the 1st quarter of 2008 to the 4th quarter of 2015 are used due to the volatility and unprecedented regulation that began in 2008.
 - Only full mergers and acquisitions are incorporated in this data, with the intentional exclusion of strategic buyouts of individual branches and lines of business. Partial sales of offices and divisions are disqualified from this study, as many of these minor acquisitions affected only specific geographic locations. Examples of exclude transactions include US Bank Acquiring Charter One branches in Chicago in 2014, or Bank of America selling their Idaho and Eastern Oregon Branches to Washington Federal, also in 2014.
 - Internal reorganizations such as divisional splits and affiliated corporate unification of divisions are excluded from this study.
 - Only previously, unaffiliated corporate bank mergers will be included, such as voluntary M&A, governmentally assisted transactions, and hostile takeovers.
- By using a restrictive scope, the goal of this research will aid in identifying whether a statistically significant relationship exists between a bank's growth strategy and shareholder value.

DATA COLLECTION

Data has been collected focusing solely on the M&A history of all firms chosen since January 2008. This has allowed for a sufficient sample size needed for this case study. A quantitative examination of pre-acquisition stock performance trends and post-acquisition trends for each institution after a takeover has occurred. Using historical data gathered from Yahoo Finance, FDIC, and Mergent Online a profile for each of these institutions has identified 52 unique mergers that satisfy the parameters used for this project.

STATISTICAL TOOLS AND TECHNIQUES

The pre and post M&A data for each of the institutions tested are grouped as unique variables. Testing includes trend analysis and statistical testing to verify to see how mergers and acquisitions affect stock performance. SPSS and Excel are the platform tools chosen to analyze and test the data in hopes of discovering correlation and relational significance. The analysis of each variables uses a 95% confidence interval percentage (CI) to identify any areas where there was greater than a 5% statistical significance where $p < .05$.

DATA ANALYSIS

In a 1972 study, which analyzed the stock price movements of large company acquisitions, researchers attempted to discover the effect of M&A's on acquiring firms (Melicher & Harter). A portion of the methodology used in this decades old study, compared average company stock prices six-months prior to merger, with average stock prices six-month post-merger, to identify if changes in prices were significantly different from zero. This six month time period was chosen as the appropriate timeframe for testing as it is far enough away from merger announcement and completion to have the averages overly influenced by speculation (Nielsen & Melicher, 1973). The results of this industrial study showed a lack of price differentiation from zero, when comparing pre-merger prices to post-merger prices.

The analysis of this 43-year-old study serves as the model for the data collection and testing in discovering the impact of large bank mergers. The data collected here focuses on more than just stock price movement, but also includes merger impact on quarterly dividend payouts, and earnings per share (EPS). Only the mergers and acquisitions by the ten largest banks in the United States, since the first quarter following the start of the Great Recession (1st Quarter 2008), have been included in this data resulting in 52 corporate acquisitions. Bank market share from a 2015 FDIC report is the primary method for determining which institutions are included within this investigation. Information for each M&A event was derived by using two different financial databases, Yahoo Finance and Mergent Online. Additionally, the information was collected by:

- Calculating both the average daily adjusted price common stock for each organization six months before the date of acquisition and the average daily common stock price from the date of acquisition to six months out (Yahoo Finance)
- Averaging the quarterly dividend payments per share for six months prior to the bank acquisition, and the average quarterly dividend payouts from the date of merger to six months in the future (Yahoo Finance)
- Recording the average EPS Net Basic of the acquiring bank six-months prior to the merger, and identifying those numbers with the EPS from the date of unification to six months post-merger (Mergent Online).

The entire dataset consisted of 52 unique bank mergers, identified as the following independent variable groups:

- AvgPrice6moPrior: Six-month pre-merger stock price average, up to the day before finalization of company acquisition.
- AvgPrice6moPost: Six-month stock price average from the date of merger plus six months.
- AvgDiv6moPrior: Six-month average dividend payout prior to merger, including only those quarterly dividend payments that occurred within the six-month measurement window.
- AvgDiv6moPost: Six-month average dividend payout after the finalization of the announced merger, including only those quarterly dividend payments that occurred within the six-month measurement window.
- AvgEPS6moPrior: Six-month average EPS as reported on the companies standardized quarterly income statement within the six-month measurement window pre-merger.
- AvgEPS6moPost: Six-month average EPS as reported on the companies standardized quarterly income statement within the six-month measurement window before merger.

TESTING OF THE HYPOTHESIS

In order to identify if any significant trends exist to the stock performance of an acquiring firm, the means of each variable pair are calculated and compared side by side both numerically and visually. On the surface, these numbers provide an interesting perspective on the impact that M&A activity has had on these large financial institutions. Based upon the raw data collected, the stock performance of these ten institutions provides a mixed message as to the impact of acquiring a smaller competitor.

TABLE 1: CHANGE IN BANK STOCKS AFTER M&A

Bank M&As Since 1st Quarter 2008	Average Change In Price Per Share	Average Change in Quarterly Dividend Per Share	Average Change In Earnings Per Share
52	-2.67%	-8.73%	-32.54%

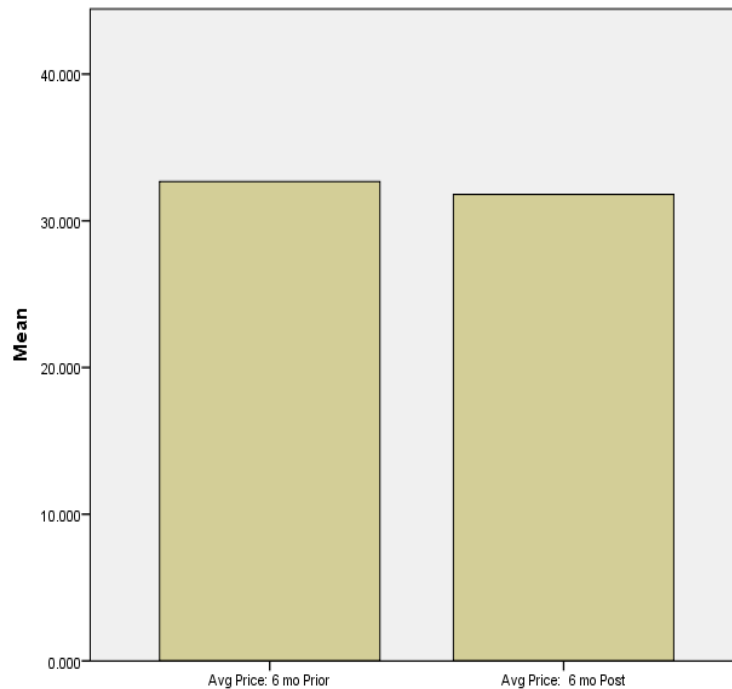
In calculating the means of each examined category, a basic trend has begun to evolve showing negative stock performance as an average for these institutions. The variable means are calculated by taking the total stock, dividend, or EPS and dividing by the number of the M&A cases for this study; in this case 52. To calculate the percent change of each variable, all data was computed using the formula: $\frac{(Post-Merger Value - Pre-Merger Value)}{Pre-Merger Value}$, a variation of the standard percent change equation (Berman, Knight, & Case, 2013). These averages are not an accurate reflection of the unique financial results experienced by each institution, but rather an overall mean of the cumulative pre and post-merger results of all ten banks analyzed. The individual results of each bank varied. Some of the entities have shown an increase in all three the tested categories (USB, PNC, COF), while others showed gains/no losses in at least two areas (C, TD, STI, BK), and the remaining firms in this sample identified average losses in all three fields (BAC, WF, JPM). Additionally, all variable sets were further analyzed to calculate the standard deviation and mean of each. In doing so, a negative downward trend emerged.

TABLE 2: PAIRED SAMPLES STATISTICS

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Avg Price: 6 mo Post	31.80327	52	11.227205	1.556933
	Avg Price: 6 mo Prior	32.67731	52	12.201663	1.692066
Pair 2	Avg Div: 6 mo Post	.26821	52	.217958	.030225
	Avg Div: 6 mo Prior	.29386	52	.243070	.033708
Pair 3	Avg EPS Net Basic: 6 mo post	.42346	52	.466951	.064755
	Avg EPS Net Basic: 6 mo prior	.62774	52	.534820	.074166

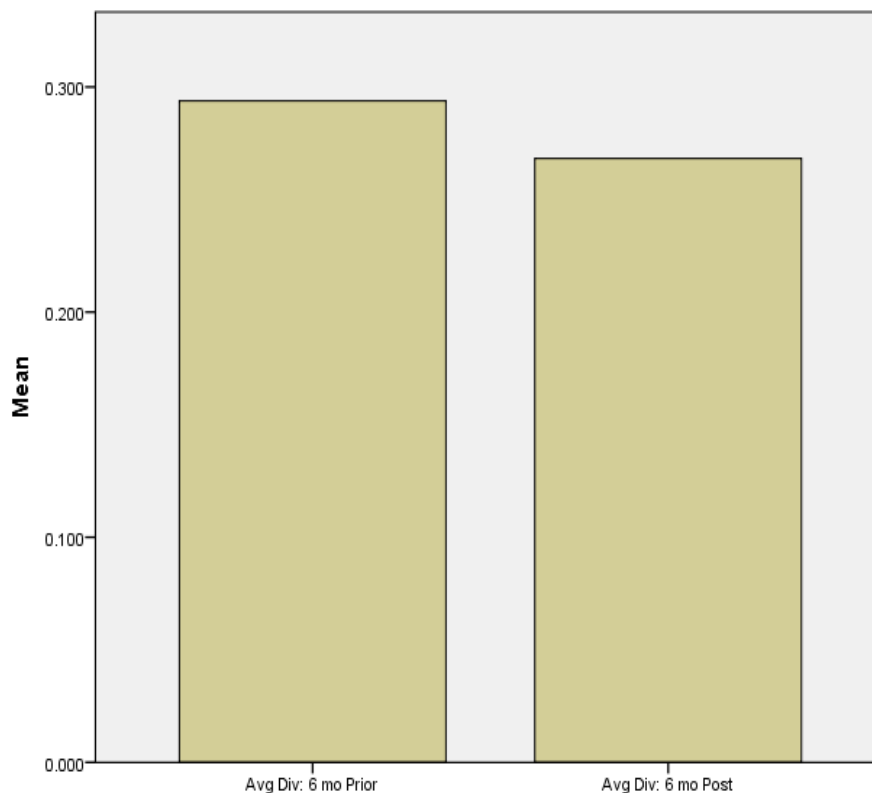
Between all ten banks, the cumulative comparison between both pre and post-merger means identified this visual downward trend:

FIG. 1

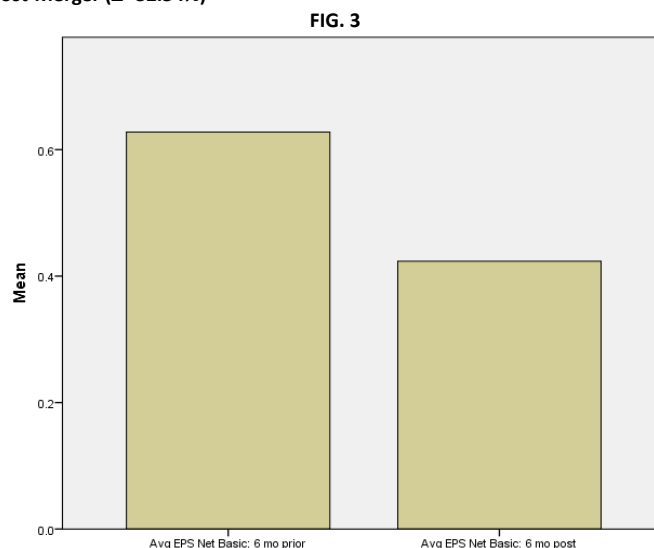


Average Stock Price Differences: Pre-Merger & Post-Merger (Δ -2.67%)

FIG. 2



Average Quarterly Dividend Differences: Pre-Merger & Post-Merger (Δ -8.73%)

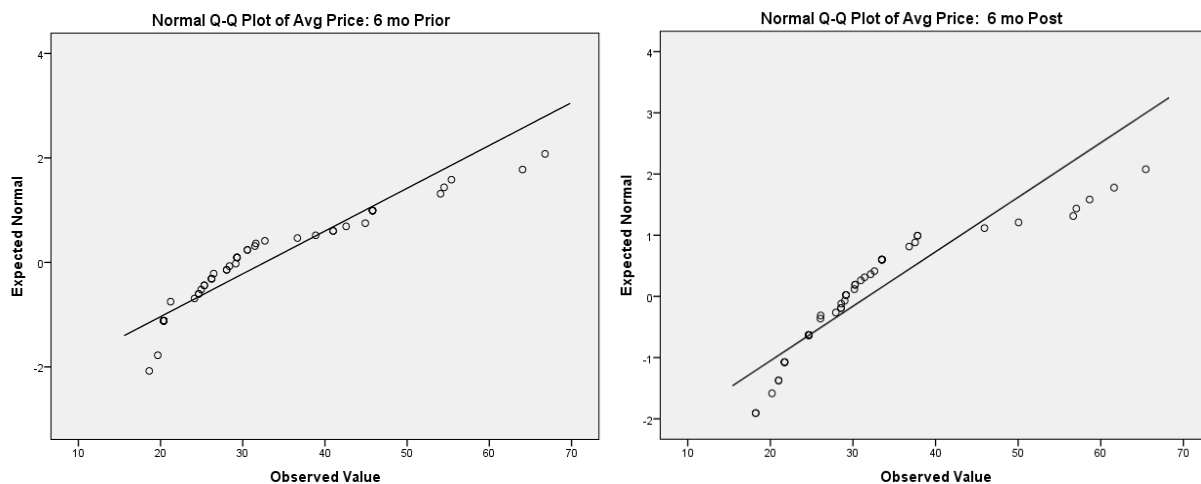


The raw percentage change in both pre and post-merger data show minor decreases in the stock performance area tested within study. The negative change in price performance dropped only slightly, while the reduction in dividend and EPS were more pronounced. These numbers are averages amongst the 52 mergers that occurred between the 1st full quarter of 2008 until the 4th quarter of 2015. This snapshot of averages, as interesting as they may be, require further testing to determine whether the pattern that has emerged is of any statistical significance. To do so requires analysis of these six variables through a more in-depth level of testing. In testing to see if the resulting decreases in stock performance are statistically significant, a paired samples t-test is used to determine whether the changes seen within these three areas are different from zero.

A boxplot exploration for each of the six variable group discovered that there were no outliers within the Avg6moPricePrior, Avg6moDivPrior, and Avg6moDivPost. The boxplot analysis of the Avg6moPricePrior yielded three outliers that were greater than 1.5 box lengths outside the edge of the box, while the variables Avg6moEPSPrior and Avg6moEPSPost each had one potential outlier. In reviewing the data, the inputs are correct and the values did not reveal the outliers as extreme, allowing for their continued inclusion into this study. The Normal Q-Q Plot provides a visual inspection of each variable, identifying a pattern of normal distribution:

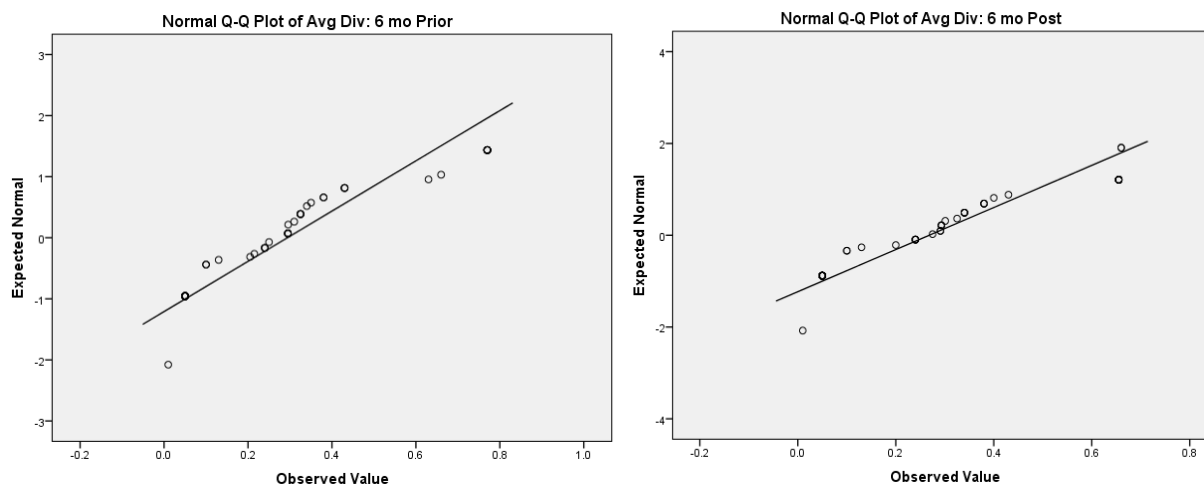
NORMAL Q-Q PLOT: STOCK PRICE

FIG. 4 & 5



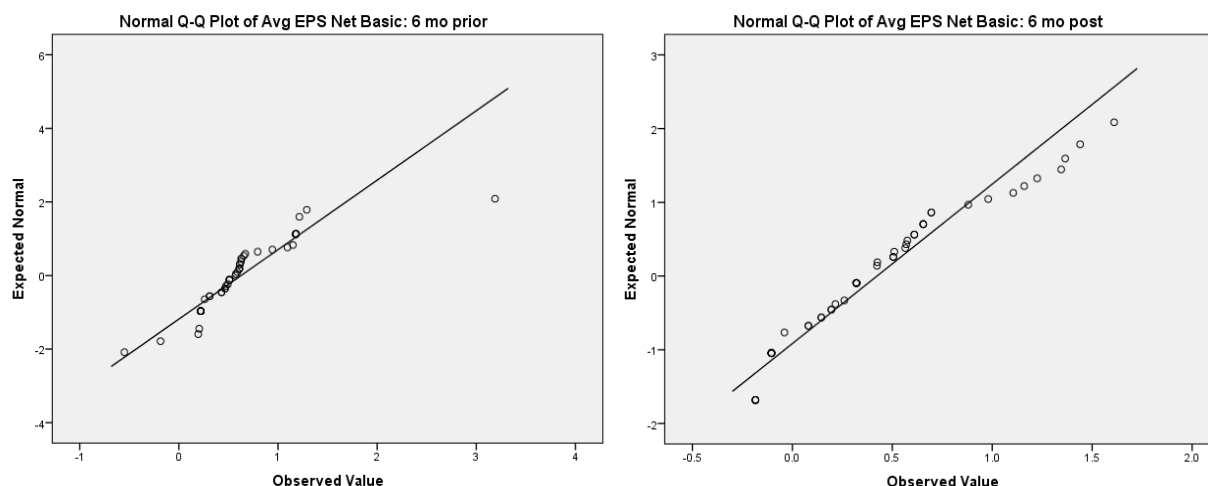
NORMAL Q-Q PLOT: QUARTERLY DIVIDEND PAYOUT

FIG. 6 & 7



NORMAL Q-Q PLOT: NET BASIC EARNINGS PER SHARE

FIG. 8 & 9



Paired Sample T-test. As the variables are paired to calculate statistical impact, the hypothesis of this study is revised and reduced to each variable pair as follows:

STOCK PRICE

- H_{P1} = M&A activity directly affects common stock price in the nation's largest banks
- H_{P0} = M&A activity does not directly affect common stock in the nation's largest banks

QUARTERLY DIVIDEND PAYMENTS

- H_{D1} = M&A activity directly affects stock dividend payments in the nation's largest banks
- H_{D0} = M&A activity does not directly affect stock dividend payments in the nation's largest banks

EARNINGS PER SHARE

- H_{E1} = M&A activity directly affects EPS in the nation's largest banks
- H_{E0} = M&A activity does not directly affect EPS in the nation's largest banks

For proper comparison the variables chosen in this study, a paired sample t-test was conducted to accurately identify the statistical significance of the stock performance impact caused by M&A activity among the largest domestic banking institutions. In this test, all calculations used the standard equation: $t = \frac{\bar{d}}{\sqrt{s^2/n}}$.

For testing purposes, all post-merger variables act as Variable 1 as these were the dependent variables, and the pre-merger variables are Variable 2 acting as the independent variables. Variable 2 acts as control to identify if there exists any post-M&A impact on stock performance.

VARIABLE ASSOCIATIONS

As a matter of measuring the strength of relationship between each pair of variables, an initial Pearson Correlation Coefficient examination identified some interesting findings as the association between these continuous variables sets. This data test shows correlation between variables, not necessarily causality as explained in other testing. The sample size of 52 allows for accuracy of identifying correlation, while not diluted by an overly large dataset. Not all variables demonstrate a statistically significant association to one another, however the strength of correlations is most predominant in the variables pairs of pre (prior) and post-merger activity in price, dividend payout, and earnings per share.

TABLE 3: VARIABLE CORRELATIONS

		Avg Price: 6 mo Prior	Avg Price: 6 mo Post	Avg Div: 6 mo Prior	Avg Div: 6 mo Post	Avg EPS Net Basic: 6 mo prior	Avg EPS Net Basic: 6 mo post
Avg Price: 6 mo Prior	Pearson Correlation	1	.773**	.635**	.731**	-.178	-.202
	Sig. (2-tailed)		.000	.000	.000	.206	.151
	N	52	52	52	52	52	52
Avg Price: 6 mo Post	Pearson Correlation	.773**	1	.189	.298*	-.139	-.184
	Sig. (2-tailed)	.000		.179	.032	.325	.192
	N	52	52	52	52	52	52
Avg Div: 6 mo Prior	Pearson Correlation	.635**	.189	1	.946**	-.218	-.171
	Sig. (2-tailed)	.000	.179		.000	.120	.226
	N	52	52	52	52	52	52
Avg Div: 6 mo Post	Pearson Correlation	.731**	.298*	.946**	1	-.224	-.179
	Sig. (2-tailed)	.000	.032	.000		.111	.204
	N	52	52	52	52	52	52
Avg EPS Net Basic: 6 mo prior	Pearson Correlation	-.178	-.139	-.218	-.224	1	.095
	Sig. (2-tailed)	.206	.325	.120	.111		.496
	N	52	52	52	52	53	53
Avg EPS Net Basic: 6 mo post	Pearson Correlation	-.202	-.184	-.171	-.179	.095	1
	Sig. (2-tailed)	.151	.192	.226	.204	.496	
	N	52	52	52	52	53	53

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

* . Correlation is significant at the 0.05 level (2-tailed).

Analysis of variable correlations and examination of the relationship strength between variable pairs discovered:

- A very strong association is found between the Average Dividend Prior & Post variables where $r=.946$, with a statistical significance of $p<.0001$.

- A strong relationship exists between the stock price variables, where $r=.773$, and a significance of $p<.0001$ which satisfies the alpha of statistical significance.
- Surprisingly, a weaker relationship is found among the earnings per share variables. The EPS ratio shows a correlation significance of $r=.095$, which denotes a weak correlation. This may be due in part to the use of negative numbers in the earnings per share calculations.

The strength of relationship is based on the following interpretation of the association.

TABLE 4

Size of the Correlation	Coefficient General Interpretation
.8 to 1.0	Very Strong Relationship
.6 to .8	Strong Relationship
.4 to .6	Moderate Relationship
.2 to .4	Weak Relationship
.0 to .2	Weak or No Relationship

(Salkind, 2014, p. 92)

The paired sample t-tests reveal the following information about the differences between each variable pair:

TABLE 5: PAIRED SAMPLES TEST

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Avg Price: 6 mo Post - Avg Price: 6 mo Prior	-.874038	7.946858	1.102031	-3.086458	1.338381	-.793	51	.431
Pair 2	Avg Div: 6 mo Post - Avg Div: 6 mo Prior	-.025648	.079845	.011073	-.047877	-.003419	-2.316	51	.025
Pair 3	Avg EPS Net Basic: 6 mo post - Avg EPS Net Basic: 6 mo prior	-.204279	.675568	.093684	-.392358	-.016200	-2.181	51	.034

RESULTS

The findings of the paired sample t-test confirmed much of what was initially discovered in the visual trend analysis of pre- and post-merger activity. The test shows a mild impact on each of the three variable pairs as demonstrated by the negative mean values. The t values, though reporting as negative, discuss their relation to the hypothesis and only show that indeed a difference between the two variable sets exists. The significance of each variable pair describes interesting findings that clarify how independent these variables are to one another.

Stock price. The results from a 95% CI identify a mean decrease of $-.874$ in the post-merger stock price when compared to pre-merger pricing. The 2-tailed significance results on stock price show that $p=.431$. This would not satisfy the statistical requirement that $p<.05$. The calculated p in this paired test shows that the significance between each variable is not statistically significant from zero, confirming the results of past researchers (Hackbarth & Morellec, 2008; Largay & Zhang, 2009), and affirming the null hypothesis.

Stock Dividends. Much like stock prices, the mean difference between the dividend pairs shows a decrease, however much smaller at $-.0256$. Unlike the significance level of stock price performance, the statistical impact on dividends revealed a $p=.025$ which satisfies the significance factor of $p<.05$. The results show a statistical correlation confirming that within this sample, bank mergers affect quarterly stock dividends at a significance level greater than zero. This result has rejected the null hypothesis for stock dividends, while confirming the hypothesis for this study.

Earnings per share. This paired sample t-test calculated a mean decrease of $-.204$ between pre and post-merger earnings. Independent of stock price and dividend per share payments, the earnings per share resulted in a $p=.034$, showing a significance greater than zero where $p<.05$. The p value rejects the null hypothesis for earnings within this sample, showing significance between pre- and post-merger stock performance.

DISCUSSION

The findings of this investigation paint a picture of both variable correlation and independence. By analyzing stock performance using three indicators, rather than solely relying on stock price, patterns have emerged through the data to provide valuable information. Stock price, though a readily available indicator of share performance, does not tell the whole story of overall stock performance. When a surviving firm acquires a smaller banking institution, the impact on price can be so minor that it is insignificant. An investor looking to grow the value of their portfolio through speculative purchase of banks who are actively acquiring other institutions will find that the resulting increase in price may never materialize. Past research has found that stock prices may rise at the announcement of a merger, but then will drop after the initial increase (Hackbarth & Morellec, 2008). There can still be short-term increases that occur in acquiring firm stock price, but these are isolated examples and not reflective of the major corporations within the industry. If anything, investment among these companies both post and pre-merger show minimal declines and moderate price stability during each time period tested.

The raw data shows large increases and declines amongst stock price, dividends, and earnings per share among all banks tested. Cumulatively, these banks demonstrate that their M&A activity creates a negative impact on their overall stock performance, as both dividends and EPS declined. A positive indicator amongst the data showed that even through economic hardship, every bank was able to pay their shareholders with quarterly dividends. These banks, though tested, maintained their financial integrity while continuing their operations. Even as the number of banks continues to decline nationwide to mergers and institutional failures, "bank mergers can result in more efficient banks and a sounder banking system and thus benefit the economy, as long as banking markets remain competitive and communities' access to banking services and credit is not diminished" (Kowalik et al., 2015, p. 31). The banks tested in this study show that even as statistically significant relationships between pre- and post-merger stock performance can occur, the strength of these stocks are still a stable investment for long term investors and portfolio managers, regardless of temporary and cyclical turbulence. The findings in this analysis do not indicate whether the relationship created by M&A will indicate positive or negative share performance, only that there is a statistically significant causal relationship by M&A on EPS and dividend payments.

CONCLUSION

The three individual paired t-tests analyzing stock price, quarterly dividends, and earnings per share provided three unique results. Stock prices were lowered by a small margin and found to reinforce the findings of past literature, and thus demonstrating a lack of differentiation from zero (Melicher & Harter, 1972). Surprisingly the same was not true for the either quarterly dividends or earnings per share, as both are affected by a bank acquiring another institution. The firms used in this sample size are not minor, but rather they currently have the fiduciary responsibility of maintaining a significant portion of deposits within the domestic banking industry (Cox, 2015). In terms of investor understanding and confidence, the discoveries of this study demonstrate that M&A activity has greater financial impact on stock performance than only affecting price. Well-informed investors understand that there is more to choosing a bank stock than only an increase in share price value, this study adds to the body of investor knowledge showing that M&A activity can drive down both dividends and EPS while creating losses for shareholders.

Additionally, the tests concluded that even in an industry where certain firms are considered "too big to fail" (Brewer & Jagtiani, 2013), growth activities can have negative stock impact for the acquiring firms, regardless of size or market share. Even though the number of deposits, assets, offices, and loans may increase on a bank's financial statement when acquiring a smaller competitor, there is still financial risk that can manifest as negative stock performance. Banks that choose to

incorporate M&A as part of their growth strategy need to be aware of these risks, and the negative impact that this approach can have on their shareholders and financial strength. This study has aided in the further understanding of this subject matter, and given a glimpse into the financial factors that affect bank stocks more so than just the price of their common shares. This research is of economic importance to businesses, individuals, bank managers, and investors alike based on the high likelihood that \$1 in every \$2 deposited in the United States is protected in at least one of these ten institutions. Unlike past research, which has focused on a broad set of data, this case study focuses a specific, yet powerful set of organizations.

LIMITATIONS OF THIS STUDY

Mergers and acquisitions have shown to affect the overall stock performance of a firm; however, there could be other factors that may influence stock performance. Using the timeframe from 1st Qtr. 2008 to 4th Qtr. 2015, can be a reason that statistical significance happened to be identified when testing these variables. During this seven year time period, the United States was at the cusp of entering into a recession (commonly known as the Great Recession) lasting from 2007 to 2009 ((Kowalik et al., 2015). During this time, an increase in governmental regulation and forced FDIC closures created an environment of volatile stock movements. The economic recovery that has been steadily gaining momentum since 2010, has allowed for both extreme declines and increases in the overall stock market that may have inadvertently affected the data tested in this study. Other factors that limit the findings of this research include using data based on governmentally assisted transactions (GAT), of which 20 of the 52 acquisitions are included. These transactions occur when the FDIC forcibly closes an institution, and that bank's assets are re-assigned to a presumable more stable institution. Including these transactions may or may not have had the same impact on stock performance as voluntary mergers and acquisitions since GAT mergers have no advance notice, and are completed within hours of a bank failing. Further research would need to be conducted to discover if the type of merger (voluntary or involuntary) is a factor in stock performance.

Additional research using control samples such as IXBK, the Nasdaq Bank Index, could be beneficial in identifying whether these stock trends were limited to just these ten institutions, or the banking industry as a whole. There could be difficulty in locating a control group to account for dividends and EPS, but that would be left to future researchers. Furthermore, it would be beneficial for investors and researchers alike to investigate the impact of the 50 or 100 largest banks in order to identify as to whether or not increasing the sample size can affect the statistical validity of the findings. In an industry where 92% of the American population subscribes to some sort of bank product or service (Burhouse, Chu, Goodstein, Northwood, Osaki, & Sharma, 2014), it is important to continually research this industry and understand which decisions can impact the health and stability of the banking system in the United States.

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CORPORATE SOCIAL RESPONSIBILITY (CSR) AND CUSTOMER'S PERSPECTIVE OF INDIAN BANKS

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ABSTRACT

Corporate social responsibility is the continuing commitment by business to achieve commercial success in ways that honor ethical values, address legal issues and contribute to economic development while improving the quality of the workforce and their families as well as the local community and society at large. Although many such voluntary social measures have become legal requirements, a number of business leaders have gone further ahead by utilizing their wealth to improve the living conditions of many people in the society. Banking sector is reckoned as a hub and barometer of the financial system. As a pillar of the economy, this sector plays a predominant role in the economic development of the country. Thus the banking sector has been playing a significant role as growth facilitator. This research paper focuses on the CSR practices of some selected Indian commercial banks as well as the customer's perspective towards CSR practices of banks.

KEYWORDS

ethical values, legal issues, workforce, business leaders, society, commercial, banking.

1. INTRODUCTION

CSR is the process by which an organization thinks about and evolves its relationships with stakeholders for the common good, and demonstrates its commitment in this regard by adoption of appropriate business processes and strategies. Thus CSR is not charity or mere donations. The concept of CSR is not simple to define; various concepts and themes overlap this term. The concepts of corporate citizenship, sustainable business, environmental responsibility, the triple bottom line, social and environmental accountability, business ethics and corporate accountability are all very much linked with CSR.

The term CSR itself came into common use in the early 1970s. The last decade of the twentieth century witnessed a shift in focus from charity and traditional philanthropy towards a more direct engagement of business in mainstream development, and concern for disadvantaged groups in society. In India, there is a growing realization that business cannot succeed in isolation and social progress is necessary for sustainable growth. An ideal CSR practice has both ethical and philosophical dimensions, particularly in India where there is a wide gap between sections of people in terms of income and standards as well as socio-economic status.

India is home to 1.2 billion people, a fast growing economy and vibrant business community, coupled with severe poverty, rapid urbanization, water stress and limited energy access. It is one of the front lines of sustainable development. Achieving the Vision2050 set out by World Business Council for Sustainable Development (WBCSD), a world in which 9 billion people live well and within the boundaries of the planet by mid-century, requires the active engagement and insight of the Indian business community. The WBCSD has established a legal entity and staff team in India to support and increase the Indian representation within the membership of WBCSD, and to support more business action by members in India. The WBCSD India office provides a platform for members to engage with other Indian corporates, industry, policy, NGO and media audiences to address sustainability challenges.

2. PRESENT STATUS OF CSR IN BANKING

History of sorts was made late on the evening of 8th August 2013 when the *Rajya Sabha* (India's Upper House of Parliament) passed the Companies Bill, 2012; *Lok Sabha* (the Lower House) had passed it earlier in December 2012. With this, India now has "a modern legislation for growth and regulation of corporate sector in India," which is expected to "facilitate business-friendly corporate regulation, improve corporate governance norms, enhance accountability on the part of corporates / auditors, raise levels of transparency and protect interests of investors, particularly small investors." This bill is applicable to companies with a net worth of Rs. 500 crore or more; a turnover of Rs 1,000 crore or more; and a net profit of Rs 5 crore or more during any financial year. Schedule VII of the Act, which lists out the CSR activities, suggests communities to be the focal point.

On the other hand, by discussing a company's relationship to its stakeholders and integrating CSR into its core operations, the draft rules suggest that CSR needs to go beyond communities and beyond the concept of philanthropy.

3. IMPORTANCE OF CORPORATE SOCIAL RESPONSIBILITY

CSR has become an important issue because of the following factors:

1. CSR helps in strengthening the relationship between companies and stakeholders.
2. It enables continuous improvement and encourages innovations.
3. Attracts the best industry talent as a socially responsible company.
4. Provides additional motivation to employees.
5. Mitigates risk as a result of its effective corporate governance framework.
6. Enhances ability to manage stakeholder expectations.

4. THREE APPROACHES TO CORPORATE RESPONSIBILITY

According to the traditional view of the corporation, it exists primarily to make profits. From this money-centered perspective, insofar as business ethics are important, they apply to moral dilemmas arising as the struggle for profit proceeds. These dilemmas include: "What obligations do organizations have to ensure that individuals seeking employment or promotion are treated fairly?" "How should conflicts of interest be handled?" and "What kind of advertising strategy should be pursued?" While these dilemmas continue to be important throughout the economic world, when businesses are conceived as holding a wide range of economic and civic responsibilities as part of their daily operation, the field of business ethics expands correspondingly. Broadly, there are three theoretical approaches to these new responsibilities:

1. CORPORATE SOCIAL RESPONSIBILITY (CSR)

The title corporate social responsibility has two meanings. First, it's a general name for any theory of the corporation that emphasizes both the responsibility to make money and the responsibility to interact ethically with the surrounding community. Second, corporate social responsibility is also a specific conception of that responsibility to profit while playing a role in broader questions of community welfare. As a specific theory of the way corporations interact with the surrounding community and larger world, corporate social responsibility (CSR) is composed of four obligations:

- a) The **economic responsibility** to make money. Required by simple economics, this obligation is the business version of the human survival instinct. Companies that don't make profits are in a modern market economy doomed to perish. Nonprofit organizations make money (from their own activities as well as through donations and grants), but pour it back into their work.
- b) The **legal responsibility** to adhere to rules and regulations. Like the previous, this responsibility is not controversial. What proponents of CSR argue, however, is that this obligation must be understood as a proactive duty. That is, laws aren't boundaries that enterprises cross over if the penalty is low; instead, responsible organizations accept the rules as a social good and make good faith efforts to obey not just the letter but also the spirit of the limits.

- c) The **ethical responsibility** to do what's right even when not required by the letter or spirit of the law. This is the theory's keystone obligation, and it depends on a coherent corporate culture that views the business itself as a citizen in society, with the kind of obligations that citizenship normally entails.
- d) The **philanthropic responsibility** to contribute to society's projects even when they're independent of the particular business. This theory's obligation is to support the general welfare in ways determined by the needs of the surrounding community.

Taken in order from top to bottom, these four obligations are *decreasingly* pressing within the theory of corporate social responsibility. After satisfying the top responsibility, attention turns to the second and so on. At the extremes, the logic behind this ranking works easily.

2. THE TRIPLE BOTTOM LINE

The triple bottom line is a form of corporate social responsibility dictating that corporate leaders tabulate bottom-line results not only in economic terms (costs versus revenue) but also in terms of company effects in the social realm, and with respect to the environment. There are two keys to this idea. **First**, the three columns of responsibility must be kept separate, with results reported independently for each. **Second**, in all three of these areas, the company should obtain sustainable results. The notion of sustainability is very specific. At the intersection of ethics and economics, **sustainability** means the long-term maintenance of balance. Here's how the balance is defined and achieved economically, socially, and environmentally:

- a) **Economic sustainability** values long-term financial solidity over more volatile, short-term profits, no matter how high. According to the triple-bottom-line model, large corporations have a responsibility to create business plans allowing stable and prolonged action.
- b) **Social sustainability** values balance in people's lives and the way we live. Social sustainability requires that corporations as citizens in a specific community of people maintain a healthy relationship with those people.
- c) **Environmental sustainability** begins from the affirmation that natural resources especially the oil fueling our engines, the clean air we breathe, and the water we drink are limited. If those things deteriorate significantly, our children won't be able to enjoy the same quality of life most of us experience. Conservation of resources, therefore, becomes tremendously important, as does the development of new sources of energy that may substitute those we're currently using.

Together, these three notions of sustainability- economic, social, and environmental guide businesses toward actions fitted to the conception of the corporation as a participating citizen in the community and not just as a money machine.

3. STAKEHOLDER THEORY

Stakeholder theory, which has been described by Edward Freeman and others, is the mirror image of corporate social responsibility. Instead of starting with a business and looking out into the world to see what ethical obligations are there, stakeholder theory starts in the world. It lists and describes those individuals and groups who will be affected by (or affect) the company's actions. In a single sentence, stakeholder theory affirms that *those whose lives are touched by a corporation hold a right and obligation to participate in directing it*.

The stakeholders include:

- Company owners, whether a private individual or shareholders
- Company workers
- Customers and potential customers of the company
- Suppliers and potential suppliers to the company
- Everyone living in the town who may be affected by contamination from workplace operations
- Creditors whose money or loaned goods are mixed into the company's actions
- Government entities involved in regulation and taxation
- Local businesses that cater to company employees (restaurants where workers have lunch, grocery stores where employee families shop, and similar)
- Other companies in the same line of work competing for market share

5. LITERATURE REVIEW

Beurden and Gossling (2008) highlighted the increased pressure for corporations and businesses to adopt CSR. According to them, CSR pressures come from legal, social, moral, and financial factors. Legal restrictions increase as a result of government restrictions, customers keep demanding higher transparency and ask for sustainable products, and investors set a greater demand based not only on financial performance but also the way businesses meet their CSR. All of these pressures and developments increase corporate motivation to implement CSR.

Carroll (1991) states four domains of Corporate Social Responsibility (CSR): economic, legal, ethical and philanthropic. Organizations are considered to have an inherent profit motive so economic performance is considered to be of greater importance than the other three above-mentioned CSR components. The philanthropic responsibility of the organization implies that the organization will be a good corporate citizen actively involved in the betterment of the society.

Cannon (1992) on the other hand states that "the primary role of business is to produce goods and services that society wants and needs; however, there is interdependence between business and society in the need for a stable environment with an educated workforce."

Friedman (2006), "There is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud". In contrast to Friedman's statement, Robbins and Coulter (2007) explained that the management's social responsibility goes beyond making profit to include protecting and improving social's welfare of its stakeholders and the environment in which the firm carries out its operations. They also have the responsibility to the society that allow their formation through various laws and regulations and support them through purchasing their products and services.

Peter Bakker (2014) emphasizes the key aspects of World Business Council for Sustainable Development (WBCSD)'s mission to overcome the challenges of sustainable development, by encouraging businesses to adopt a different mindset. The current Corporate Social Responsibility (CSR) models are inadequate. *The Economic Times* explains that the WBCSD has led the way by engaging with over 800 scientists and experts to develop its new Action2020 initiative. Action2020 is a science-based action plan that seeks to engage companies across the globe to implement innovative and scalable business solutions and improve the business case for sustainability.

The 2010 report highlights increasing interest for CSR among small and medium enterprises and notes increasing use of social media in corporate sustainability practices. For the 2010 report, a total of 108 companies, large and small, submitted 117 examples of good corporate sustainability practices. These were divided into five areas of corporate social responsibility: community, marketplace, environment, workplace, management and reporting. In addition, four new categories with a total of 48 different examples of good practice were created. The four categories covered: corporate volunteering, help for people, eco-offices, and preventive health care for employees. These latter categories were developed in response to the growing number of natural disasters experienced in parts of the world, which necessarily have an impact on corporate decision-making, activities and performance.

6. RESEARCH METHODOLOGY

Both the corporate sector and banking sector of the world are talking about the implementation of CSR in India. A number of studies have been made so far in respect of CSR implantation in the Indian Banking sector. An effort is made in the present study to know the status of CSR and strategies adopted for CSR in the Banking sector. The present study is based on observation method. 5 banks from public sector and 5 banks from private sector are selected for the study. Convenience Sampling is used to collect primary data of 25 bank's customers and secondary sources are bank's Annual Report or CSR report, web sites, newsletters and other secondary sources. The major objective of this study is to study the CSR practices of Indian banks and ascertain the customer's perspective.

7. FINDINGS OF THE STUDY

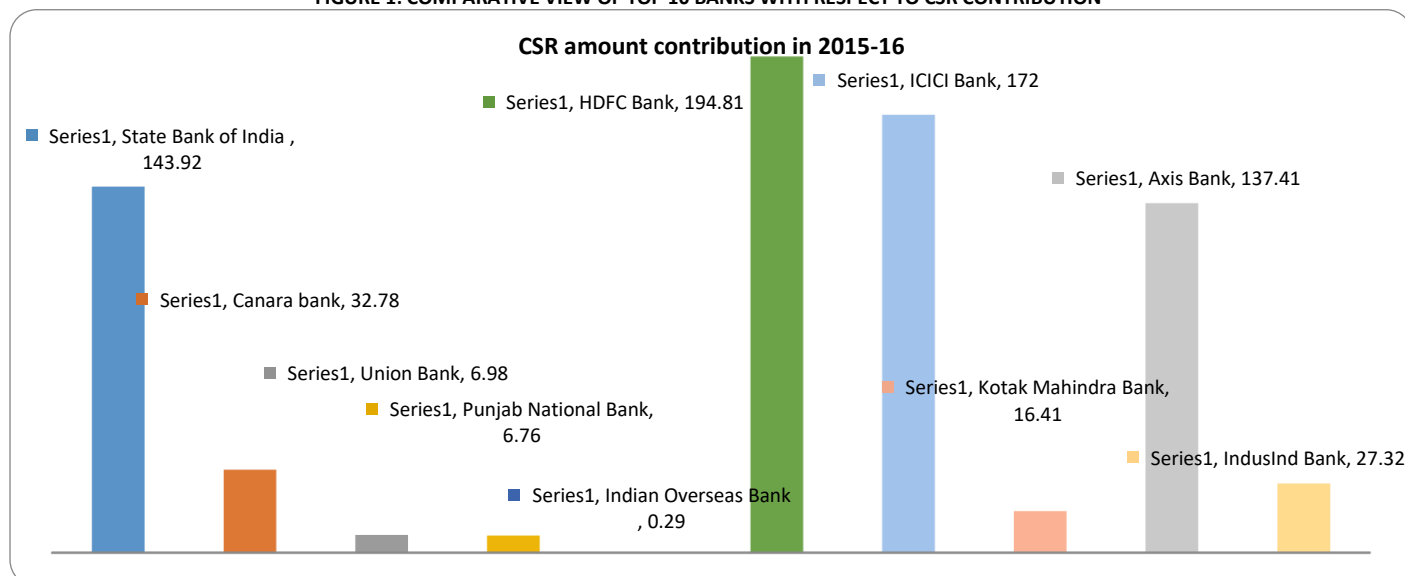
To highlight the role of banks in corporate social responsibility the RBI circulated a notice on December 20, 2007 for all the scheduled commercial banks, with title "Corporate Social Responsibility, Sustainable Development and Non-Financial Reporting – Role of Banks". Major issues discussed in the notice were regarding Corporate Social Responsibility, Sustainable Development, and Non-Financial Reporting. Briefing about the corporate social responsibility program to other member commercial banks RBI followed many international initiatives to highlight the importance of this notice like United Nations Environment Program Finance Initiative (UNEPFI), Global Reporting Initiative (GRI), World Business Council for Sustainable Development (WBCSD), International Finance Corporation, The Equator Principles, and Declaration on Financial Institutions.

7.1 BANK'S CSR REPORTING AREAS

TABLE 1: ANNUAL REPORT/CSR REPORT: 2015-16

Sr	Name of Bank	CSR Amount (Cr.)	CSR Report Publication	CSR Commit-tee	CSR Reporting Areas
1.	State Bank of India (SBI)	143.92	Business Responsibility Policy	Yes	<ul style="list-style-type: none"> • Health & Education • Games & Sports • Women Empowerment • Child Development • Environment Protection • Assistance to poor and under privileged • Entrepreneur development programmes • Assistance during natural calamities
2.	Canara bank	32.78	Annual Report	Yes	<ul style="list-style-type: none"> • Education & Skill Development • Health & Care • Women Welfare • Energy Conservation • Social Welfare & Relief
3.	Union Bank	6.98	Annual Report	Yes	<ul style="list-style-type: none"> • Health care-mental & physical disability • Community welfare & Environment protection • Girl child adoption & women empowerment • Skill Development • Rural Development & village adoption • Vocational training & Education
4.	Punjab National Bank	6.76	Annual Report	Yes	<ul style="list-style-type: none"> • Farmer Welfare Trust • Centenary Rural Development Trust • Financial Literacy Centre • Sanitation • Education • Medical Camps
5.	Indian Overseas Bank (IOB)	0.29	Annual Report	Yes	<ul style="list-style-type: none"> • Retail Banking • Education & Development • Agriculture Sector Lending • Loans to Non-corporate farmers
6.	HDFC Bank	194.81	Annual Report	Yes	<ul style="list-style-type: none"> • Rural Development • Sanitation • Education • Financial Literacy & Inclusion • Skill Development and sustainable livelihoods
7.	ICICI Bank	172.00	Annual Report	Yes	<ul style="list-style-type: none"> • Education • Health Care • Skill development and sustainable livelihoods • Financial inclusion • Support employee engagement in CSR activities
8.	Kotak Mahindra Bank	16.41	Annual Report	Yes	<ul style="list-style-type: none"> • Financial Inclusion • Employee Welfare • Environment Protection • Promotion of Green Culture • Enhancing vocational skills and livelihood • Promoting preventive healthcare and sanitation • Relief and rehabilitation
9.	Axis Bank	137.41	Annual Report on CSR	Yes	<ul style="list-style-type: none"> • Vocational Education & Training • Livelihood Enhancement and Rural Development • Medical Relief and Trauma Care • Sanitation • Welfare measures for Armed Forces Veterans
10.	IndusInd Bank	27.32	Annual Report	Yes	<ul style="list-style-type: none"> • Rural Development & Inclusiveness • Environmental Sustainability • Preventive Healthcare • Welfare measures for Armed Forces Veterans

FIGURE 1: COMPARATIVE VIEW OF TOP 10 BANKS WITH RESPECT TO CSR CONTRIBUTION



As banks were selected on the basis of total income generated in 2015-16, it is apparent that banks with high income margin contribute good amount in CSR activities. Clearly HDFC, ICICI, SBI and Axis Bank are top four banks in the list.

TABLE 2 MAJOR ACTIVITIES REPORTED BY BANKS

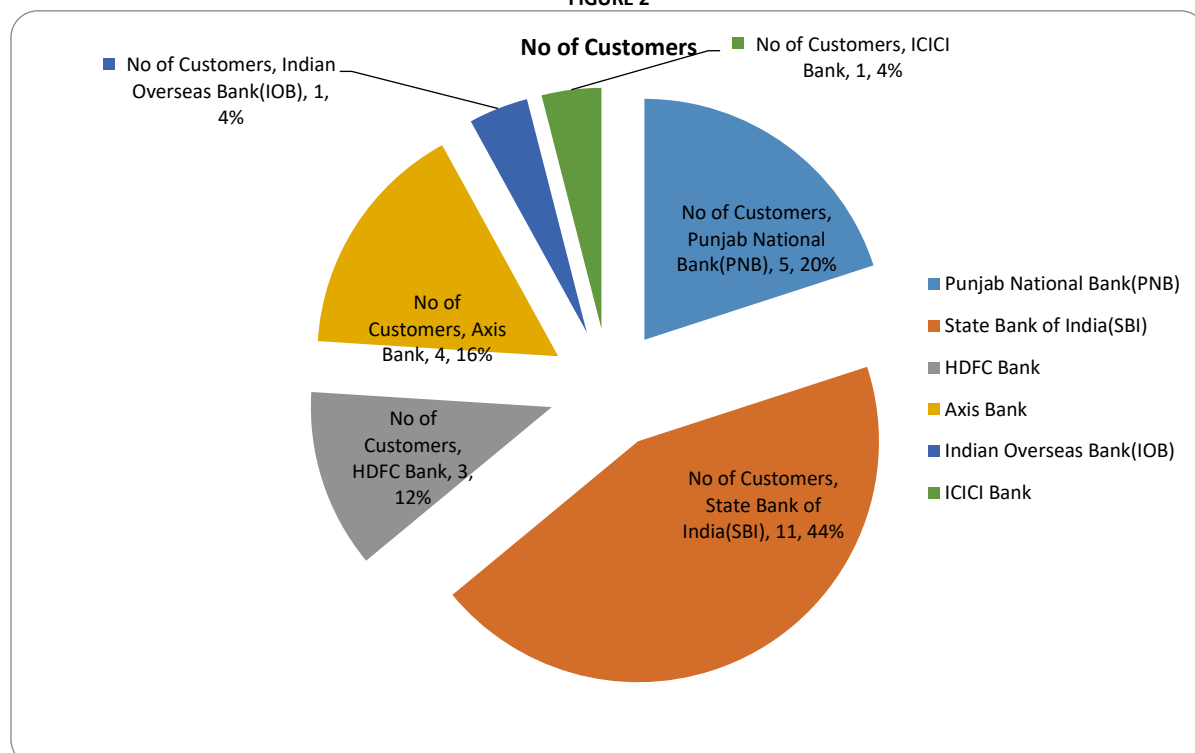
Major Areas of CSR activities	Number of Banks
Education	7
Healthcare	7
Skill Development	6
Environment	3
Community Welfare & Development	8
Women Empowerment	2
Assistance during Natural Calamities	2
Development of Culture & Sports	1
Support to disabled, Ex-serviceman families and senior citizen	3
Others: Energy conservation, Green culture, Rural development, etc	3

It is clear from the above table that banks concentrate on few major activities to spend their CSR budget. Community Welfare & Development, Education, Healthcare, Skill developments are on top of this list.

7.2 CUSTOMER'S PERSPECTIVE ON CSR

1. Number of customers having bank account

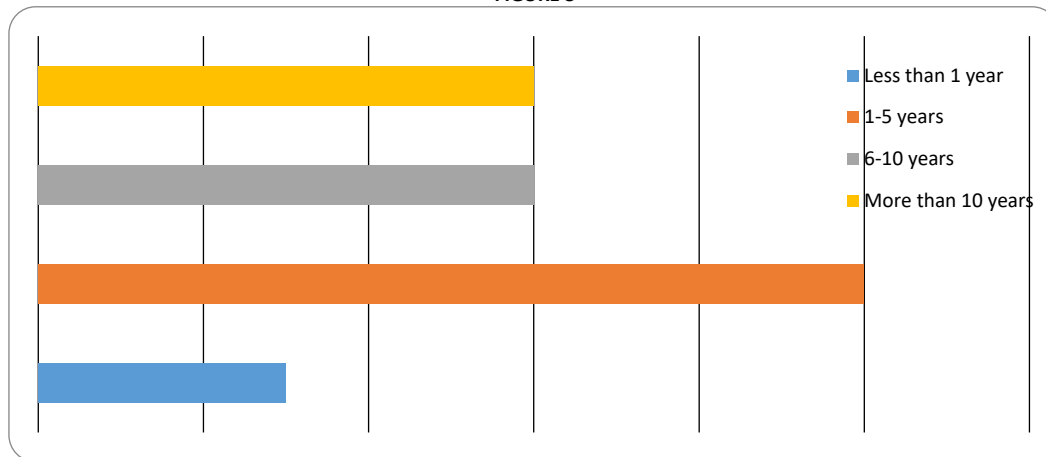
FIGURE 2



It is clear from the figure 2 that State Bank of India has major shareholding; Punjab National Bank, Axis Bank, HDFC Bank also contributes to the large shareholding in the small segmented area.

2. Period of operation of bank account by its customers

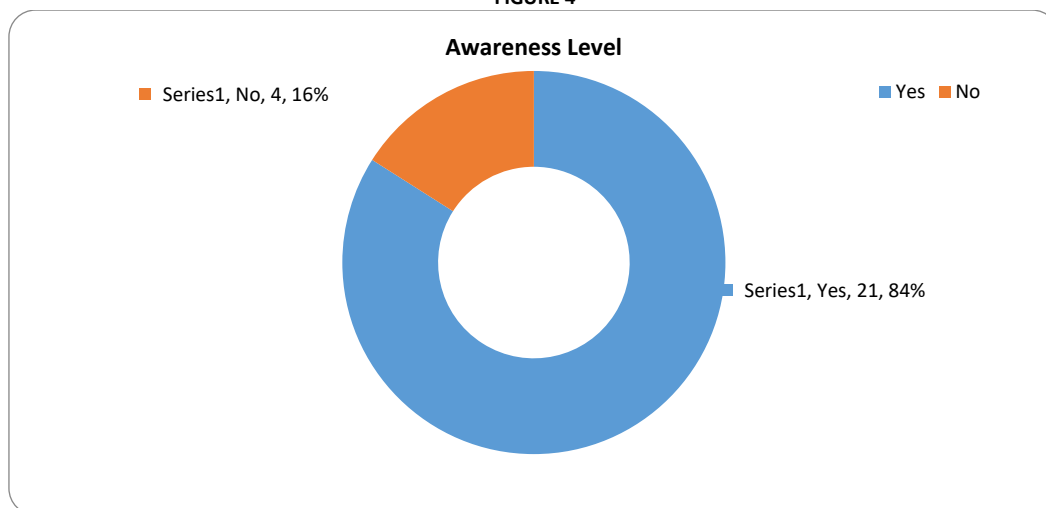
FIGURE 3



This figure clearly states the time period from when customer's are operating with their respective banks.

3. Customer's awareness level regarding the bank's social responsibility towards the society?

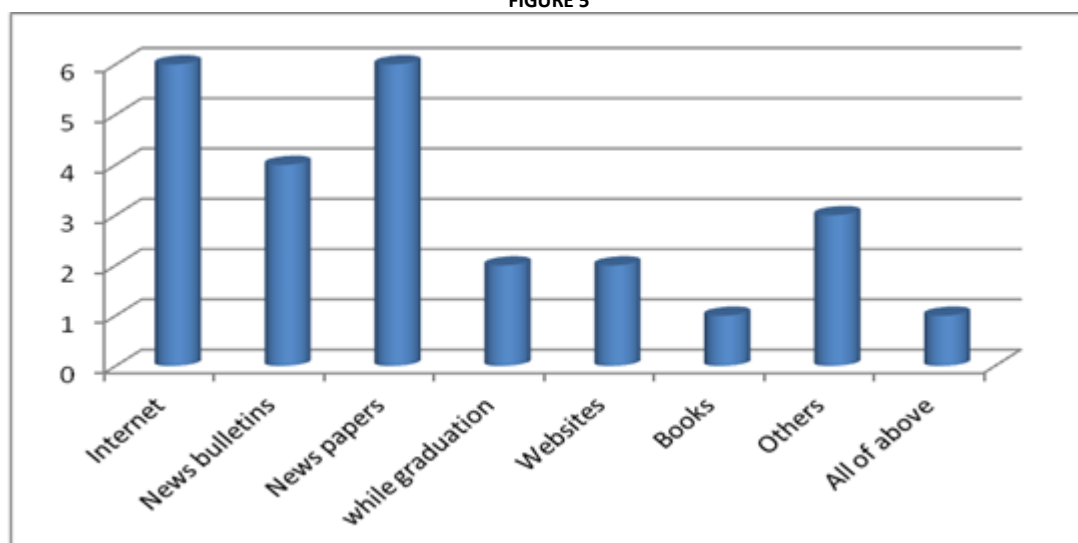
FIGURE 4



Major number of population is aware amount the term Corporate Social Responsibility as well as their banks operations towards CSR practices.

4. Channel of information about the concept of social responsibility of banks:

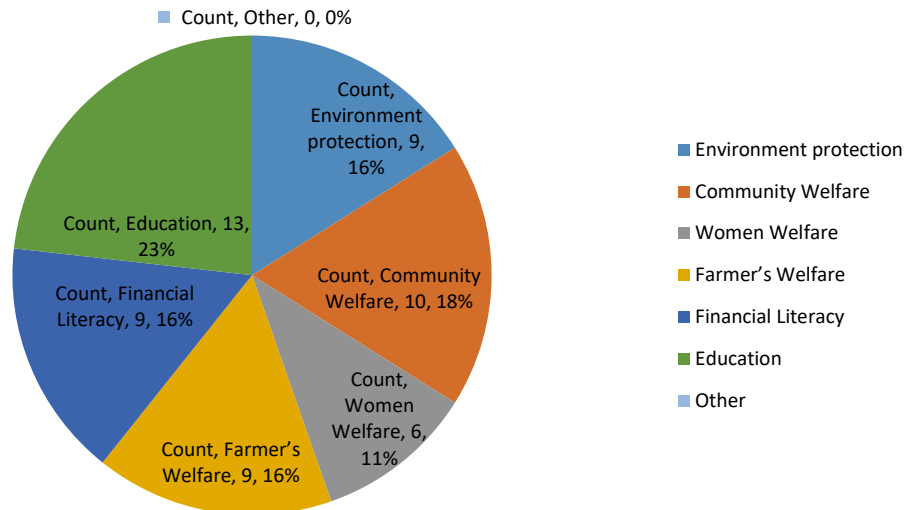
FIGURE 5



This figure represents the source of information of customers towards CSR practices of the respective banks.

5. Customer's awareness about bank serving any of the areas:

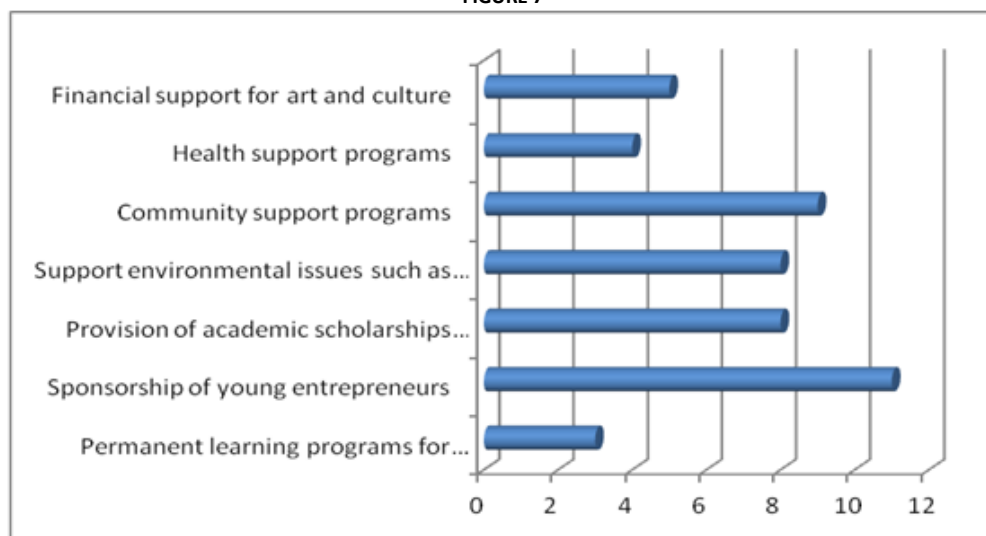
FIGURE 6



This question has been asked to the customer's so that the areas are identified, they knew the functioning of bank and its CSR operations towards the different sectors.

6. Areas which subject due consideration by your bank:

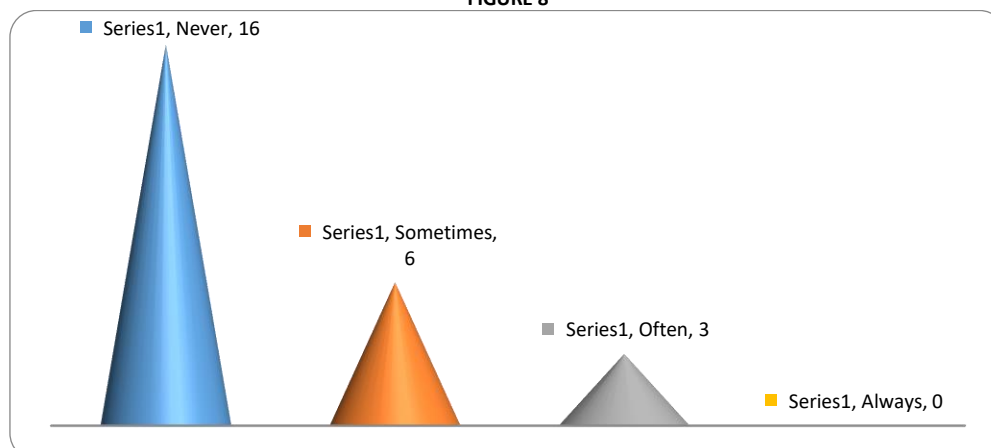
FIGURE 7



The customer's duly respect the focused areas of bank's functions but they also feel that the banks must also explore these areas such as sponsoring the young entrepreneurs to create employment opportunities in the state, community support programmes, provision for academic scholarships, etc.

7. Did any of the bank staff give you misinformation relating to bank's product/services:

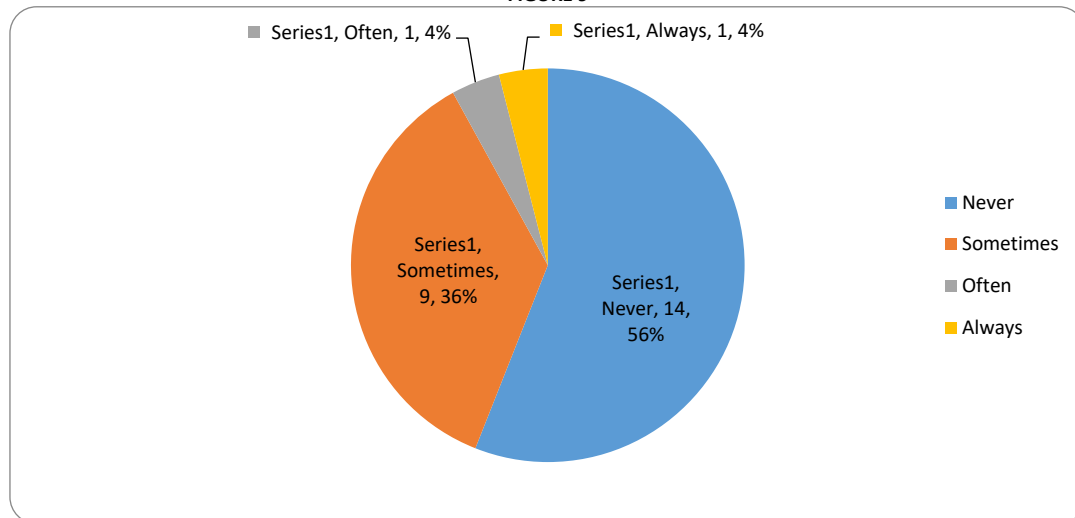
FIGURE 8



This figure illustrates the correct or misleading information conveyed to the customers by their respective banks. Here, maximum number of customers feels that their bank never misleads them, but few customers feel their bank misleads them sometimes regarding day-to-day banking operations which needs due consideration.

8. Has your bank failed to keep its commitment with you?

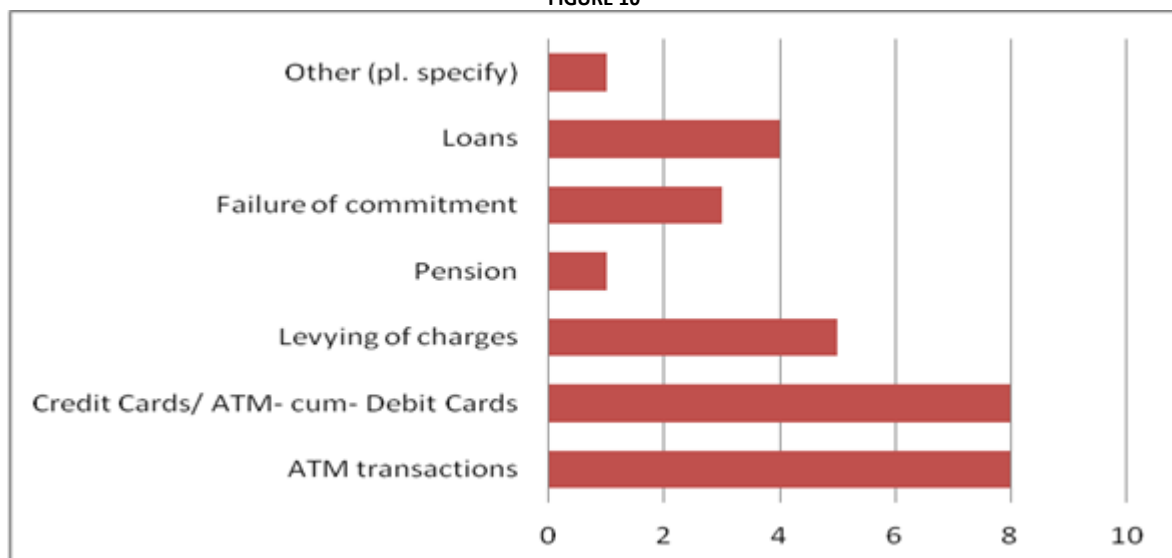
FIGURE 9



In this figure large number of customers feels satisfied with their banks commitment with them. But, few number of customers still need to be clarified by their banks on different banking aspects.

9. According to you, which of the areas are subjected to complaints relating to your bank's services?

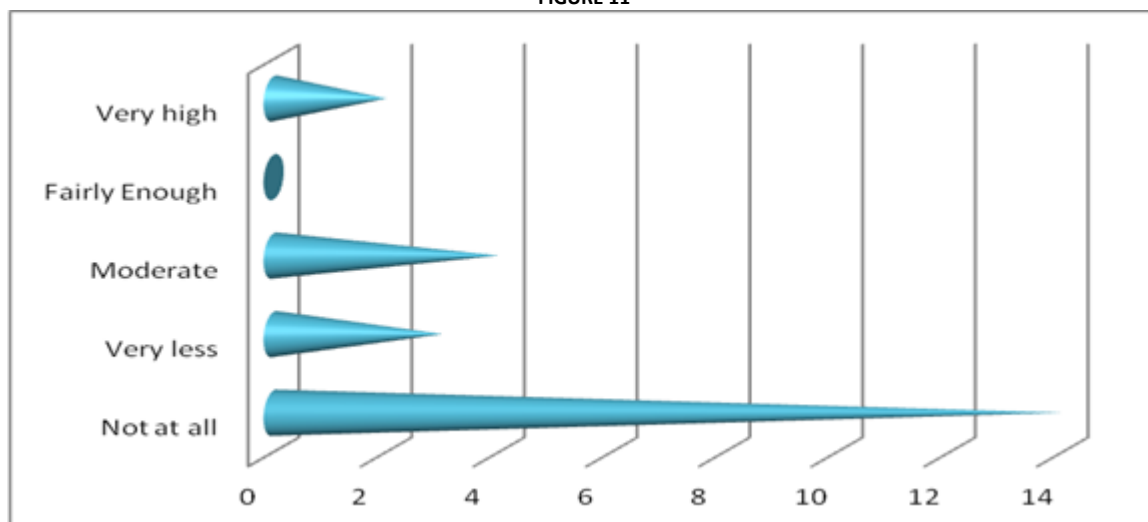
FIGURE 10



ATM transactions, Credit/ Debit Cards, Levying of charges, Loans, etc still are the areas where customer feels dissatisfied and seeks more attention by their respective banks.

10. To what extent do you feel like changing your account to another bank?

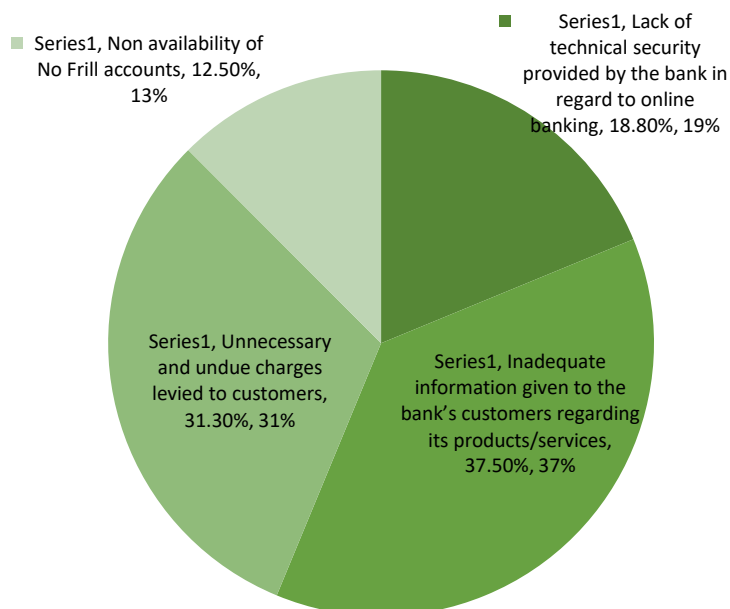
FIGURE 11



Despite the above dissatisfaction level of customer's towards different aspects of banks, still large number of customers not at all want to change their account to another bank, the only consideration they seek is early recovery of their grievances as well as more frequent services.

11. What makes you feel like opting for another bank's account?

FIGURE 12



Here, the large number of customer's who wants to change their bank account are due to inadequate information given regarding products/services (37.50%), unnecessary and undue charges levied by banks (31.30%), lack of technical security/cyber crime protection (18.80%), and also non availability of NoFrill accounts (12.50%).

CONCLUSION

Banks plays a paramount role in the development and growth of Indian economy. It serves as a blood in body. The result indicates that:

- Banks are far behind the other companies as none of the above banks publish separate CSR report or sustainability report, only one of the above banks published business responsibility report.
- Concentration on social issues is more in comparison to environmental issues, it may be possible because banks does not harm environment directly. There is a scope for development of separate CSR or sustainability report according to important parameters to measure actual position. Banking sector is different from other service sector so government needs to focus more on functioning and role in progress of society through CSR activities.
- Customers now-a-days are creating more and more dependency upon banking activities in the shape of digital money/banking. Banks should also focus on customer retention techniques.
- Total income and size of banks are very important factor in CSR contribution. Banks with high income contributes more towards such activities. Banks must create awareness about their CSR functions in urban areas also and some more areas like sponsoring young entrepreneurs should also be added in CSR practices.

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18. <https://www.unionbankonline.co.in/>

WIRELESS ROUTING PROTOCOLS AND ITS SECURITY ISSUES IN AD HOC NETWORK

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ROHTAK

ABSTRACT

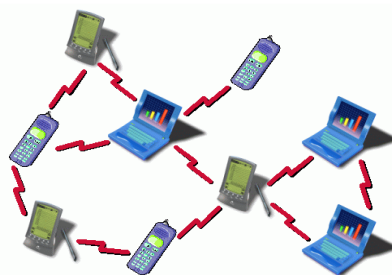
A network is normally a sequence of points or nodes interconnected by communication paths in the information technology. Networks means interconnect networks and also contain sub-networks. The most common topology or general configurations of networks include the Bus topology, Star topology, token ring and Mesh topologies. An Ad hoc network is the network that composed of individual devices that can be communicate with each other directly. Ad hoc network has also had two definitions:- "the first can be using what is on hand," while on the other hand is "for one specific purpose." i.e. members of an ad hoc committee they are studying a specific issue that might discover that they are attending the same event and decide to have an ad hoc meeting. A wireless ad hoc network is a collection of independent nodes or stations which communicate with each other by creating a multihop radio network. A network where nodes are all connected to each other can be called mesh network. A significant fact is that the connection is maintained in a decentralized way. Every node of a wireless ad hoc network is a user terminal and a router at the same time. The management of the network is distributed between all nodes.

KEYWORDS

wireless network, routing in ad hoc network, architecture of ad hoc networking, security issues, security attacks.

INTRODUCTION

Now a day's wireless communication networks are used by millions of people in their daily routine. We use this technology for wireless Internet access with our personal computers, laptop, for data transfer between phones, and even to play multiplayer games with portable game console and so on. However, more of these wireless networks operate in ad hoc mode. These kinds of networks have many advantages over wired networks: ad hoc networks do not require infrastructure, they can be deployed instantly and they are highly flexible. MANET is a collection of two or more devices or nodes or terminals with wireless communications and networking capability that communicate with each other without the aid of any centralized administrator also the wireless nodes that can dynamically form a network to exchange information without using any existing fixed network infrastructure. And it's an autonomous system in which mobile hosts connected by wireless links are free to be dynamically and sometime act as routers at the same time. All nodes in a wireless ad hoc network act as a router and host as well as the network topology is in dynamically, because the connectivity between the nodes may vary with time due to some of the node departures and new node arrivals. The special features of Mobile Ad Hoc Network (MANET) bring this technology great opportunity together with severe challenges.

FIG 1: MOBILE NETWORK**TYPES OF WIRELESS NETWORK**

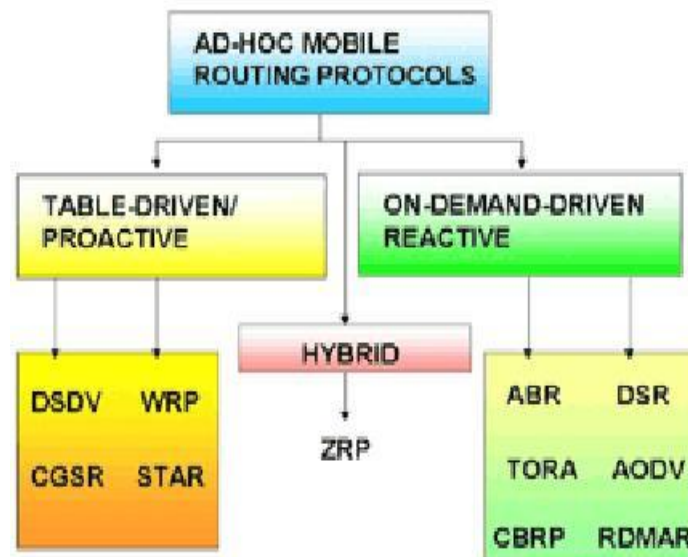
There are mainly three types of wireless network:

1. **Wireless Personal Area Networking (WPAN)**:- WPAN describes an application of wireless technology that is intended to address usage scenarios that are inherently personal in nature. The emphasis is on instant connectivity between devices that manage personal data or which facilitate data sharing between small groups of individuals.
2. **Wireless Local Area Networking (WLAN)**:- WLAN on the other is more focused on organizational connectivity not unlike wire based LAN connections. The intent of WLAN technologies is to provide members of workgroups access to corporate network resources be it shared data, shared applications or e-mail but do so in way that does not inhibit a user's mobility.
3. **Wireless Wide Area Networking (WWAN)** :- WWAN addresses the need to stay connected while traveling outside this boundary. Today, cellular technologies enable wireless computer connectivity either via a cable to a cellular telephone or through PC Card cellular modems. The need being addressed by WWAN is the need to stay in touch with business critical communications while traveling.

ROUTING IN AD-HOC NETWORK

The basic routing problem is that of finding an ordered series of intermediate nodes that can transport a packet across a network from its source to its destination by forwarding the packet along this series of intermediate nodes. In traditional hop-by-hop solutions to the routing problem, each node in the network maintains a routing table: for each known destination, the routing table lists the next node to which a packet for that destination should be sent. Steering is a capacity in the system layer which decides the way from a source to a goal for the movement stream. A directing convention is required in light of the fact that it might be important to cross a few hubs (multi-bounces) before a parcel achieves the goal. The steering convention's principle capacities are the choice of courses for different source-goal sets and the conveyance of messages to their right goal. In remote systems, because of host portability, organize topology may change every now and then.

FIG 2: AD HOC ROUTING PROTOCOLS



1. **TABLE DRIVEN ROUTING PROTOCOLS:-** In the Table Driven Routing Protocol the information from each node to every node in the network which are maintains up-to-date. When a node needs to forward a packet, the route will be readily available; thus there is no delay in searching for a route. However, for a highly dynamic topology, the proactive schemes will spend a significant amount of scarce wireless resource in maintaining the updated routing information correct. The areas where they differ from the other are the number of necessary routing-related tables and the methods by which changes in network structure are broadcast. The main disadvantage of table driven implementation algorithm is- They react slow on any restructuring and if there are failures.
2. **ON DEMAND ROUTING PROTOCOLS:-** A different approach from table-driven routing is source-initiated on-demand routing. This type of routing creates routes only when desired by the source node. When a node requires a route to a destination, it initiates a route discovery process within the network. This process is completed once a route is found or all possible route permutations have been examined. Once a route has been established, it is maintained by some form of route maintenance procedure until either the destination becomes inaccessible along every path from the source or until the route is no longer desired.
3. **HYBRID ROUTING PROTOCOLS:-** In hybrid strategies, this protocol divide the network into zones (clusters) and run a proactive protocol within the zone and a reactive approach to perform routing between the different zones. This approach is better suited for large networks where clustering and partitioning of the network is very common.

ARCHITECTURE OF ROUTING

This refers the directing design must thoughtfully be on the level, that is, every address serves just as an identifier and does not pass on any data around one host to another that is topologically situated, concerning whatever other hub. The steering overhead increments quickly when the system gets to be bigger. The thought behind various leveled steering is to separate the hosts of a self-composed system into various covering or disjoint groups. One hub is chosen as bunch set out toward every group. This group head keeps up the enrollment data for the team. Hubs that are not group heads will, from this time forward, be alluded to as "customary hubs." When a standard hub needs to send a bundle, the hub can send the parcel to the bunch head that courses the bundle towards the goal." Team head Gateway Switch Routing (CGSR) and Cluster-Based Routing Protocol (CBRP) have a place with this kind of directing plan. Various leveled directing includes bunch, address, and portability administration."

SECURITY ISSUES

The security of any network is very important issue. In the security issues versatile remote systems are by large more inclined to security dangers than are altered link nets. The expanded probability of listening in, parodying, and dissent of administration assaults ought to be deliberately considered. Existing connection security strategies are frequently connected inside remote systems to lesson security dangers. Snooping is unapproved access to someone else's information. It is like listening in however is not really restricted to accessing information amid its transmission. Snooping can incorporate easygoing recognition of an email that shows up on another's PC screen or watching what another person is writing. More modern snooping utilizes programming projects to remotely screen action on a PC or system gadget. In system layer wormhole assault, a malevolent hub gets parcels at one area in the system and passages them to another area in the system, where these bundles are hate into the system. In Black gap assault, an assailant uses the directing convention to promote itself as having the most limited way to the hub whose parcels it needs to capture. An aggressor listens the solicitations for courses in a flooding based convention. At the point when the aggressor gets a demand for a course to the goal hub, it makes an answer comprising of a greatly short course.

SECURITY ATTACKS

Securing wireless ad hoc networks is a highly challenging issue. Understanding possible form of attacks is always the first step towards developing good security solutions. Ad hoc networks have to cope with the same kinds of vulnerabilities as their wired counterparts, as well as with new vulnerabilities specific to the adhoc context. Securing and designing an efficient routing protocol for wireless ad-hoc network is one of the most challenging tasks. Due to dynamic nature and no infrastructure of MANET demands a new set of networking strategies to be processed in order to provide effective and protected overhead free end-to-end communication. Because of lack of predefined centralized administration for route discovery procedure, results in the decrease in the performance of network. There are several types of attack that affect the MANET and its security. These attacks can be divided into two types:

- 1) Passive attack
- 2) Active attack

Passive attack: In passive attack, an unauthorized node controls and goals to search out information about the network. Attackers do not damage data in the network in place of it he examines traffic like recognizing communicating nodes, control data which is changed between them and steal important information. Passive attackers do not shatter the operation of routing protocols but try to discover the important information from routed traffic. Passive attack is used to achieve the information for future harmful effects. They do not examine to adjust or change the data packets. Some of the examples of passive attack include:

- Traffic monitoring
- Snooping
- Eavesdropping
- Traffic analysis

➤ Release of message contents

Active attack: Active attack can alter or change the state of the data in the network such as message modification, denial of services, message fabrications, congestion etc. it shatter the normal functionality of the network and launched by the nodes with authorization to process with in a network. Active attacks are divided into four groups i.e. *dropping, modification, timing attacks and fabrication*. Active can be of two types may be internal or external. An external active attack can be brought out by any outside source that do not belong to the network. An internal active attack is malicious nodes that are part of a network. They are hard to find out as compare to external attack. Some of the active attack includes:

- Spoofing
- Modification
- Denial of service
- Masquerade
- Network Jamming
- Impersonating
- Message reply

There are numerous sort of shortcoming in any system. Powerlessness is a shortcoming that is inborn in a security framework or a system gadget, for example, switch, switch, desktop, server or security gadget itself. Any framework associated with the system might be helpless against unapproved information control as it doesn't confirm the client's character to get to the information. As MANET is a remote adhoc arrange it is substantially more inclined to assaults contrasted with a wired system. A portion of the vulnerabilities are talked about beneath.

CONCLUSION

Through this paper I got a conclusion that Ad hoc networking is at the center of the evolution towards the 4th generation wireless technology. Its intrinsic flexibility, ease of maintain and also require lack of infrastructure, automated-configuration, self-administration and also its capabilities, and significant costs advantages make it a prime candidate for becoming the stalwart technology for personal pervasive communication. The opportunity and importance of ad hoc networks is being increasingly recognized by both the research and industry community.

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POLICY SUPPORT TO AUGMENT THE AGRIBUSINESS POTENTIAL OF KARNATAKA**NAGARAJA K.****RESEARCH SCHOLAR****DEPARTMENT OF STUDIES IN ECONOMICS****DAVANGERE UNIVERSITY****SHIVAGANGOTHRI****ABSTRACT**

Agribusiness is one of the lucrative sectors in Indian economy; it is estimated to contribute to GDP around 30 % and also provides direct and indirect employment opportunities to masses of India. In the field of agriculture and allied activities, it has had greater role in terms of value addition to farm produce and converting the conventional agriculture into corporate agriculture. In fact, agribusiness is not only benefitting to farmer's community in the form of value addition, but also transforming the Indian economy into progressive one by achieving both economic development and growth. Agribusiness is multidimensional, which encompasses the activities pre and post-harvest, like, agricultural production, processing and distribution, etc. In the context of Karnataka state, the economy is radically agrarian economy and has ten agro-climatic zones. There has been significant improvement in productivity and quality in the food production. Through agribusiness, there is also change in the cropping pattern from conventional to commercial or high valued cropping pattern (fruits, vegetables, flowers and plantation) being adopted by farmers in the state. Meanwhile, state Govt. implemented several policies for promoting the agribusiness and improving the standard of living of poor farmers in the state. In this direction, this paper analyses the potentiality of agribusiness sector and support with special emphasis on recent policy in Karnataka state.

KEYWORDS

agriculture, agri-business, potentiality and policy support.

INTRODUCTION

Agribusiness has played key role in Indian economy. As it contributes more to GDP and providing job opportunities at large. In the context of India, it is one of the emerging businesses related to agriculture. After implementation of new economic policy, the contribution of agriculture has been shrinking on account of rapid growth of industrialisation and tertiary sector. Despite, contribution has been minimal to GDP, agriculture and allied activities still have potentiality of yielding higher returns owing to agribusiness. In India, as population is growing up; there is need of ensuring food security, therefore, this sector need to be converted into business. Consequently, it led for the origin and development of agribusiness in the country. In support of it, many companies existed and having contract with farmers regarding agriculture and allied activities for value addition as well as promotion of agribusiness. There are 29 states in India, among them state of Karnataka is a vibrant and having potentiality of agribusiness. Thus, Karnataka economy is radically agrarian economy and has ten agro-climatic zones. The overall development is depended on growth and development of agriculture and allied sectors. For last several years, there has been significant improvement in productivity and quality in the food production. Through agribusiness, there is also change in the cropping pattern from conventional to commercial or high valued cropping pattern (fruits, vegetables, flowers and plantation) being adopted by farmers in the state. It of course increases the farmer's income, employment opportunity and paving the way for growth of agribusiness in the state. In the light of the above issues, this paper examines about the status, policy support and measures for augmentation of agribusiness in Karnataka state.

REVIEW OF LITERATURE

We could come up with appropriate objectives and need for the study by reviewing the available literature and also adopting good methodology accordingly.

1. Kerry k. Litzenberg (July, 1992): this paper explicates on the potential for agribusiness research by agricultural economics over the past decade.
2. N.M. Kerur, G.M. Gaddi and A.D. Naik (2010): This study analyses the physical and financial performance in regulated markets in Karnataka state.
3. Dr. Atul Bansal (2011): This article examines how under liberalisation and globalization, agribusiness has opened new aspect for growth and development of the rural economy can be balanced, as long as there is better management in the economy.
4. Dr.G.V.Joshi (2012): This study attempts to identify the progress of agribusiness with banks financing in Dakshina Kannada district.
5. Dr.Sandeep Bansal, Deepak Garg and Sanjeev K. Saini (2012): This article sheds light on how under new economic policy; agribusiness opened new avenues for growth and development of the rural economy.
6. Dr. H. Ramakrishna (2012): This research paper discusses need of private investment for agriculture and agribusiness investment into India and state of Karnataka in particular.
7. Sukhpal Singh (2014): This paper delineates the rationale for franchising in agribusiness and the failure and success in franchising in agribusiness by corporate agencies. Besides, it also explains better management of franchising and its wider applicability in the Indian agribusiness context.
8. Asopa (2014): The aim of the study was to evaluate the need to build the required infrastructure for promoting the agribusiness in home as well as abroad in India.
9. N.G. Ustriyana (Jan, 2015): This paper attempts to introduce an agribusiness approach model to community empowerment by considering local potency development as a primary component for the success of this approach. Briefly, this highlights about agribusiness model for rural community development in Indonesia.

NEED FOR THE STUDY

Agribusiness is one of the emerging business sectors in India. After the implementation of LPG in the country, agriculture sector has become an industry by providing essential goods to masses of all classes. In the context of Karnataka economy, there is a huge potentiality of agribusiness pertaining to employment opportunities, infrastructure and value addition to farm product by ensuring food security in the state. Besides, there is yet to be created better post-harvest infrastructure for promoting agribusiness in the state. In the light of the above aspects, this paper examines the policy support regarding an enhancement of agribusiness potentiality in Karnataka.

METHODOLOGY

This paper is descriptive only. For this study, data has been collected from secondary sources. This paper analyses about agribusiness potential from policies point of view; in this direction, latest policy to be highlighted in terms of agribusiness in Karnataka.

OBJECTIVES

1. To throw light on agribusiness in India.
2. To understand the status of agribusiness in Karnataka.
3. To examine the policy support relating to agribusiness in the state.
4. To suggest some measures for augmenting of the agribusiness in the state.

AGRIBUSINESS IN INDIA

Agribusiness is one of the sectors in Indian economy; it is benefitting both agriculture and industry simultaneously. Since 1950 onwards until economic reforms initiated, contribution from agriculture sector was huge, then, its contribution gradually declining to 14 or 15 % approximately. When Indian economy got global exposure due to globalisation, agriculture was too affected by it, therefore, its contribution still minimal because of industrialisation and service sector. Even so, agriculture is getting new shape owing to agribusiness and bringing lot of benefits to agriculture and allied activities. In other words, agribusiness is certainly one of the lucrative sectors to create employment opportunities and boosting economic growth in India. In India, there could be multiple dimensions of agribusiness in the form of pre and post-harvest, like food processing, contract farming, inputs industry, supply chain management, etc.

TABLE 1: ESTIMATED SIZE OF AGRIBUSINESS IN INDIA

Sr. No.	Sectors	Estimated Growth (in Billions)	
		2010 (year)	2020 (year)
1.	Agriculture	10000	17000
2.	Agri-business	17000	36000
3.	Economy	52000	140000

Sources: Data Monitor Agricultural Products in India.

Pertaining to the above table, there is both current and estimated growth size in the table, by which, we could understand that there would be huge potentiality of agribusiness relatively with other sectors. Furthermore, this sector seems to be growing at 10 % per annum. Globally, agribusiness much larger than agriculture. For instance, the ratio of agribusiness to agriculture segments in USA and Brazil is approximately ten and four, respectively. The corresponding ratio to India is estimated approximately two.

STATUS OF AGRIBUSINESS IN KARNATAKA

In the state of Karnataka, agriculture sector contribution stood at 12 or 13 % to GSDP. The GSDP stood at constant prices Rs. 780805 cr. In fact, after globalisation, this sector too affected by it and converted into corporate farming. Consequently, it is emerging as an agribusiness and promoting employment opportunities as well as value addition to products of agriculture. In this way, even in the state, many companies are coming forward to boost production of the sector including animal husbandry, horticulture, inputs, credit, insurance, sales and marketing, etc. Meanwhile, Govt. of Karnataka implemented several plans and schemes to promote agribusiness associated with food processing. In support of it, there are companies which big players in agribusiness as well as food processing like ITC, Nestle, Gujarat Ambuja, Britannia, Parle, Cargill India, etc. Agribusiness and Food Processing sector in the State has witnessed a steady growth. Exports have increased from Rs.5, 158 crores in 2010-11 to Rs.11, 231 crore in

2014-15 registering a Compounded Annual Growth of 21% (CAGR). In the state, agro-based industries set up across 30 districts and there are about 54,905 agro processing units with an investment of Rs.4,42,879 Lakhs have employed 3,24,148 manpower as on 31.03.2015. These are mainly in MSME sector.

POLICY SUPPORT RELATING TO AGRIBUSINESS IN THE STATE

Govt. of Karnataka has implemented policies regarding agribusiness and food processing. In this regard, it formulated several policies for development of agribusiness sector in the state.

TABLE 2: POLICIES PERTAINING TO AGRIBUSINESS IN KARNATAKA STATE

Sr No.	Year of Implementation	Policies	Objectives of Policies
1	2002	Industrial promotion policy	Promoting agro food processing industries in the state.
2	2011	Integrated agribusiness development policy	Sustained development of agriculture and allied activities
3	2015	Agribusiness and food processing policy	Overall development of Agribusiness and Food Processing sector to give value addition to farm produce for the benefit of farmers

Source: Karnataka Agribusiness & Food Processing Policy – 2015

Latest plan has been implemented for promoting agri-business in the state; it covers whole activities in terms of agribusiness including food processing. There is a need for integrating and promoting agribusiness in the field of horticulture, fisheries, food processing, ware housing and logistics, etc. Each of these sectors required to be under a unified policy for benefiting both stake holders and farmers. As a result, Govt. of Karnataka had implemented the policy in the year 2015. Certainly, it reflects several issues in terms of agribusiness in the state. This policy is covered with some aspects; which sheds light on scope and coverage of agribusiness. These aspects are like agricultural, dairy, horticultural, bio-technology, bio-informatics, medicinal and aromatic plants, food parks and quality certification in the entire value chain. Under the current plan, Govt. of Karnataka has outlined few objectives in consideration of agribusiness and food processing, they are:

1. To increase the income of farmers by enhancing value addition and bringing wastage down
2. To provide ample opportunities for direct and indirect employment generation
3. To create required post-harvest infrastructure (transportation, warehouse, and cold storage) in this sector
4. To promote higher flow of investments in to supply chain from farm to market
5. To augment the supply chain and infrastructure opportunity in rural area

In light of the above objectives, Government intends to achieve these objectives through the following strategies:

- Encouraging investments in the supply chain infrastructure to reduce post-harvest loss.
- Strengthening linkage between processing enterprises and Research & Development institutes.
- Fiscal incentives for setting up focused industrial clusters and food processing parks in potential food clusters.
- Encourage adoption of quality certifications, green and clean practices, energy efficient measures. Declaring the entire State as single zone for availing incentives and concessions. In this way, the Govt. has made some incentives in order to develop and promote the agribusiness sector and food processing in the state.

TABLE 3: INCENTIVES UNDER THE POLICY OF KARNATAKA AGRIBUSINESS & FOOD PROCESSING POLICY 2015

	Particulars	Karnataka Agribusiness & Food Processing Policy 2015
1.	Investment Promotion Subsidy	Investment promotion subsidy @ 35% of the value of fixed assets (VFA) irrespective of zonal and promoter classification up to a maximum of Rs.65 Lakhs for MSME
2.	Exemption from Stamp Duty for MSME, Category A, B & C enterprises	Stamp duty to be paid in respect of (i) loan agreements, credit deeds, mortgage and hypothecation deeds executed for availing loans from State Government including VAT loan from C&I Department and / or State Financial Corporation, National Level Financial Institutions, Commercial Banks, RRBs, Co-operative Banks, KVIB/ KVIC, Karnataka State SC/ST Development Corporation, Karnataka State Minority Development Corporation and other institutions which may be notified by the Government from time to time for the initial period of five years only and (ii) for lease deeds, lease-cum-sale and absolute sale deeds executed by industrial enterprises in respect of industrial plots, sheds, industrial tenements by KIADB, KSSIDC, KEONICS, Industrial Co-operatives and approved private industrial estates shall be exempted @ 100% irrespective of promoter & zonal classification for MSME, Category 'A', 'B' & 'C' enterprises.
3.	Concessional Registration Charges for MSME, Category A, B & C enterprises	For all loan documents, lease deeds and sale deeds, the registration charges shall be at a concessional rate @ Rs.0.50 per Rs.1000 irrespective of promoter classification for MSME, Category 'A', 'B' & 'C' enterprises.
4.	Reimbursement of land conversion fee for MSME, Category A, B & C enterprises	The payment of land conversion fee for converting the land from agriculture use to industrial use will be reimbursed @ 100% irrespective of promoter & zonal classification for MSME, Category 'A', 'B' & 'C' enterprises.
5.	Exemption from Entry Tax	MSME: 100% exemption for 3 years on plant and machinery and capital goods and 6 years for raw materials, inputs and component parts and consumables excluding petroleum products from the date of commencement of project implementation and from the date of commencement of commercial production respectively irrespective of zonal Classification.
6.	Subsidy for Setting up Effluent Treatment Plant (ETP)	One time capital subsidy to an extent of 75% of the cost subject to a maximum of Rs.50 Lakhs for MSMEs in respect of ETPs costing less than Rs.100 Lakhs. Further, One time capital subsidy to an extent of 50% of the cost of ETPs subject to a ceiling of Rs.100 Lakhs for Category 'A', 'B' & 'C' enterprises irrespective of zonal classification. One time capital subsidy to an extent of 50% of the cost of ETPs subject to a ceiling of Rs.200 Lakhs for setting up of Effluent Treatment Plants (ETPs) as a common facility in food parks, spice parks, sea food parks or a place where the cluster of food processing & Agribusiness enterprises are located irrespective of promoter and zonal classification.
7.	Interest Subsidy	Interest subsidy of 6% per annum on term loans will be provided to Micro Enterprises Irrespective of promoter classification. The period of interest subsidy is for 7 years irrespective of zonal classification.
8.	Exemption from tax on Electricity tariff	100% exemption of tax on electricity tariff for the initial period of eight years irrespective of zonal classification
9.	Reimbursement of VAT to MSME & Category A, B & C Enterprises	MSME: 75% of net VAT will be reimbursed for a period of 5 years subject to a maximum of 100% of the Value of Fixed Assets irrespective of promoter & zonal classification to be Claimed on yearly basis. For Category 'A', 'B' & 'C' enterprises net VAT reimbursement will be to an extent of 60%, 70% & 80% respectively for a period of 5 years subject to a maximum of 100% of the Value of Fixed Assets irrespective of promoter & zonal classification to be claimed on yearly basis.
10.	Subsidy for technology adoption from recognized national Labs	50% of the cost (max Rs.1 Lakh) for MSME irrespective of promoter classification.
11.	Market Fee Exemption	New Agricultural Produce Processing Industries are exempted from payment of market fee for a period of ten years in respect of purchases of agricultural produce by such industries.

Source: Karnataka Agribusiness & Food Processing Policy – 2015

In addition, Govt. of Karnataka is supporting the private sector to set up plant across the state by providing various incentives and also backing for bio-technology for boosting the growth of agriculture, etc.

SOME MEASURES FOR AUGMENTING OF THE AGRIBUSINESS IN THE STATE

Govt. of Karnataka has taken some measures in order to expand and develop the agribusiness sector. They are,

1. Karnataka Woos Private Capital to Promote Agribusiness: Karnataka Govt. is having share of PPP in agribusiness regarding technology support for production, market development and agro-process sector, etc.
2. Declaring the Entire State as Single Zone: Agribusiness in the state is still at nascent stage and in order to encourage this sector; state has been declared as a single zone. By which, all incentives and concessions to be provided for the growth and development of agribusiness in all parts of state.
3. Single Window Clearance System: The govt. of Karnataka launched a single window clearance system, by which, projects are cleared in terms of agribusiness in the state.
4. Information and Knowledge Support Centres: Kannadigas from other countries showing interest regarding their field in agribusiness and food processing as well and receiving projects from them to be considered on priority and an exclusive land holding will have facilitated in this regard.
5. Facilitation Mechanism: Single window mechanism shall continue following with approach for improving ease of doing business in the state. Individual investors are provided with the sector specialist services for translation their investment intentions.

CONCLUSION

The government of Karnataka has launched several policies for promotion of agri-business in the state. Though agriculture contributing around 12 or 13 % to SGDP of the state, it has potentiality of ensuring food security associated with high yield and productivity. Since last decade, there has been tremendous growth being estimated in agriculture owing to globalisation impact with company's participation in to this sector. Meanwhile, Govt come up with policies for supporting the agribusiness so as to benefit both farmers and companies together. In this paper, there are some issues regarding potentiality of agribusiness in the state; thus, Govt. Latest plan "agribusiness and food processing-2015", which addresses many issues like, food security, supply chain management, inputs industry, infrastructure and opportunities under agribusiness in the state. Despite, this policy is recognising the potentiality but, there is still inadequate infrastructure in the state; which partly retarding the progress of this sector. However, agribusiness is one of the profitable sectors, it is bringing benefits and safeguarding the interest of farmers' community and companies; by which, govt. is striving to create favourable environment with policy support for augmentation of agribusiness in Karnataka state.

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WORK-LIFE BALANCE: ITS CORRELATION WITH JOB SATISFACTION, LIFE SATISFACTION AND STRESS LEVEL AMONGST EXECUTIVES OF PUBLIC SECTOR BANKS IN PUNJAB

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ABSTRACT

Work life balance has recently taken the attention of both researchers and executives. This subject interests almost everyone with a professional career. This widespread interest is partly due to its reflection on all aspects of life. For those who think that the main objective in life is to work, their career becomes the core of life. However, people have limited time and therefore have to perform many other activities other than their jobs. Without a balance between the two, many mishaps can be experienced in both the cases. In this study, Work-life balance is analyzed from the organizational context. The study has the potential to enable the working people to consider their part of stand in terms of work-life balance and to support the executives to gain new perspective in order to cope with such problems. The study attempts to investigate the relationship between the Work life balance and Job satisfaction, life satisfaction and stress level. One hundred executives of Public Sector Banks of Punjab State (50 males and 50 females) ranging age of 30 years and above were randomly selected from the district S.A.S Nagar, Mohali. The results have been discussed by conducting t-ratios, Inter-correlations and Factor analysis on different variables among males and females.

KEYWORDS

work life balance, stress, life satisfaction, job satisfaction, personality.

INTRODUCTION

Work life balance has recently taken the attention of both researchers and executives. This subject interests almost everyone with a professional career. This widespread interest is partly due to its reflection on all aspects of life. For those who think that the main objective in life is to work, their career becomes the core of life. However, people have limited time and therefore have to perform many other activities other than their jobs. Without a balance between the two, many mishaps can be experienced in both the cases.

The term work life balance was invented in the mid-1800 by Paul Krasner who viewed that happiness has as little separation as possible between your work and your play. The concept of "work-life balance" was first used in United Kingdom in the late 1970s and in United States in 1986 as balance between an individual's work and personal life. Although work-life programs existed as early as the 1930s. Rosabeth Moss Kanter's seminal book (1977), "Work and Family in the United States: A Critical Review and Agenda for Research and Policy", brought the issue of work/life balance to the forefront of research and organizations. In the 1980s and 1990s, companies began to offer work-life programs. While the first wave of these programs was primarily to support women with children, today's work-life programs are less gender-specific and recognize other commitments as well as those of the family.

Work/life balance initiatives are not only a phenomenon for employees of a single country rather employees in global communities want flexibility and control over their work and personal lives. There are many different ways to define and discuss balance but most seem to include the notions of flexibility (Hill, Hawkins, Ferris, & Weitzman, 2001; Papalexandris & Kramer, 1997), juggling (Brown, 2004), and sustainability (van Eijnatten & Vos, 2002).

According to Limoges (2003), work-life balance is "primarily a matter of deciding when to hold on and when to let go."

According to Clark (2000), the very term, 'work-life balance' refers to 'satisfaction and good functioning at work and at home with a minimum of role conflict.'

In the words of Greenblatt (2002), work-life balance has been characterized by 'the absence of unacceptable levels of conflict between work and non-work demands.'

The Blueprint for Life-Work Designs (Hache, Redekopp, & Jarvis, 2000) describes a complex inter-relationship of life roles. An assortment of "balance wheels" are widely available, typically including such aspects of life as social (e.g., family, friends, and romantic relationships), physical (e.g., physical fitness, environmental conditions, and general health), intellectual (e.g., education, mental challenge), emotional, spiritual, and work (including career, money, homemaking, and community service).

Thus, from the above definitions of work-life balance it could be concluded that when demands from the work and non-work domains are mutually incompatible, conflict may occur. For this reason, a lack of balance between work and non-work is commonly conceptualized as work-family conflict or work-non-work conflict (Frone et al., 1997; Parasuraman et al., 1996). Such conflict can occur both when work roles interfere with non-work roles and vice versa. Thus, it is important for every individual, whether working or non-working, that the concept of work-life balance has to play a significant role to live a life free from mental health related problems (such as stress, depression, anxiety, etc.), to acquire a more satisfied job, and to develop adaptive coping strategies in life to handle stressful situations either at work place or a home. Work-life balance being a combination of interactions among different areas of one's life, can affect multiple levels of society. The disadvantages associated with work-life imbalances are numerous and impact both employee and employer. For the employee, consequences can have a negative impact on "work and life satisfaction, on well-being, mental health, physical health, and on individual performance in organizations," as reported by O'Driscoll in 1996 (Guest, 2001). For employers, "The costs to your business of failing to improve work-life balance include: poor performance, absenteeism and sick leave; and higher staff turnover, recruitment and training costs" (Department of Trade and Industry, 2001). The inverse is true of individuals and employers who are able to achieve balance. Positive work experiences that allow employees to "reach their full potential, be fully engaged, and be able to meet their personal and professional goals and objectives" (Spinks, 2004) promote a balance where "work can enhance life off the job, not just detract from it (Galinsky, 2005.)."

Galinsky, et. al., (2005.) argued that "although working long and hard is clearly part and parcel of advancing in today's corporate structure, a one-sided life, where work always comes first, isn't necessarily beneficial to career development." Evidence from the Families and Work Institute study suggests that employees stressed in the workplace are depressed and tend to make more mistakes (Robertson, 2005). Career advancement often requires long hours, but satisfaction and feelings of success, which are indicators of a balanced life (Guest, 2000), come from a full and complete life with all its varied experiences, including experiences outside of work.

Regardless of one's personal definition for balance, most people know when they are out of balance: they are constantly tired, feel as if their choices are limited, have minimal control, and are no longer able to effectively manage their lives. They may experience life as "happening to them" – and notice that their responses are more reactive than proactive. The glass may seem half-empty rather than half-full – life may seem more negative than positive.

It is generally agreed that work-life balance has become more difficult. Within the past decade or so, the global workplace has seen increased numbers of working women, dual-career and single parent families, and increased numbers of employees with eldercare responsibilities; a decrease in job security; and a blurring of work-family boundaries due to technological change (Brown, 2004; Duxbury & Higgins, 2001, 2003; Parker & Arthur, 2004). As many individuals indulges in several significant life roles (e.g., parent, spouse, child, worker, student, community member), role conflict has contributed to work-life imbalance.

"Work-family or work-life conflict occurs when the cumulative demand of these many work and non-work life roles are incompatible in some respect so that participation in one role is made more difficult by participation in the other role" (Duxbury & Higgins, 2001, p. 3). Research confirms that work-life imbalance is costly on both a personal and professional level. Duxbury and Higgins (2003) reported that "the effects of 'role overload' are costing Canadian businesses as much

as \$10-billion a year in overtime and contracting out required to complete the work of absent employees." These results are similar to previous Canadian research: "Burnout costs Canadian businesses an estimated \$12 billion per year in health claims, lost productivity, and absenteeism, according to the Conference Board of Canada" (Isherwood & Cajic, 1998). For career management professionals and employers, it seems important to recognize and alleviate the damage caused by lack of work-life balance.

Furthermore, work-life balance remains an issue that requires considerable attention from society. As a result of advancement in technology, increasingly sophistication and affordable technologies, employees have become more concerned to keep contact with their work". Employees use many methods, such as emails, computers, and cell phones, which enable them to accomplish their work beyond the physical boundaries of their office. Researchers have found that employees who consider their work roles to be an important component of their identities will be more likely to apply these communication technologies to work while in their non-work domain. As a result, communication technologies in the temporal and structural aspects of work have changed, defining a "new workplace" in which employees are more connected to the jobs beyond the boundaries of the traditional workday and workplace

REVIEW OF LITERATURE

With the present understanding of work-life balance, its definition, its discrimination from work-life imbalance presents the clear understanding of the concept and nature of work-life balance researches have been reported that employees who experience increased stress due to work/life conflict and decreased perceptions of control over their work and non-work demands are less productive, less committed to, and satisfied with their organization and more likely to be absent or leave the organization (Adams, 1996; Boles & Babin, 1996; Boles, Howard & Donofrio, 2001; Frye & Breaugh, 2004; Netemeyer et al, 1996). Moreover, individuals experiencing interference between work and personal lives are also significantly more likely to suffer from reduced psychological well-being and physical health (Grant-Vallone & Ensher, 1998).

Frone (2000) in a study concluded that people who experienced life/work conflict were nearly 30 times more likely to suffer from a mood disorder (e.g. depression) and 10 times more likely to have an anxiety (disorder). On the other hand, employees with lower levels of work/life conflict report higher job satisfaction overall (Boles et al, 2001). Thus, these empirical evidences provide support that work-life balance is directly related to job satisfaction, life satisfaction and level of stress.

Perceived stress refers to the extent to which one perceives one's situation to be uncontrollable and burdensome. Individuals who report high levels of perceived stress often manifest symptoms frequently associated with "distress," including nervousness, frustration, irritability, and generalized anxiety. Perceived stress has been linked to job dissatisfaction, depressed feelings, work absence, and turnover. Perceptions of stress have been shown to be particularly high among employees who have difficulty balancing work and non-work demands (Frone, Russell & Cooper, 1997; Quick et al., 1997; Googins, 1991; and Duxbury & Higgins, 1998). In a survey the National Insurance company of U.S reported four out of ten employees are extremely stressed at their work place and employees those are in high stress jobs are three times more likely to suffer from stress related medical conditions and are twice as likely to quit the job and survey also reported women exhibits more stress at work place.

In another the study, Work-Family Spillover and Daily Reports of Work and Family Stress, researchers found that with an increased amount of negative spillover from work to family, the likelihood of stress within the family increased by 74%, and with an increased amount of negative spillover from family to work it leads increment of 47% of stress at workplace According to National Health Survey (2010), 16% of U.S. workers reported difficulty balancing work and family and imbalance was more prevalent among workers aged 30–44 (19%) compared with other age.

The number of stress-related disability claims by American employees has doubled according to the Employee Assistance Professionals Association in Arlington, Virginia. Seventy-five to ninety percent of physician visits are related to stress and, according to the American Institute of Stress, the cost to industry has been estimated at \$200 billion-\$300 billion a year.

Steven L. Sauter, chief of the Applied Psychology and Ergonomics Branch of the National Institute for Occupational Safety and health stated that "the workplace has become the single greatest source of stress". Michael Feuerstein, professor of clinical psychology at the Bethesda Naval Hospital stated that there is greater increase in work-related neuroskeletal disorders from a combination of stress and ergonomic stressors". It is clear that problems caused by stress have become a major concern to both employers and employees. Symptoms of stress are manifested both physiologically and psychologically. Persistent stress can result in cardiovascular disease, frequent headaches, stiff muscles, backache irritability, jumpiness, insecurity difficulty in concentration and may also lead to binge eating, and smoking.

According to Esther M. Orioli, president of Essi Systems, a stress management consulting firm, "Traditional stress-management programs placed the responsibility of reducing stress on the individual rather than on the organization-where it belongs. No matter how healthy individual employees are when they start out, if they work in a dysfunctional system, they'll burn out

Life satisfaction is defined as an assessment of feelings and attitudes about one's life ranging from negative to positive Life satisfaction is one of three major indicators of well-being with positive affect, and negative affect (Diener, 1984). Although satisfaction with current life circumstances is often assessed in research studies, Diener, Suh, Lucas, & Smith (1999) Life satisfaction also include the desire to change one's life; satisfaction with past; with future; and significant other's views of one's life." (Beutell, 2006)

Life satisfaction provides an assessment of an individual's overall sense of well-being (physical, emotional, social productive). Work-life researchers reason that, because of the interactive and reciprocal nature of the relationships between work and family domains, work-related role stress might combine with work-family demands to exert considerable influence on an employee's overall perception of life satisfaction. Further, it is assumed that improvements in the quality of work-life will produce corresponding improvements in the quality of life as it makes it easier for employees to reduce the strains of managing the modern family. Generally, the research has supported these contentions. High work-life conflict has consistently been associated with lower levels of life satisfaction (Aryee, 1992; Bedeian et al., 1988; Googins, 1991; Duxbury & Higgins, 1998; and Rice, Frone & McFarlin, 1992).

Job satisfaction has been of interest to organizational researchers, due to its relationships with job performance and/or organizational commitment (Christen, Lyster, & Soberman, 2006; Cohrs, Abele, & Dette, 2006; Rayton, 2006). Job satisfaction has been defined as a pleasure or positive emotional state resulting from the appraisal, affective reaction and attitude towards one's job and attitude is formed by the feeling, belief and behavior of the individual. A satisfied worker is more creative, innovative, and loyal (Ajmir 2001) while dissatisfied employees makes organization dysfunctional in business, damaging their financial performance. For the success of an organization a satisfied work force is essential. Assessment of employees' attitude such as job satisfaction has become a common activity in organization in which measurement is concerned with physical and psychological well-being of the people. Satisfaction results when a job fulfills or facilitates the attainment of individual values and standards Dissatisfaction occurs when the job is seen as blocking such attainment. This attitude has received extensive attention from researchers because it was at one time believed to be cause of improved job performance but recent researchers negate such a relationship and suggest a more complicated interaction between satisfaction, commitment, turnover and productivity. Now, because of the organizations concerns for creating both humane and high performance workplace, researchers continue to search for definite answers about the cause and consequences of job satisfaction Judge & Watanabe's (1994) study support this view by showing a positive relationship between job and life satisfaction. Similarly, Landry (2000) also found a positive correlation between life and job satisfaction of librarians in public libraries.

Rashed Saad Al Sumaiti (2008) reported on the basis of research conducted on 195 Oil and Gas Organization employees positive correlation between work life balance and job satisfaction.

Afshan Naseem, (2011) found that satisfied employees shows excellent performances that leads to organizational success thus result in improved financial success. Employee's satisfaction increases the quality of work. A positive correlation between work life balance and job satisfaction was reported by Bushra and yasir Aftab (2014) among University teachers of Gujarat in Pakistan.

OBJECTIVES

The main objectives of the study are as per following:

1. To analyze the concept of work-life balance from the organizational context.
2. To investigate the relationship between the work-life balance, job satisfaction, life satisfaction and level of stress.
3. To trace out the gender differences in context with Work life balance, job satisfaction, life satisfaction and level of stress

HYPOTHESIS

- There is positive correlation between work life balance, job satisfaction, and life satisfaction.
- There is positive correlation between life satisfaction and job satisfaction.
- Work Life balance and job satisfaction negatively correlates to stress.
- There is a significant gender difference in relation to work-life balance, job satisfaction, life satisfaction and level of stress.

SCOPE

The present study confine to the 100 professionals 50 males and 50 females from the Bank Managers to the supporting staff having minimum of five year experience and who are operationally working for more than 40 hours per week of Public sector banks of district SAS Nagar Mohali, Punjab. Furthermore, the study focused on the correlates of work life balance, job satisfaction, life satisfaction, and level of stress.

SIGNIFICANCE

Banking sector which is considered as the prime driver of economic growth and has brought tectonic swings in the economic landscape of the nation. It has turned Indian economy to be more opened, liberalized, and globalized. It is also the fastest growing economies of the world, where efficiency and productive growth have been considered as the kingpin for survival. Banking being a huge sector is assumed that the employees particularly at the managerial level are overburdened with work are prone to mental stress and their work life balance is also affected, which requires an empirical study to explore the relationship of work life balance with job satisfaction, life satisfaction and level of stress. It is therefore, felt the need to study the relevant topic "Work-Life Balance: its correlation with job satisfaction, life satisfaction and stress level amongst executives of public sector banks in Punjab" which has been taken as the theme of the present study.

RESEARCH METHODOLOGY**PROCEDURE**

Participants for the present investigation were contacted personally and prior consent of all participants was taken before starting the investigation. They were assured that the information being collected from them was purely for research purpose and would be kept confidential. The instructions for each test were given as per their respective manuals.

SAMPLE

The sample for the present study comprised of one hundred employees at the managerial level (50 males and 50 females) of public sector banks particularly having minimum five year experience and who work more than 40 hours per week from the district S AS Nagar of Punjab. The participants were selected using probability method i.e. **stratified sampling** technique, wherein the strata was of only the managerial level employees, and the selection of sufficient subjects were done randomly assuming the exact representation of the population.

INSTRUMENTS

For the present investigation following tools were used:

WORK-LIFE BALANCE SCALE [WLB; Carlson, Grzywacz, & Zivnaska (2009)]: This is a six-item scale designed to represent the definition developed by Grzywacz and Carlson (2007) of work-family balance that refers to the extent to which an individual is meeting negotiated role-related expectations in both the work and family domains. Therefore, each item includes a reference to the expectations or negotiation of roles (negotiation, expectations, etc.) and each item taps the perspective of an external party to capture what other people expect from the focal individual (people, supervisors, family members, co-workers). A sample item is 'I do a good job of meeting the role expectations of critical people in my work and family life.'

All the six items of this measure are responded on a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree. Items were such that higher scores equate to higher level of work-life balance. An exploratory factor analysis using Principal Axis Factor Analysis was conducted on the six items. All six items loaded at .77 or above on a single factor, the Eigen values was 4.49 and 74.9 percent of the variance was explained. The Cronbach alpha for this scale was .93 items to derive the scores (24 items for Distress, 14 items for Well-being) with no item overlap.

SATISFACTION WITH LIFE SCALE [SWLS; Diener (1985)]: To measure satisfaction with life, the Satisfaction with Life Scale developed by Diener et al. (1985) it consists five items on a 7-point rating scale (from 1 = strongly disagree to 7 = strongly agree). Alpha reliability in the present study was $\alpha = 0.77$.

MINNESOTA SATISFACTION QUESTIONNAIRE [MSQ; Weiss, Dawis, England, & Loftquist (1967)]: The MSQ short form consists of 20 questions focusing on intrinsic and extrinsic reinforcement factors of employee attitude. This form is scored on three scales which include intrinsic satisfaction, extrinsic satisfaction and general satisfaction. This form utilizes a Likert-type scale with five response alternatives ranging from "Very Dissatisfied" (weighted 1) to "Very Satisfied" (weighted 5) for each of the 20 statements. The average of the 20 items formed overall job satisfaction. The coefficient alpha for the overall job satisfaction was .93.

PERCEIVED STRESS SCALE [PSS; Cohen, (1994)]: It is a measure of the degree to which situations in one's life are appraised as stressful. It is a self-reporting instrument consisting of 10 statements which are designed to tap how unpredictable, uncontrollable and overloaded respondents find their lives. The scale also includes a number of direct queries about current level of experienced stress. The scores are obtained by reversing responses to the four positively stated items (items 4, 5, 7 and 8) and then summing across all scale items.

The questions in this scale ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt in a certain way. Higher scores are associated with greater vulnerability to stressful life-event-elicited depressive symptoms

The test-Retest reliability and predictive validity of this scale has been found to be the strongest for shorter time periods. The 10-item self-report instrument has established reliability ($r = 0.85$). Regarding the internal consistency of the PSS, Remor and Carroble (2001) obtained a value of $\alpha = 0.67$, and Remor (2006) a value of $\alpha = 0.81$.

STATISTICAL DATA ANALYSIS

Keeping in view the multiplicity of factors involved in work-life balance, the present study used the factor analysis for determining the correlates of work-life balance.

The data was analyzed to obtain the information given below:

Frequency Distribution, mean, standard deviation, of all the variables

Inter-correlations among different variables.

Factor analysis for the measure of work life balance job satisfaction, life satisfaction and, stress.

T-test for comparing males and females on different variables.

RESULTS AND DISCUSSIONS

The results have been presented and discussed under the following headings:

A. Frequency distribution of scores on different variables.

B. Comparison of males and females on different variables;

C. Inter-correlations among tested variables; and

D. Factor analysis.

A. FREQUENCY DISTRIBUTION OF SCORES ON DIFFERENT VARIABLES

The frequency distributions of scores on tested variables for the total sample and separately for males and females are shown in Table No. 1A and Table No. 1B. The same table also shows mean, median, standard deviation, skewness and kurtosis for each variables i.e. Work life balance, Job satisfaction, life satisfaction and Stress. Males scores high on Work life balance, job satisfaction and Life satisfaction in individual situation and group situation except one variable level of stress on which females score high in individual and in group situation. An examination of values of skewness and kurtosis reveals that scores on different measures are more or less normally distributed except little negative skewness in case of male scores.

TABLE 1A: FREQUENCY DISTRIBUTION OF SCORES

Work-Life Balance				Stress			
CI	Frequency			CI	Frequency		
	F	M	T		F	M	T
14-16	3	6	9	10-14	2	3	5
17-19	10	1	11	15-19	5	16	21
20-22	14	3	17	20-24	28	16	44
23-25	15	10	25	25-29	12	11	23
26-28	6	20	26	30-34	3	4	7
29-31	2	10	12				
Mean	21.87	25.10	23.48		22.93	21.07	22
Median	22.00	27.00	23.48		22.50	20.50	21
SD	3.68	4.7	4.5		4.24	4.8	4.6
Skewness	.11	-1.2	.38		.26	-.018	.001
Kurtosis	-.30	.41	.83		-.168	.18	.012

TABLE 1B: FREQUENCY DISTRIBUTION OF SCORES

Life-satisfaction				Job-Satisfaction			
CI	Frequency				Frequency		
	F	M	T		F	M	T
5-9	0	2	2	26-30	3	2	5
10-14	12	2	14	31-35	3	2	5
15-19	10	8	18	36-40	6	2	8
20-24	18	5	23	41-45	10	6	16
25-29	8	16	24	46-50	10	3	13
30-34	2	15	17	51-55	10	16	26
35-39	0	2	2	56-60	3	5	8
				61-65	3	6	9
				66-70	2	8	10
Mean	20.13	25.27	22.7		47.6	54.07	50.83
Median	21.50	26	23		48	54	52
SD	5.4	6.5	6.5		10.8	10.7	10.8
Skewness	-.18	-1.19	-.44		-.38	-.67	-.42
Kurtosis	.913	1.8	-.27		.29	.42	-.01

B. COMPARISON OF MALES AND FEMALES ON DIFFERENT VARIABLES

To compare the mean scores of males and females on the measured variables, t-test of significance was applied. This was done to find out whether there is any significant difference between males and females on the measured variables.

TABLE 2: GROUP STATISTICS

Variables	SEX	N	Mean	Std. Dev.	t	df
WLB	Male	50	25.10	4.715	2.960	98
	Female	50	21.87	3.683	2.960	
ST	Male	50	21.07	4.877	-1.582	98
	Female	50	22.93	4.242	-1.582	
JS	Male	50	54.07	10.706	2.398	98
	Female	50	47.60	10.173	2.398	
LS	Male	50	25.27	6.596	3.292	98
	Female	50	20.13	5.425	3.292	

t-value significant at .01=2.6 at .05=1.98

Means and standard deviation for each measure for males, (50) females (50) and total sample (100) are presented in table N0- 2. On viewing the tables it shows that there is significant t- ratio at .01 on Work life balance and Life satisfaction among males and females and there is significant difference at .05 level on Job satisfaction. According to t-test level of significance the average difference between the males and females is significant. On stress no significant difference was reported though there is inverse correlation between stress and Work life balance, Job satisfaction and life satisfaction means that by increasing the stress, level of Work life balance, job satisfaction and life satisfaction will also decrease proportionately. For measures Work life balance and Life satisfaction and job satisfaction the trend is different in the sense males scores higher on all these measures indicates males have better work life balance, life satisfaction and job satisfaction comparatively to women's. Support for this view comes from the studies Lalita Kumari 2012 and Shokoufeh Kasraie., at al 2014. Keeping in view the above results, it can be stated that males and females differed significantly on Work life balance, Life satisfaction and job satisfaction except level of stress.

C. INTERCORRELATIONS AMONG TESTED VARIABLES

Pearson's product-moment intercorrelations were computed separately for (1) Total sample, (2) Females and (3) Males. Intercorrelations are shown in Table - 3, 4 and 5.

TABLE 3: CORRELATION MATRIX FOR FEMALES

		WLB	ST	JS	LS
Correlation	WLB	1.000	-.071	.483	.287
	ST		1.000	.218	.053
	JS			1.000	.598
	LS				1.000

TABLE 4: CORRELATION MATRIX FOR MALES

		WLB	ST	JS	LS
Correlation	WLB	1.000	.199	.346	.392
	ST		1.000	.260	.168
	JS			1.000	.600
	LS				1.000

TABLE 5 CORRELATION FOR TOTAL GROUP

		WLB	ST	JS	LS
Correlation	WLB	1.000	.008	.467	.444
	ST		1.000	.164	.027
	JS			1.000	.642
	LS				1.000

Correlation significant at .05=.27, .01=.35

Work life balance is positively correlated with Job satisfaction and life satisfaction in males, females and total group. In case of all the three groups Work life balance is positively correlated with Job satisfaction at .01 levels while work life balance is significantly positively correlated with life satisfaction at .01 levels in males and total group and at .05 levels in females.

Stress is not correlated with any variable in any group, whereas Job satisfaction is positively correlated Life satisfaction at .01 levels in males, females and total group. From the intercorrelations it becomes clear that Work Life balance positively contributed to Job Satisfaction and Life satisfaction whereas stress appears to be an independent factor.

D. FACTOR ANALYSIS

The obtained correlational matrix was factored by the Principal component method (Hotelling, 1936) using unities in the diagonal. Following Kaiser's recommendations only those factors were retained for further rotations which had latent roots above 1.00. Rotation was accomplished by using Kaiser's (1958) varimax criterion for orthogonal single structure and positive manifold. The primary criterion for the inclusion of a variable in a given factor was a loading of .30.

In order to make meaningful comparisons of the factors two separate analysis was done on Males and Females. It was decided to pair the comparable rotated factors and discuss them collectively. In Female group two factors were extracted while in Male group only one Factor was extracted.

TABLE 6

Variables	FACTOR LOADINGS (Factor-I)	
	Females	Males
WLB	.73	.67
ST	-	.47
JS	.87	.82
LS	.78	.82

Factor -1 has high and significant loadings on WLB, JS and LS in Female group while in Male group this factor has high loadings on all the variables i.e., WLB, ST, JS and LS. It indicates that Work Life Balance is positively correlated with Job satisfaction, life satisfaction and level of stress in males while stress is appearing an independent variable in females.

TABLE 7

Variables	FACTOR LOADINGS (Factor-II)	
	Females	
WLB	-.28	
ST	.96	

Factor 2 has very high and significant loadings on Stress in Females group. There is negative relationship between Work Life balance and stress in females though factor loadings on WLB is negative but not significant indicates stress appears as an independent factor in females. Negative loadings on WLB (though loadings are low and insignificant) indicate females are more stressed in maintaining their work life balance whereas males can easily maintain work life balance without any stress.

An overall look at the results reveals that the hypothesis that there is positive relationship between Work-life balance, Job satisfaction and Life satisfaction is fully proved while another hypothesis of positive correlation between job satisfaction and life satisfaction is also proved but the hypothesis of negative correlation between work life balance and job satisfaction to stress is partially proved only in case of females. The hypothesis of gender difference in relation to Work life balance Job satisfaction, life satisfaction and stress is fully proved.

CONCLUSION

The present study has some limitations like small sample and limited area of investigation which might not be the exact representation of the whole population of the banking sector. As our results are based on a convenience sample with unknown generalizability future research is needed using more purposefully drawn samples. Though this research offers a foundational starting block for further theoretical and empirical investigations in the area for scholars and the practitioners interested in understanding and maximizing performance in the work and family domains.

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