VIRTUE

A Bi-annual Refereed Journal

(Included in the UGC List of Approved Journals)

ISSN No. 2230-7117

An Overview

DAVIM has always recognized and acknowledged the contribution made by academicians in imparting management education and their need to enhance the knowledge in various functional areas of management. In this pursuit, the institute took a new initiative and released the first issue of the Journal titled **"VIRTUE" -** Bi-annual Multidisciplinary Refereed Research Journal in the year 2010. With the guidance and support of researchers, contributors, editorial board members the journal has marked its place in the UGC List of approved journals in the year 2017.

This journal seeks to provide a platform to researchers, academicians, practicing managers and other professionals from various expert fields to present their research findings and share their views and experience. Its main objective is to promote research education worldwide and to establish a link between various fields of management and information technology. The journal being a multidisciplinary focuses on various issues related to management development and implementation of new methodologies and technologies, which improve the operational objectives of an organization. Considering India's strategic role in the world economy and its contribution by providing a large pool of talented human resources to the corporate sector, it is important to understand the strategic issues those will contribute towards the success of the organization. Therefore, journal acts as a forum for exchange of new developments done by researchers and practitioners, which further contributes to the adoption of a new holistic managerial approach that ensure a technologically, economically, socially and ecologically acceptable deployment of new technologies in today's business practice.

VIRTUE

Bi- annual Refereed Journal of DAV Institute of Management

Volume V, Issue 1, Jan.- June 2017, ISSN 2230-7117

DAV Institute of Management, NH-3, N.I.T, Faridabad-121001.

Email: info@davim.ac.in, web: www.davim.ac.in

VIRTUE: A BI-ANNUAL REFEREED JOURNAL

Volume V Issue I January-June 2017

CONTENTS

Journal is also available online on www.davim.ac.in

VIRTUE

Bi-annual Refereed Journal of DAV Institute of Management, Faridabad

Volume V   Issue 1 Jan. – June 2017

Editorial Board

From the Desk of Editor-In-Chief

Dear Colleagues,

The nation hosts one of the largest concentrations of multinational subsidiaries in the world and they operate a complex international network of organizational pipelines. In tandem, individuals, many from the Indian Diaspora, from in and out of the nation, are connecting it with locations all around the globe through their personal networks. These global networks foster volatility and are the conduits that enable our modern knowledge economy to function. Indeed the creativity and innovation that foster is humanity's best hope for a prosperous and sustainable future in this volatile and uncertain environment.

In addition, the changing economic landscape also implies rapid skill obsolescence, and necessitates constant learning of new skills across domains, with the ability to interpret and apply existing skills set in new contexts. The key benefits of stability, income growth, and health and retirement benefits that were once associated with larger companies are no longer taken for granted-there is an increasing shift to smaller firms or self employment the world over. Even such shifts demand new skill set and the need to continuously maintain and refresh such skills.

Many papers in this issue addresses the similar themes as - Digitalization of Indian economy, Emotional labour, HRD Climate and Employees commitments, Psychological well being of employees, Trends in the growth of Mutual fund industry i.e. managing global flow of funds, knowledge management, corporate restructuring, Quality Service, Sustainable enterprise as a pathway to unconventional strategies and solutions, Economics, HR and Financial Strategies.

Perhaps, in coming times individuals will face the prospect of constantly changing environment and technologies within their job and the only skills that can help an individual stay relevant and stay ahead is the ability and desire to earn continually.

Keep Reading……

Dr. Ritu Gandhi Arora

Message from the Pacesetter…………

It gives me extraordinary pleasure to inform to our readers that our “Virtue” has been given honorary recognition by UGC! Virtue has received its due commendation and has been recognized as a premier journal in its field.

Time flies and without realizing it, we continue our journey of providing our avid readers the assortment of multidisciplinary research papers which are usable and have a high level of application. It seems as if just a few months back we had launched our journal and today we are releasing the first issue of its fifth volume.

There are a lot of challenges which the growing economies face in the domain of basic necessities in life. Hence, it is vital that different stakeholders unite and amalgamate on issues which confront the society. Our journal publishes empirical research that tests, extends, or builds management theory and contributes to management practice. It aims to publish articles that rely on research evidence as opposed to opinion for their arguments. This is an ennobling process of growth.

The sectors in this journal are a catalogue of divergent fields ranging from education, energy, finance, environment, consumers, careers, psychology of human behavior, subjects on economic stability or instability, manufacturing and service areas. It focuses on myriad disciplines intended for an academic or technical audience. I especially enjoy the fact that papers published in the journal often represent early, exciting, and ground-breaking work in various arenas. This journal is a scholarly publication containing articles written by researchers, professors and other experts and attempts to document and ignite a debate on research focused on technology and communal concerns in context of emanating issues. The linchpin would however be the emerging sectors and research which discusses application and usability in societal and consumer context whether individual or industrial.

I extend my heartfelt gratitude towards **Dr. Punam Suri Ji,** President, DAVCMC, Delhi and **Sh. Prabodh Mahajan Ji**, Vice President , DAVCMC , Delhi for their blessings and imprimatur in all our endeavors.

Also I would like to thank our editorial team members, reviewers who are the unsung heroes who form the solid foundation of our journal assessment system and help select high-quality papers for our journal. Of course, our authors, also, who are the ones who submit their original contributions to make our product possible.

With Warm Wishes
Dr. Neelam Gulati

CONCEPTUALIZING THE INSINUATING ROLE OF EMOTIONAL LABOUR ON EMPLOYEE WORK OUTCOMES: A CONCEPTUAL REVISIT

Dr.Vijit Chaturvedi

Associate Professor

Amity Business School, Amity University

Noida

vchaturvedi@amity.edu

Abstract

The recent advancement in the study of emotional labour is due to the rapid speed with which the service sectors are developing and proliferating, making it more and more crucial to understand the application and utilize the concept of emotional labour in making employee outcomes more effectual.

Emotional labour (EL) refers to "the mechanisms employees use to adjust their outward expression of emotion in accordance with organisational and societal norms during employee-customer interactions". This concept is different from emotions at work place since that deals only with how emotions during employee –employer interactions are managed. The concept of emotional labour is more towards the expected and pre-listed set of expected behaviour.

It is important to draw a line of distinction between emotional labour and intelligence as both are very different with respect to applications. There are many factors as suggested in literature that affects EL right from intrinsic and extrinsic job satisfaction, commitment both continuance and affective, job outcome etc. which are applicable in different context.

The present paper attempts to understand the conceptual overview of Emotional labour and its applicability in context to performance or outcome of employees.

Keywords: *Emotions, Behavioural Challenges, Interpersonal Behaviour, Job Design, Attitudes.*

INTRODUCTION

Emotional labour can be defined as 'the management of feeling to create a publicly observable facial or bodily display 'The term 'emotional labour' was first introduced by **Hoch child (1979; 1983)** in her seminal work, "The Managed Heart: Commercialization of

Human Feeling”.

Hochschild (1983) provided three main contributions to the EL literature: 1) understanding the EL of particular 2) describing feeling rules, and 3) feeling management through surface and deep acting strategies. Hochschild’s book was the inception of the EL literature and the origin of almost all of the emergent research streams. Despite having the same foundation, EL researchers have drawn upon different aspects of Hochschild’s work and hence the area has developed into four main, and quite separate, streams of research: 1) Emotional job demand 2) Emotional expression 3) emotional dissonance 4) Emotion regulation strategies.

This perspective of emotional outcome is equally related to emotional expression and related dissonance which may lead to burnout and stress also. It serves the purpose of emotional display.

The theory of Emotional Labour Theory deals with emotions which employees feel, or pretend to feel, in an attempt to meet their job requirements This helps in creating and building similar expression, feeling, facial display, and emotional regulation based as per organization requirement. This benefits the employer and the organization largely as it creates uniformity across the employees but may or not equally benefits employees. This emotional management occurs within the workforce and creates a situation in which the emotion management by workers can be exchanged in the marketplace.

It also helps employees to reduce the control mechanism and direct control over employees and thus leading to reduction in inter-personal problems. This results in to improvement in service quality and outcomes. But this can have fatal impact on employees as work life balance, informal environment, work autonomy, sense of freedom becomes limited.

Majority studies which will be discussed later in literature review find that emotional labour leads to negative outcome like job exhaustion, monotony, lack of team work, politicking, affecting both organization commitment and citizenship behavior as well.

The present paper with the help of conceptual overview of previous study will help in understanding the impact of emotional labour on employee outcomes.

Observations based on the conceptual study will help in understanding the impact and suggested remedies to regulate and refine the mechanism of emotional labour in more positive and mutually productive ways.

A framework for research on emotion in organizations has been created since emotion was recognized as one element of labour from the 1970s. As the service industry has developed, emotional labour, who are asked by organizations to hide their emotions and display emotions customers want, have increased rapidly.

According as it has been found that emotional labour has negative effects on emotional labourers' attitudes towards jobs and organizations and on their job performance as well as on their psychological and physical health, a lot of studies on emotional labourers have been under way. Many of the studies emphasized negative aspects of the results of emotional labour. While active research has been carried out by researchers, mixed findings and many problems have been suggested. This is because the existing studies failed to clarify the concept and dimensions of emotional labour.

LITERATURE REVIEW

With respect to the identified objectives of study the concept and underlying constructs of emotional labour literature review of previous researches are as under-

Recent studies have focused on EL as a process of internal emotion regulation **(Brotheridge & Lee 1998; Brotheridge & Lee 2003; Grandey 2000; Grandey 2003),** as this provides the link between the dissonance experienced and the expressed emotion **(Glomb & Tews 2004).** Managing emotions to create an emotional display that conforms with specific display rules typically requires some form of self-regulation on the part of the employee. When employees attempt to regulate their emotional displays in order to meet societal, occupational or organisational norms they experience emotional dissonance (ED) **(Ashforth & Humphrey 1993)**. To regulate their emotions employees, engage in either surface or deep acting **(Hochschild 1983).**

In surface acting, 'employees try to manage the visible aspects of emotions that appear on the 'surface' and which can be noticed by the interaction partner to bring them in line with the organizational display rules while the inner feelings remain unchanged'

Emotional dissonance *therefore exists between what the employee is feeling and the outward expression of the emotion*.

In deep acting, employees attempt to feel the emotions they are required to express as part of their job requirements.

Thus, when difference lies between the felt, perceived and acted emotions and leading to display of some other emotions it leads to a stage of dissonance in the mind-set and behavior as a result of which an undue pressure is always in form of outcome exist. Based on various other controlling variables it may either lead to positive but in long term affect the inner state of mind thus affecting the job engagement, job satisfaction and involvement in the work with an emotional framework.

In the emotional regulation both the surface behavior and the inner behavior gets affected, they being interdependent on each other thus affects not only the work but also one's social psychology.

These also help in predicting the organizational outcomes both when the feelings are in resonance and when they are conflicting.

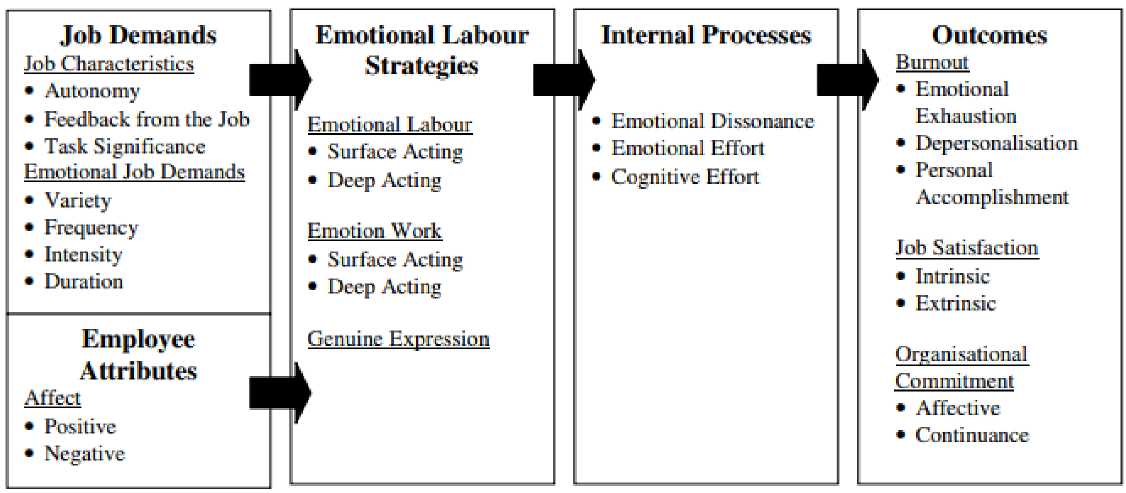


Figure -1 Rubin et. al (2005) Conceptual model of Emotional labour

Based on a common and specific model of understanding the underlying assumption, antecedents and the possible outcome of emotional labour on employee outcomes with reference to emotional labour has been validated by **Rubin Et.al (2005).**This model integrated Emotional dissonance, Emotional Labour, job-specific (job characteristics) and emotion-specific antecedent variables. The outcome variables include job attitudes, health and psychological well-being and job related behaviour.

This helps in giving a direction in understanding that job characteristics and employee attributes are affected largely by the emotional demands of the job. There needs to be congruence between the two which is balanced by emotional demands which if affected will impact both employee attributes leading to positive and negative feeling if clarity does not exist.

As an outcome it will lead to variety of emotional regulation in form of surface and inner or deep feeling which if have high variance will lead to imbalance. The imbalance if not regulated effectively and on time leads to emotional burnout, dissonance, affecting job satisfaction and also organization commitment.

Thus, an effective flow of surface and inner acting feeling that can help in regulating emotions and leading to mutual benefit of both employee and employer is desired.

Similarly, **Grandey (2000)** presented a model of emotion regulation based on antecedent-focused and response-focused strategies whereby the individual adjusts their physiology or outward expression of emotion.

These two strategies were central to Grandey's model of EL. Grandey also included antecedents of emotional job demands and Emotion Dissonance to further explain EL and its link with burnout. Only parts of this model have been tested to date. **(Totterdell & Holman 2003).**

Thus internal emotion regulation works effective and efficiently when managed well with inner and surface acting equilibrium.

According to **Hochschild (1983**), emotion management has two forms: emotion work and Emotion labour. Emotional Labour as emotion management undertaken as part of the job and emotion work as emotion management performed in private. Therefore, EL occurs during employees' interactions with customer and emotion work occurs during Job Demands.

The other Job Characteristics as a part of emotional labour includes -

- Autonomy
- Feedback from the Job
- Task Significance
- Variety
- Frequency
- Intensity
- Duration
- Surface Acting
- Deep Acting Genuine Expression Internal Processes
- Emotional Dissonance
- Emotional Effort
- Cognitive Effort Outcomes
- Emotional Exhaustion
- Depersonalization

• Personal Accomplishment

Job Satisfaction – Intrinsic, Extrinsic

Organizational Commitment

• Affective

• Continuance

The above factors are thus primarily important and both can get affected if not handled properly. With regard to emotional work very little literature is available for outward expression of emotion. Balanced emotional regulation helps reduction in work place conflicts, effective inter-personal relation, and harmonious industrial relation. Thus antecedents, outcomes and emotion management are important to be understood if equilibrium between emotion labour and emotion management are important.

Also as suggested in conservation of resources theory given by **(Hobfoll 1989, 1998 as cited in Brotheridge & Lee 2002)** they state that the process of EL and its link to emotional exhaustion. Specifically, this theory suggests that when there is an imbalance between demands and resources the result is stress, so when EL does not yield the desired response (from customers, co-workers etc) and thus is no longer a rewarding exchange then estrangement, strain and detachment may occur.

It emphasizes upon the fact that surface acting may not be as highly valued by customers, and thus there is a potentially greater depletion of emotional resources. An imbalance between investment and gain may lead to emotional exhaustion **(Cropanzano, Rupp & Byrne 2003).**

Similar to such study are findings of **Morris and Feldman (1996)** who proposed that the greater the demand for intense emotions, a variety of emotions and the greater the duration of required emotional displays, the greater the EL, though researchers are yet to establish this link empirically but this may probably impact the emotional labour outcome.

This needs to be thoughtfully taken care of when designing profile, delegating task, evaluating performance and potential of employees as this affects the emotional display and inner state of mind which becomes visible in behavioural outcome.

Diefendorff, et al. (2006) conducted a study investigating the relationship between EL and OCB and concluded that employees who genuinely display more positive behaviours (deep acting) in the workplace are more likely to engage in OCB compared to employees who fake and suppress their emotions (surface acting). Deep acting requires an employee to change his or her emotional state to comply with a customer's needs **(Giardini and Frese, 2006)** and this may produce a positive emotional climate that encourages interpersonal helping, generates individual initiative, and promotes positive customer orientation.

OTHER FACTORS AFFECTING EMOTIONAL LABOUR

Job Characteristics – It is one of the major determinant of Emotional labour is job characteristics identified as autonomy, task identity, skill variety, feedback, mutual contact and friendly relationship. Afterward, **Hackman & Oldham (1976)** defined the following five core job characteristics by adding task significance to the existing characteristics: skill variety, task identity, task significance, autonomy and feedback. These factors affect emotional labour and feelings strongly.

Organizational characteristics - The organizational characteristics, as the antecedents of emotional labour, include organizational support system, social support, and performance pressure and job satisfaction. **Thomas & Ganster (1995)** suggested that the organizational support system creates an environment where a more predictable job environment is provided and co-workers can give helps each other, reducing the stress of the members. Social support consists of support from supervisors, support from co-workers and support from family members, and refers to all positive supports that individuals can obtain from their interpersonal relationship.

Thus social support also plays a strong role of supervisors, co-workers and needed positive support in an organization.

Emotion work is the starting point for the understanding of emotional labour. **Hochschild (2003)** used the term emotion work to refer to any attempt to modify the experience or expression of a consciously felt emotion. When the individual performs emotion work as a required part of his/her actual job performance it is called emotional labour. **Callahan & Mc. Collum (2002)** interprets that emotional work is appropriate for situations in which individuals are personally choosing to manage their emotions for their own non-compensated benefits.

Surface Acting (SA) & Deep Acting (DA) - These traits Surface acting involves employees simulating emotions that are not actually felt, by changing their outward appearances (i.e. facial expression, gestures, or voice tone) when exhibiting required emotions. Using the SA technique, people alter the outward expression of emotion in the service of altering their inner feelings. By changing facial or bodily expressions, such as slumped shoulders, bowed head, studies showed that SA results in negative emotional labour and DA results in positive emotional labour.

For example, they reported that while SA is related to negative results such as depersonalization, emotional exhaustion, or dissatisfaction, DA is related to positive results such as sincerity or a sense of fulfillment unlike SA, DA involves changing inner feelings by altering something more than outward appearance.

Thus, leaders/managers/ functional heads should as effectual leaders try to inculcate, observe and develop the same amongst their people.

The impact both **positive and negative** also carries importance. As suggested by **(Watson, Clark & Tellegen 1988)**, individuals with high positive affect tend to view situations and circumstances in a positive way and are considered optimistic. Alternatively, those individuals with high negative affect tend to be pessimistic and focus on the negative aspects of situations and circumstances.

Burnout- Another variable that has received the most attention in the EL literature is burnout, and in particular the dimension of emotional exhaustion. Burnout refers to feelings of emotional drain or fatigue and has been defined as the consequence of 'people work' where individuals experience emotional exhaustion, depersonalization and reduced personal accomplishment **(Maslach 1982).**

Emotional exhaustion is when there is a depletion of emotional energy whereas ***depersonalization*** is where an individual may distance themselves from a situation in order to cope with the emotional drain. Emotional exhaustion and depersonalization are considered central to burnout whereas personal accomplishment is considered more of a personality variable related to the sense of achievement experienced through engaging in work (similar to self-efficacy). Thus while getting emotional labour strengthened and reinforced special care needs to be taken whether the impact will augment depersonalization and should not lead to emotional exhaustion.

Job satisfaction- Job satisfaction refers to the attitude an employee may have towards certain aspects of their job and work experiences. An employee may assess their job satisfaction based on whether their needs and expectations are met. This may relate to satisfaction with extrinsic rewards (external to the job) or intrinsic rewards (**Warr, Cook & Wall 1979).** Although **Grandey (2003)** included job satisfaction as an antecedent of EL and found that it negatively predicted both surface and deep acting, most studies consider job satisfaction to be an outcome of EL. Similarly, **Abraham (1998; 1999a; 1999b)** found support for negative relationship between ED and job satisfaction. Specifically, in her three studies Abraham found that ED was negatively related to job satisfaction and this relationship was moderated by social support in high-support groups, negative affect and self-monitoring.

Thus, the role of emotional dissonance and its re-verification along with its impact on job satisfaction is of prime importance.

Individual characteristics- One of the most important antecedents that affect emotional labour, the variables related to individual characteristics are emotional contagion, empathic concern and job emotion. Emotional contagion refers to a congenital sensitivity of a natural assimilation with the emotion expressed by others, where a process of cognitive interpretation is not involved in sharing the emotion with others.

Organisational commitment-The attachment an employee feels towards their organisation is referred to as organisational commitment. Of particular interest are the different types of commitment and how surface and deep acting differentially impact on them. Organisational commitment may be measured along three dimensions: affective, continuance and normative **(Allen & Meyer 1990).** Different researches proved that Emotional labour deeply affects and lowers down the high level of commitment thus affecting performance in long term.

Many studies have also found the debatable role that emotions play in workplace. For e.g. emotion in terms of business administration to date has been treated as a factor that interrupts work efficiency in the field **(Ashforth and Humphrey, 1993).** In other words, emotion has not been a considering factor in many studies.

Ashforth & Humphrey (1993) argued that emotional labour is closely related to the degree of considering the wellbeing and happiness of customers by service providers.

Choi et al. (2006) found that empathic concern affects deep acting. That is, although individuals with empathic concern do not agree with the emotion of others, they understand the emotion of others through a cognitive process and express their own emotion. Empathic concern is also one of the individual characteristics that are the causes of emotional labour, in that it expresses an emotional state different from the actual emotion. Job emotion is the degree to which employees express their emotion during job performance and refers to the empathy occurring while performing their job. If employees empathize more while performing their job, it is more likely that they express their emotion.

Brotheridge & Lee (2003) developed the six faceted Emotional Labour Scale (ELS) based on the theories of **Hochschild (1983)** and **Morris & Feldman (1996).** Their ELS measures the "intensity, frequency, variety of emotional display, surface acting, deep acting and the duration of interaction. This is helpful in measuring the Extent and intensity of emotional labour in an organization.

Thus, from the above discussion it can be inferred that the scope and coverage of emotional labour is immense with the perspective of HR and overall for effective organization health

RESEARCH METHODOLOGY

Type of research is descriptive as the observations will be based on the available literature and previous study. Researches of last 10 years are considered to understand the trend and development in the concept.

OBJECTIVES OF THE STUDY

The present study aims at understanding:

a) To study the scope and coverage of Emotional labour with organization perspectives

b) To study the factors /underlying constructs of emotional labour

c) To understand the positive and negative impact of emotional labour on employee

POSITIVE OUTCOMES OF EMOTIONAL LABOUR

Previous studies on emotional labour were performed under the assumption that employees are forced to feel other emotions than their own emotion, which then act as stressors by themselves, focusing on the psychological aspect of employees.

However, the positive outcomes of emotional labour are based on the view that emotional labour can obviously create positive outcomes because there can surely be potential benefits of emotional labour **(Wouters, 1989).** As for the positive outcomes of emotional labour, **Wharton (1993)** found a positive association between emotional labour and job satisfaction in hospital employees. A study on bank employees by also found a positive relationship between positive emotional display and job satisfaction, which empirically supports the assertion of **Wouters (1989)** that emotional labour not only incurs costs, but also creates benefits **(Shmutte 1999).**

Ashforth and Humphrey (1993) viewed emotional labour as being positive because emotional labour plays the role of strengthening the mutual relationship between employees who perceive it.

NEGATIVE OUTCOMES OF EMOTIONAL LABOUR

Studies on emotional labour generally focus on the negative outcomes of emotional labour. Although organizations require their employees to always express friendly emotions to their customers, the employees do not follow the requirement in reality. Thus, employees recognize a disparity between the emotions their organization pursues and their own. If the disparity continues, they recognize themselves as liars and are afraid of expressing their emotion in a normal emotional situation. As a result, they find it difficult to form an emotional relationship with others, and become isolated from society.

OBSERVATIONS AND OUTCOME OF PREVIOUS LITERATURE

Thus based on the researches in earlier studies it can be understood that Emotional labour is a highly dependent construct which is affected by many variables which varies from individual specify factor to organizational and external drives as well.

Emotions and emotional labour play a significant role in determining the performance, outcome, strategic contribution, organization commitment, needed (required) display of emotions leading to customer satisfaction.

Emotional labour affects certain variables strongly like emotional dissonance, depersonalization, job satisfaction, job commitment, fatigue, burnout, emotional regulation, organization citizenship behaviour, organization outcome, deep acting behaviour, empathic concern, job involvement and engagement, psychological well-being of individuals, detachment and attachment concerns, and internalization of organization commitment.

The above factors seemed to be deeply related and affected by emotional labour if not regulated properly can lead to dysfunctional consequences amongst employees.

Thus, while communicating the behavioural outcomes it is important for organization to understand that all these factors being the intangibles which decide the tangible outcomes for organization success needs to be given proper attention and focus so as to align its outcome with organization survival.

Today when we talk of strategic partnering role of each department and stakeholder specifically the employees keeping their physical and mental wellbeing intact and purposeful is important. As we all are driven by our thoughts, feeling, behaviour and resulting actions, emotions and its effective regulation play a pivotal role in determining the organization success, employee satisfaction, building effective employer brand and creating workforce of tomorrow.

CONCLUSION

Thus it can be understood that there are various factors that affect the emotional labour as stated in the previous studies and also found by various researchers. It is important for organization to understand the relevance and applicability of these dimensions in own organization as the duration , intensity, relevance also varies from organization to organization and also the internal and external business conditions like mismatch between your personality and what is expected from you in your role, misalignment of values, when what one being asked to do doesn't accord with what one believe in, a workplace culture in which particular ways of expressing emotion are specific or not.

IMPLICATIONS

Thus, understanding the relevance and importance of emotional labour for an organization irrespective of the nature of organization understanding, developing, preserving and maintaining emotions for effective mutual interest is of prime importance. It is necessary to state that whatever development or skill one imbibes to work productively it is the behavioural element which even for core or generic competencies are to be translated. Thus the role of behavioural expression and emotion display based on emotional regulation affects the type/quality of work performance, talent retention and knowledge building.

Thus, enough attention should be given to maintain the level of emotional labour in every organization to ensure organization sustainability.

REFERENCES/ BIBLIOGRAPHY

Ashforth & Humphrey (1993), Emotional Labour in Service Roles: The Influence of Identity, *Academy of Management Review*, 18 (1), pp.88–115.

Abraham (1998, 1999), The Relationship between Emotional Intelligence, Work Attitudes Behaviour and Outcomes – An Examination Among Senior Managers, *Journal of Managerial Psychology*, 18 (7–8), pp.788–813.

Allen & Meyer (1990), Employees' Mood, Perceptions of Fairness and Organizational Commitment, *Journal of Business and Psychology*, 21(1), pp.65–82.

Brotheridge & Lee. (1998), Development and Validation of The Emotional Labour Scale, *Journal of Occupational and Organizational Psychology*, 76, pp.365–379.

Brotheridge & Lee (2003), Matching Commitment to Supervisors and Organizations to In-Role and Extra-Role Performance, *Human Performance*, 16, pp.327–348.

Cropanzano, Rupp & Byrne (2003). The Influence of Employee Organizational Citizenship Behaviour on Customer Loyalty, *International Journal of Service Industry Management*, 15 (1), pp.27–53.

Callahan & McCollum. (2002), Emotional Intelligence, Cognitive Intelligence and Job Performance, *Administrative Science Quarterly*, 51, pp.1–28.

Choi. et al. (2006), Internal Benefits of Service-Worker Customer Orientation: Job Satisfaction, Commitment, and Organizational Citizenship Behaviours, *Journal of Marketing*, 68, pp.128–146.

Diefendorff, et. al. (2006), Antecedents and Consequences of Emotional Display Rule Perceptions, *Journal of Applied Psychology*, 88 (2), pp.284–294.

Grandey (2000), Must "service with a smile" be stressful? The moderating role of personal control for American and French employees, *Journal of Applied Psychology*, 90 (5), pp.893–904.

Gandhi, Ritu. (2015), Comparative study of Factors Affecting Talent Retention and Strategic Remedies, *Anvesha: The Journal of Management*, 8(2), pp. 10-20.

Hackman & Oldham (1976), *Leadership and Organizations: The GLOBE Study of 62 Societies*, Sage Thousand Oaks, CA. Johnson

Hochschild (1979; 1983), Mood and Emotions in Small Groups and Work Teams, *Organizational Behaviour and Human Decision Processes*, 86, pp.99–130.

Hobfoll (1989), Organizational Benefits of Having Emotionally Intelligent Managers And Employees, *Journal of Workplace Learning*, 11(3), pp.84–88.

Maslach (1982), Individualism-Collectivism as an Individual Difference Predictor of Organizational Citizenship Behaviour, *Journal of Organizational Behaviour*, 16 (2), pp.127–142.

Rubin Et.al (2005), Mechanisms Linking Employee Affective Delivery and Customer Behavioural Intentions, *Journal of Applied Psychology*, 87 (5), pp.1001–1008

Shmutte (1999), The Science of Emotional Intelligence, *Current Directions in Psychological Science*, 14 (6), pp.281–285.

Totterdell & Holman. (2003), Emotion Regulation In Customer Service Roles: Testing a Model of Emotional Labour, *Journal of Occupational Health Psychology*, 8 (1), pp.55–73.

Thomas & Ganster. (1995), Organizational Citizenship Behaviours: Achievement Orientation and Personality, *Journal of Business and Psychology*, 13 (2), pp.263–279.

Watson, Clark & Tellegen. (1988), When Customers Lash Out: The Effect of Customer Interactional Injustice on Emotional Labour and The Mediating Role of Discrete Emotions, *Journal of Applied Psychology*, 91(4), pp.971–978.

Warr, Cook & Wall. (1979), The Affective Consequences of Service Work', *Work and Occupation*, 20, pp.205–232.

Wouters. (1989), Organizational Citizenship Behaviours and Service Quality as External Effectiveness of Contract Employees, *Journal of Business Research*, 56, pp.597–611.

EMPIRICAL STUDY ON RELATIONSHIP BETWEEN HRD CLIMATE AND ORGANISATIONAL COMMITMENT IN AUTO COMPONENT MANUFACTURING COMPANIES

Animesh Singh
Research Scholar
Lingaya's University
Faridabad
animesh.hrd@gmail.com,

Dr. Urvesh Chaudhery
Associate Professor
Lingaya's University
Faridabad
urvesh.chaudhery@lingayasuniversity.edu.in

ABSTRACT

Organisational commitment is one of the most widely discussed topics in the field of Organisation behaviour among the researchers, Psychologists, HR practitioners and Top Management employees. A committed employee not only works with full dedication but also proves to be most productive. The objective of this study is not only to access the Human Resource Climate prevailing in the auto-component manufacturing companies but also find relationship of HRD climate & organisational Commitment among the employees. Data was collected from 593 employees of auto component manufacturing companies and significant relationship was found between HRD climate components and organisational commitment. The study provide important implications for management & HR professionals to understand the importance of Human resource development for organisation and its impact on employees organisational commitment and encourage them to focus more on organisational commitment by providing better HRD climate in their respective organisations.

Keywords: *Organisational Commitment, Human Resource Development, Auto Component Manufacturing Companies, Employee*

INTRODUCTION

The twenty first century organisations are grappling with challenges not only hire the skilful employees but also to retain them and use them in most efficient manner for longer time. As war of talent is so tough that high performers are of acute shortage so it's very crucial for any organisation to make his employees committed towards the organisational goals. A committed employee not only works with full dedication but always proves to be most productive and excellent team player. So organisational commitment is one of the most widely discussed topics in the field of OB among the researchers, Psychologists, HR practitioners and Top Management employees. Human resource department play an integral role to make employees committed to the organisation. Human resources management practices play a very crucial role in achieving the organization's goals and proved to be very useful to make organisation to be competent enough. In today's techno driven environment the desired results can only be get by using a development oriented approach. As a result the concept of Human Resource Development (HRD) has emerged as a strategy to improve employee's capabilities to get required output. In our country the emergence of concept of Human Resource Development (HRD) is credited to Prof. T.V. Rao and Prof. Udai Pareek.

REVIEW OF LITERATURE

Organisational Commitment

Organizational commitment has been defined by the different researchers in different aspects. It is defined as the extent of employees' willingness to put their efforts for the organisations' success and degree of fit between the employees' values and the organisation values. It is the strength of an individual's identification and involvement with a particular organization **(Steers, 1977)** but then in advance it is affirmed by three aspects: a belief in and acceptance of goals and values, a willingness to exert effort, and a strong desire to maintain membership **(Porter, Steers, Mowday and Boulian, 1974). Becker (1960)** described commitment, in general as "a disposition to engage in consistent lines of activity as a result of the accumulation of earnings that would be lost if the activity were discontinued."

Meyer and Allen (1991) purposed the three-component model of organizational commitment. According to them Organizational commitment is a three dimensional approach and opened a path of research with this. As per their views, commitment is the aggregate result of three different but related components viz., Continuance Commitment, Affective Commitment and Normative Commitment. The three dimensions are as follows:

- Affective Commitment: It is defined as an emotional attachment to the organization such that the strongly committed individual identifies with, is involved in and enjoys membership in the organization **(Allen and Meyer, 1990).** This is the ideal 'happy' state for an individual. : He wants to stay with a company or organization because he has an emotional attachment and involvement with the organization or we can say that he is psychologically attached to the organization.

- Continuance Commitment: It involves commitment based on the costs that the employee attaches with leaving the organization. The individual who has been worked quite a bit in the organization feels that that he/she has invested a great deal of effort/time and now they have no option but to remain in the organization. “Continuance commitment develops on the basis of two factors: The magnitude of the investments individuals make, and the perceived lack of alternatives**” (Allen and Meyer, 1990).**
- Normative Commitment: It involves the employee’s feelings of obligation to stay with the organization. “Workers with a strong normative commitment feel that they ought to stay within the organization because he/she believes they should” **(Meyer and Allen, 1991).** The employee feels that he is obliged to stay in the organization due to some reason.

HRD Climate:

HRD encompasses the development oriented activities of the organization. For an individual to perform productively, the climate prevailing in the organization needs to be conducive for his development. Various research studies have been conducted to determine and analyze the factors affecting the HRD Climate prevailing in organizations. The Pioneer in Integrated HRD Systems Approach for Indian organizations was the two professors of the Indian Institute of Management, Ahmedabad T V. Rao & Udai Pareek (1975). Recognizing the importance of HRD climate, Center for HRD, Xavier Labor Relations Institute (XLRI, India) developed a 38-item HRD climate questionnaire to survey the extent to which development climate exists in organizations. The 38 items included in the questionnaire can be grouped into three categories such as

- General climate: The general climate items deal with the importance given to human resources development in general by the top management and line managers
- OCTAPAC culture: The OCTAPAC items deal with the extent to which openness, confrontation, trust, autonomy, pro-activity, authenticity and collaboration are valued and promoted in the organization

- HRD mechanisms: The items dealing with HRD mechanisms measure the extent to which HRD mechanisms are implemented seriously.

Using this instrument the first survey of HRD climate in Indian organizations was carried out by **Rao and Abraham (1986)** among 41 organizations in India. The study found that the general HRD climate in the organizations appears to be at an average level. The most important factor contributing to this seems to be a general indifference on the part of the employees on their own development. After the development of concept so many studies were conducted to find the importance of HRD climate. In the study "human resource development climate in Rourkela steel plant " by **Srinibash Dash & J. Mohapatra** researcher wants to know employee perception regarding HRD climate and came to conclusion that there is a considerable scope for the development and implementation of appropriate HRD programmes and interventions. "HRD Climate in Indian Banking Sector" by **Aleem Hashmi & Haidar Abbas** showed that the outcomes of HRD instruments in a given climate of Indian banking sector is average and there is lot of scope for improvement. **Jain et al.(1997)** study in BHEL and NFL and concluded that the HRD climate is mainly a function of the effectiveness variables including individual efficiency, organizational efficiency and productivity, and the HRD variables including management policy on HRD, organization development, role analysis and training. The various elements of a HRD Climate if exist to a good extent in an organization would definitely help in augmenting job satisfaction of employees **(Solkhe and Choudhary,2011).** There exist a statistical co-relationship between specific elements in the organizational climate and four performance measures such as profitability, productivity, customer loyalty and employee retention **(B.Pattnayak,2003).** In another study it was found HRD climate influences the job satisfaction of employees **(K. Narendranath, 2013**).HRD has a strong impact on organisational commitment & human resource development (HRD) of an Organization could be seen as strategy to improve the capacity of employees, bring about organizational commitment (OC) and promote performance. **(Daniel 2012).** There is a significant difference in the HRD climate of software and manufacturing organizations. Software organizations have better general climate, HRD mechanism and OCTAPAC culture compared to manufacturing organisations (**S. Saraswathi, 2010).** HRD Climate has a definite impact on Job Satisfaction which in turn leads to the increased organizational performance **(Ajay Solkhe & Nirmala Chaudhary, 2011).** Strong relationship between organisational commitment and HRD dimensions **(V.Rama Devi).** From the above discussion it is obvious that HRD plays an important role in organisational and employee development and organizational improvement. & Commitment is a necessary variable that drives individual action **(Hakim and Viswesvaran 2005).**

OBJECTIVES & HYPOTHESIS

- To assess Human resource development (HRD) climate of the employees of the selected organizations included in the study.
- To establish relationship between HRD climate and organizational commitment of employees based on the collected data.

Hypothesis:

H0: There is no significant relationship between HRD climate & Organizational commitment of employees in Auto component manufacturing units.

H1: There is a significant relationship between HRD climate & Organizational commitment of employees in Auto manufacturing units.

RESEARCH METHODOLOGY

Sample:

The study focused on the employees in auto component manufacturing companies in Faridabad and its nearby areas. A total of 700 questionnaires were distributed for the data collection, out of which 630 filled questionnaires were received. Out of these 630 filled questionnaires 37 questionnaires were incomplete and were not deemed fit for the analysis and hence were rejected. So at last, a total of 593 filled questionnaires were considered for final analysis.

Instrument:

Data was gathered in this study using a questionnaire that was divided in to three parts namely HRD Climate, Organisational commitment and personal information of respondents. HRD Climate scale developed by **Rao and Abharaham (1986)** was used. This instrument consists of 38 items. All items were rated on a five - point scale (1 – strongly disagree to 5 - strongly agree) next part of questionnaire was used to measure the organisational commitment. The five point scale ranging from “strongly disagree (1) to strongly agree (5). developed by Allen and Meyer (1991) was used to measure organisational commitment.

Reliability & Validity:

Exploratory factor analysis and confirmatory factor analysis were used to extract factors of HRD climate scale .Three factors (HRD-General Climate, HRD Mechanism & HRD Culture) were extracted & accounted for 57.68 percent of the total variance in the sample. Six variables were dropped during factor analysis due to low values communalities and low factor loadings. So we were left with 32 variables. The composite reliability of these three factors were 0.941, 0.942 and 0.915 respectively and value of Average Variance Extracted (AVE) >.5 & also the value of Maximum Shared Variance (MSV) < AVE & Square root of AVE greater than inter-construct correlation. The Cronbach’s Alpha value for Organisational commitment scale comes out to .865. Hence scale was reliable and valid enough to be used for current study.

Statistical Measures:

To analyse the results, various statistical measures such mean, standard deviation, correlation and regression analysis were performed through SPSS 22, AMOS 21 & MS Excel 2007.

DATA ANALYSIS

Total 593 responses were analyzed for final study. Out of these 80% were male. About 52% were in age group of 25 – 35 years and 14% were from below25 years and remaining belonged to above 35 years age category. 51% respondents had tenure of less than 5 years, 39 % between 5 to 15 years, and the rest had tenure more than 15 years. Around 75% of respondents were married and rest was unmarried.

Level of overall Human resource development (HRD) climate among employees is studied. Three components of HRD climate namely HRD-General climate, HRD Mechanism & HRD Culture are identified for present study. HRD climate and its components were calculated which is as shown in Table 1.

Table 1. HRD Climate Score

	N		Mean	Std. Deviation
	Valid	Missing		
HRD CLIMATE	593	0	3.6890	.72936
HRD Mechanism	593	0	3.6896	.83575
HED - General Climate	593	0	3.6965	.85598
HRD Culture	593	0	3.6635	.81279

Overall average mean score of HRD climate is 3.68 out of 5. If we convert this score in %age terms the overall score of HRD climate is 67% *(Percentage score = (mean score-1) x 25). This assumes that a score of 1 represents 0 percent, of 2 represents 25 percent, of 3 represents 50 percent, of 4 represents 75 percent, and of 5 represents 100 percent. Thus, percentage score indicate the degree to which the particular dimension exists in the company out of the ideal 100). Apparently the HRD-General climate has got 3.69, HRD Mechanism 3.68 and HRD culture score is 3.66. It implies that overall HRD climate in auto component manufacturing companies is good enough.

Table 2: Item Wise Analysis of HRD Climate score is as shown below

	N		Mean	Std. Deviation
	Valid	Missing		
HRD 1 The top management of this organization goes out of its way to make sure that employees enjoy their work.	593	0	3.639	1.0581
HRD2 The top management believes that human resources are an extremely important resource and that they have to be treated more humanely	593	0	3.718	1.0462
HRD3 Development of the subordinates is seen as an important part of their job by the managers/officers here	593	0	3.75	1.0551
HRD4 The personnel policies in this organization facilitate employee development.	593	0	3.641	1.094

HRD5 The top management Is willing to invest a considerable part of their time and other resources to ensure the development of employees.	593	0	3.626	1.1262
HRD7 People lacking competence in doing their jobs are helped to acquire competence rather than being left unattended.	593	0	3.656	1.0904
HRD8 Managers in this organization believe that employee behaviour can be changed and people can be developed at any stage of their life.	593	0	3.739	1.0563
HRD9 People in this organization are helpful to each other.	593	0	3.806	1.0707
HRD10 Employees in this organization are very informal and do not hesitate to discuss their personal problems with their supervisors	593	0	3.629	1.0846
HRD11 The psychological climate in this organization is very conducive to any employee interested in developing himself by acquiring new knowledge and skills.	593	0	3.69	1.0865
HRD12 Seniors guide their juniors and prepare them for future responsibilities/ roles they are likely to take up.	593	0	3.767	1.1225
HRD14 Seniors guide their juniors and prepare them for future responsibilities/ roles they are likely to take up.	593	0	3.631	1.1242
HRD16 When an employee does good work his supervising officers take special care to appreciate it.	593	0	3.634	1.073
HRD17 Performance appraisal reports in our organization are based on objective assessment and adequate information and not on any favoritism.	593	0	3.722	1.0599
HRD19 Employees are encouraged to experiment with new methods and try out creative ideas.	593	0	3.696	1.0744

HRD20 When any employee makes a mistake his supervisors treat it with understanding and help him to learn from such mistakes rather than punishing him or discouraging him	593	0	3.718	1.0764
HRD21 Weaknesses of employees are communicated to them in a non-threatening way.	593	0	3.705	1.0278
HRD22 When behaviour feedback is given to employees they take it seriously and use it for development.	593	0	3.717	1.0087
HRD24 When employees are sponsored for training; they take it seriously and try to learn from the programs they attend.	593	0	3.811	1.0307
HRD25 Employees returning from training programmes are given opportunities to try out what they have learnt.	593	0	3.681	1.0771
HRD26 Employees are sponsored for training programmes on the basis of genuine training needs.	593	0	3.683	1.0594
HRD28 Employees are not afraid to express or discussion of their feelings with their superiors.	593	0	3.627	1.0272
HRD29 Employees are not afraid to express or discuss their feelings with their subordinates.	593	0	3.69	1.0772
HRD31 Delegation of authority to encourage juniors to develop handling higher responsibilities is quite common in this organization.	593	0	3.582	1.0688
HRD32 When seniors delegate authority to juniors, the juniors use it as anopportunity for development	593	0	3.749	1.0013
HRD33 Team spirit is of high order in this organization	593	0	3.688	1.0822
HRD34 When problems arise people discuss these problems openly and try to solve them rather than keep accusing each other behind the back.	593	0	3.735	1.0163

HRD35 Career opportunities are pointed out to juniors by senior officers in the organization.	593	0	3.59	1.0634
HRD36 The organization's future plans are made known to the managerial staff to help them develop their juniors and prepare them for future.	593	0	3.703	1.0314
HRD37 This organization ensures employee's welfare to such an extent that the employees can save a lot of their mental energy for work purposes.	593	0	3.659	1.0868
HRD38 Job-rotation in this organization facilitates employee development.	593	0	3.617	1.1014

Table 2 shows item wise HRD climate score. On deeper analysis it can be stated that areas like People informal relationship, employee's development, job rotation & Authority delegation are the areas of concern and requires special attention.

Table 3 : Correlation Between Overall HRD Climate, HRD Climate components and Organizational Commitment

		Organizational Commitment	HRD Climate	General Climate	HRD Mechanism	HRD Culture
Organizational Commitment	Pearson Correlation	1	.634**	.586**	.569**	.529**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	593	593	593	593	593
HRD Climate	Pearson Correlation	.634**	1	.892**	.907**	.841**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	593	593	593	593	593
General Climate	Pearson Correlation	.586**	.892**	1	.689**	.663**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	593	593	593	593	593
HRD Mechanism	Pearson Correlation	.569**	.907**	.689**	1	.665**

	Sig. (2-tailed)	.000	.000	.000		.000
	N	593	593	593	593	593
HRD Culture	Pearson Correlation	.529**	.841**	.663**	.665**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	593	593	593	593	593

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

It was clear from the above table that there exists a positive association between HRD Climate and organizational commitment. This was ensured as the correlation coefficient value was 0.634 and it was highly significant. It is stated that if the significance level is very small (less than 0.05) then the correlation is significant and the two variables are said to be linearly related. Similarly a positive relationship is also found between HRD climate components: General Climate & OC (.586), HRD Mechanism & OC (.569) & HRD Culture & OC (.529). Hence the positive relationship between the effective implementation of HRD Climate practices and level of individual's commitment towards the organizations has been made apparent.

Table 4 : Model 1 : HRD Climate and Organizational Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.634[a]	.402	.401	.50381

a. Predictors: (Constant), HRD CLIMATE

R = .634 This Shows that there is a simple correlation between HRD Climate and Organisational Commitment. R Square = .402, which tells us that HRD Climate accounts for 40.2% of the variation in Organizational Commitment.

Table 5 : ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	100.847	1	100.847	397.303	.000[b]
	Residual	150.013	591	.254		
	Total	250.860	592			

a. Dependent Variable: ORGANIZATIONAL COMMITMENT

b. Predictors: (Constant), HRD CLIMATE

It can be inferred from above table that the regression model was valid. This was ensured as the significance value of the F statistic is small (smaller than 0.05) which indicates that the independent variable has done a good job of explaining the variation in the dependent variable.

Table 6 : Coefficients[a]

Model		UnStandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.560	.107		14.613	.000
	HRD Climate	.566	.028	.634	19.932	.000

a. Dependent Variable: ORGANIZATIONAL COMMITMENT

The beta value indicates that increasing the HRD practices by 1 unit will increase the organizational commitment by 0.56 units.

Further a deeper analysis was also done to find relationship between HRD Climate Components – HRD, General Climate, HRD Mechanism, HRD Culture and Organizational Commitment, regression analysis was done again.

Table 7 : Model 2 - Relationship between HRD-General Climate, HRD Mechanism, HRD Culture and Organizational Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638[a]	.407	.404	.50262

a. Predictors: (Constant), HRD Culture, General Climate, HRD Mechanism

R = .638 This Shows that there is a simple correlation between HRD Climate variables (HRD – General Climate, HRD Mechanism & HRD Culture) and Organisational Commitment. R Square = .402, which tells us that HRD Climate accounts for 40.2% of the variation in Organizational Commitment.

Table 8 : Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.596	.105		15.148	.000

HRD - General Climate	.233	.036	.307	6.485	.000
HRD Mechanism	.196	.037	.251	5.303	.000
HRD Culture	.127	.037	.159	3.467	.001

a. Dependent Variable: ORGANIZATIONAL COMMITMENT

The standardized coefficient for each of independent variable is HRD - General Climate (B = 0.233, P =.00); HRD Mechanism (B = .196, P = .00) & HRD Culture (B = 0.127, P = .00)

As shown in the above table the results of regression analysis can also be depicted in the regression equation form based on regression coefficients.

OC = 1.596 + 0.233 (HRD – General Climate) + 0.196 (HRD Mechanism) + 0.127(HRD Culture)

FINDINGS & CONCLUSIONS

The overall HRD climate in auto component manufacturing companies is 3.68 accounts for 67%. Table 3 shows the analysis shed light on the strong positive effect of HRD Climate on Organizational commitment (R=.634). It shows that Human resource development practices positively affect the organisational commitment of employees. In table 4 Regression analyses shows the high significance of independent variable (HRD Climate) on dependent variable (Organisational commitment), as we can see 40.02 % of the variation in organisational commitment is explained variables, while 60.08 % is the inherent variability or remain unexplained.

Table 3 shows that there is a positive relationship between HRD climate components: General Climate & Organisational Commitment (.586), HRD Mechanism & Organisational commitment (.569) & HRD Culture & Organisational Commitment (.529). Regression analyses shows the high significance of independent variables HRD – General Climate , HRD Mechanism & HRD Culture on dependent variable Organisational commitment, as we can see 40.02 % of the variation in organisational commitment is explained by independent variables, Three component of HRD Climate tested including HRD – General climate (β =.0.233 F = .000), HRD Mechanism (β = .196, F = .000), HRD cultural (β = .127, F = .000) are significantly contributing towards the Organisational commitment. All it shows that, HRD Climate components have a significant contribution in employee's organisational commitment.

IMPLICATIONS

HRD climate of auto component industry lies in satisfactory range. The mean value is 3.68 i.e. 67%. Delegation of authority, Career opportunities, Job rotation, Informal relationships & subordinate superior relationships are the major areas of concern and needs special attention to improve overall HRD score.

Overall HRD climate is significantly related with organizational commitment and if HRD climate is increased by one unit would increase the organizational commitment by 0.56 units.

RESEARCH LIMITATIONS & SCOPE FOR FUTURE RESEARCH:

The current study was conducted to examine the Human Resource Development climate variables relationship with organizational commitment within the context of Auto component manufacturing units. Since the study was conducted in one sector, the findings may not be applicable in other types of organizations in other sectors. Therefore, further studies are needed using other sectors in India, and in different countries too. Some new variables should also include in further researches like performance management, technology change and automation etc.

REFERENCES/BIBLIOGRAPHY:

Allen, N.J., & Meyer J.P. (1990), The measurement and Antecedents of Affective, Continuance and Normative commitment, *Journal of Occupational Psychology* 63, pp. 1-18.

Allen, N.J., & Meyer, J.P. (1993), Organisational Commitment: Evidence of career stage effect? , *Journal of Business Research*, 26, pp.49-61.

Bagozzi , R.P., Yi,Y. (1988), On the Evaluation of Structure Equation Models, *Journal of the Academy of Marketing Science*, 16 (1), pp.74-94.

Bentler , P.M. & Bonett, D.G. (1980), Significance Tests And Goodness-Of-Fit In The Analysis Of Covariance Structures, *Psychological Bulletin*, 88, pp.588 – 606 .

Chaudhary, R., Rangnekar, S., Barua M. (2013), Human Resource Development Climate in India: Examining the Psychometric Properties of HRD Climate Survey Instrument, *Vision 17(1*).

Daniel, E.G.(2012), Impact of Human Resource Development & Organisational Commitment on Financial Sector Employees in Nigeria. Scientific Annals of the "Alexandru Ioan Cuza", *University of Iaşi Economic Sciences 59* (2), pp. 29-41.

Devi, V. & Pujitha, V., (2013), The influence of HRD Climate on Organisational commitment. *Golden Research Thoughts,* 2 (7).

Dixit, V., & Bhati, M., (2012), A Study about Employee Commitment and its impact on Sustained Productivity in Indian Auto-Component Industry., *European Journal of Business and Social Sciences*, 1(6), pp 34 – 51.

Ewis, M. (2015) , The role of Human Resources Development Climate in Building Positive Job Attitudes and Extra – Role Behaviours , *International Journal of Business and Management*, 10(5).

Fornell, Claes & David F. Larker (1981), Evaluating Structural Equation Models with Unobservable Variables and Measurement Error, *Journal of Marketing Research*, 18 (February), pp. 39-50.

Hu, L. & Bentler, P.M. (1999), Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives, *Structural Equation Modeling*, 6, pp.1-55.

Imran, A., & Ahmed, M., (2012), Impact of Human Resource Management Practices on Organizational Commitment: A Study among Service Sector Employees in Pakistan. *Interdisciplinary Journal of Contemporary Research In Business,* 2, pp. 81-90.

Malhotra N. K., Dash S. (2011), Marketing Research an Applied Orientation. *London: Pearson Publishing.*

Nunnally, J.C., & Bernstein, I.H. (1994), *Psychometric Theory (3rd ed.),* New York: McGraw-Hill.

Rao, T.V. and Abraham, S.J. (1986), Recent Experiences in HRD, *Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi*, pp. 23-34.

Saraswati, S. (2010), Human Resources Development Climate: An Empirical Study. *International Journal of Innovation, Management and Technology*, 1(2), pp.174-179.

Solkhe ,A & Chaudhary, N. (2010) , HRD Climate and Job Satisfaction: An Empirical Investigation, *International Journal Of Computing And Business Research*, Vol. 2 .

IMPACT OF DEMOGRAPHIC VARIABLES ON THE PSYCHOLOGICAL WELL BEING OF FACULTY MEMBERS

Dr. Anjali Ahuja
Assistant Professor
DAV Institute of Management
Faridabad, Haryana.
Anjali_bhakhar@yahoo.com, bhakharanjali@rediffmail.com

ABSTRACT

Psychological Well Being is a complex construct that is concerned with the optimal psychological functioning and entails the perception of engagement with existential challenges of life. Psychological well-being refers to how people evaluate their lives. Most people evaluate their life as either good or bad. Various researches have shown that a person's well-being predicts job attitudes and performance. There are various factors which can influence the psychological well being of an individual. In the current study, impact of demographic factors of faculty members on their psychological well being is being studied. In the context of faculty members, psychological well-being is critical and not just a "nice-to-have". In current study 54 faculty members from management institutes in Faridabad have been studied. Ryff's scale of Psychological Well being (Ryff, 1995) was used to measure psychological well being of faculty members. Results of t test and ANOVA depict that there is a significant impact of 'Age' and 'Experience' of faculty members on their psychological well being. Whereas 'gender' of faculty members has no significant impact on their PWB score.

Keywords: *Psychological Well Being, Gender, Age, Experience, Faculty Members*

INTRODUCTION

The Concept of Psychological Well Being

The term 'Well being' has been defined from various perspectives. Some researchers define it from two perspectives: Clinical perspective and Psychological perspective. Clinical perspective defines well being as the absence of negative physical conditions. Psychological perspective defines well being as the prevalence of positive attributes. Since ancient times people have searched for an answer to what makes a good life. Researchers of field of psychological well being assume that an important feature of a good life is that the person himself likes his life. Early studies of well-being were focused on the absence of psychopathology. But the recent studies emphasize on optimal PWB **(Bar-On, 2005; Huppert, Baylis, & Keverne, 2004).** Huppert et al. describe subjective well-being as living life well. Some other researchers consider psychological well being in terms of happiness (eudaimonia) **(Aristotle, 1947; and Deci and Ryan, 2008).** It is concerned with an individual's judgement regarding enduring mood (happiness). Some consider it as evaluation of self, i.e. satisfaction with one's physical and mental health and functioning; and its relation to material and psycho-social environment (life and work satisfaction).

According to **Ryff (1989),** psychological well being indicates "whether and to what extent an individual is dealing with the existential challenges of life, focusing on self realization, and whether the person is fully functioning, leading to satisfaction in all aspects of life. The six psychological dimensions identified by his model are:

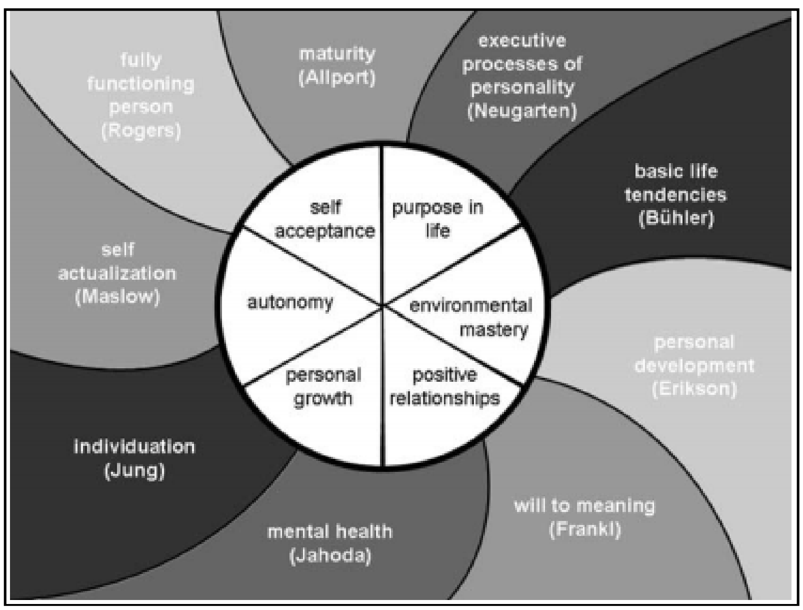


Figure 1: Core Dimensions of PWB And Their Theoretical Foundations

Source: Ryff and Singer (2008), Journal of Happiness Studies, 9, pp. 20

1. Self Acceptance: Having a positive attitude towards the self, acknowledgement and acceptance of multiple aspects of self and feeling positive about past life.
2. Environmental mastery: Having a sense of mastery and competence in managing the environment and an ability to choose or create contexts suitable to personal needs and values.

3. Positive relations with others: Maintaining warm, satisfying, trusting relationships with others, showing concern about the welfare of others, having a capability of strong empathy, and understanding the importance of give and take attitude in human relationships.
4. Purpose in life: Having goals and a sense of direction in life, feeling that there is a meaning to present and past life and maintaining beliefs that give purpose to one's life.
5. Personal Growth: Having feelings towards continuous development, seeing self as growing and expanding, openness to new experiences, realizing one's potential, seeing improvement in self and behaviour over time, and changing in ways that reflect more self knowledge and effectiveness.
6. Autonomy: Having autonomy means possessing self determination, independence, and ability to resist the social pressures to think and act in certain ways, regulation of behaviour from within, and self evaluation by personal standards.

RESEARCH METHODOLOGY

Hypothesis

H0 (Null Hypothesis): There is no significant impact of Gender, Age and Experience of faculty members on their psychological well being

Sampling Technique: As the data was related to the behavioral aspect of individuals, convenience sampling technique was used.

Sample Size: The study is conducted on the basis of sample of 54 faculty members taken from management institutes of Faridabad.

Data Collection

Primary data on psychological well being was collected and administered from well-structured questionnaire. Ryff's scale of Psychological Well being (Ryff, 1995) was used to measure psychological well being. It measures six constructs of psychological wellbeing (as mentioned above).

The questionnaire consisted of 42 items. Out of these 42 items, 20 were negative and 22 were positive. The responses were taken on a 6 point scale ranging from 'Strongly Disagree to Strongly Agree'.

Reliability and Validity of Instrument: The internal consistency coefficients of the instrument were found to be quite high (between 0.86 and 0.93). The test-retest reliability coefficients for a sub-sample of the participants over a 6 week period were also found to be high (0.81-0.88). Construct validity of the instrument has been checked.

Total 70 questionnaires were distributed out of which 54 complete questionnaires were obtained. The response rate was 85 percent.

Secondary Data: The secondary information was collected from available literature on the topic from Journals, Books, Newspaper and Magazines; and Internet.

DATA ANALYSIS TOOLS AND TECHNIQUES

Data was analyzed by appropriate statistical tools such as percentage, mean, standard deviation and different statistical tests (t test, ANOVA, Post hoc analysis). SPSS (v. 17.0) was used for this purpose.

Gender and Psychological Well being

According to ‘Gender’ the respondents were divided into two categories, i.e. Male and Female. To find out the impact of ‘Gender’ on psychological well being, independent sample t-test was applied. This test checks out whether the differences in means of two groups are significant or they are by chance only. In this case it was independent sample t-test because the two samples (male and female samples) are independent of each other. Table 1 depicted the descriptive statistics of PWB score of respondents according to Gender:

Table 1: Summary Of Mean Score And Standard Deviation Of PWB Score On The Basis Of Gender Of Respondent

	Gender	N	Mean	Std. Deviation
Autonomy	Female	42	27.00	4.643
	Male	12	29.33	3.499
Environmental Mastery	Female	42	28.29	3.337
	Male	12	29.17	2.657
Personal Growth	Female	42	33.62	4.924

	Male	12	34.17	5.060
Positive Relations With Others	Female	42	35.24	3.850
	Male	12	32.33	5.449
Purpose In Life	Female	42	31.86	4.365
	Male	12	31.50	4.079
Self Acceptance	Female	42	32.29	4.769
	Male	12	32.67	5.990
Total PWB	Female	42	188.29	16.655
	Male	12	189.17	23.798

The table represented the mean scores of male and female respondents for 6 factors of psychological well being and total PWB score. It also depicts the Standard deviation for all factors. The mean varies for male and female respondents in almost each factor. But to test whether this difference in mean is significant or not, results of t-test were seen (table 2).

The variables where F value was significant (<.05), t value and its significance in 'Equal variances assumed' row was notified and where F value was not significant (>.05), t value and its significance in 'Equal variances not assumed' row was notified. Accordingly, by viewing all t values and their significance the conclusion drawn is that male and female does not vary significantly in any of the factor of PWB. So, this null hypothesis is accepted, this means gender has no impact on psychological well being of faculty members.

Table 2: Summary of T-Test Of PWB Score On The Basis Of Gender Of Respondent

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**
Autonomy	Equal variances assumed	.333	.567	-1.611	52	.113	-2.333	1.449
	Equal variances not assumed			-1.884	23.274	.072	-2.333	1.238
Environmental mastery	Equal variances assumed	2.300	.135	-.840	52	.405	-.881	1.049
	Equal variances not assumed			-.954	21.952	.351	-.881	.924
Personal growth	Equal variances assumed	.207	.651	-.338	52	.737	-.548	1.621
	Equal variances not assumed			-.333	17.414	.743	-.548	1.647

Positive relations with others	Equal variances assumed	.969	.330	2.094	52	.041	2.905	1.387
	Equal variances not assumed			1.727	14.283	.106	2.905	1.682
Purpose in life	Equal variances assumed	.857	.359	.253	52	.801	.357	1.409
	Equal variances not assumed			.263	18.835	.795	.357	1.356
Self acceptance	Equal variances assumed	1.216	.275	-.230	52	.819	-.381	1.654
	Equal variances not assumed			-.203	15.212	.842	-.381	1.879
Total psychological well being score	Equal variances assumed	2.101	.153	-.146	52	.884	-.881	6.022
	Equal variances not assumed			-.120	14.219	.906	-.881	7.335

This depicts that the males and females do not differ in their psychological well being. Current studies regarding gender differences related to psychological well being reflect contradictory results. Some researchers of view that gender differences exist in well being **(Crose, Nicholas, Gobble and Frank, 1992; Lu, 2000; Stephens, Dulberg & Joubert, 1999).** Some others **(Ek, 2000)** found no marked gender difference**.**

Age and Psychological Well being

According to age the respondents were divided into three categories, i.e. ‘Below 30’, ‘30-39’, ‘40 and above’. To find out the impact of Age on psychological well being of faculty members, ANOVA was applied (as the number of categories was more than 2). Descriptive statistics of PWB scores of respondents according to different age categories are depicted in table 3:

Table 3: Summary of Mean Score and Standard Deviation of PWB Score on The Basis of Age of Respondent

Factors	Age	N	Mean	Std. Deviation	Std. Error
Autonomy	Below 30	8	23.75	3.655	1.292
	30-39	36	27.72	4.743	.790
	40 and above	10	29.80	1.549	.490
	Total	54	27.52	4.492	.611
Environmental mastery	Below 30	8	27.75	4.234	1.497
	30-39	36	28.83	3.085	.514
	40 and above	10	27.80	2.781	.879
	Total	54	28.48	3.196	.435
Personal growth	Below 30	8	30.50	5.099	1.803
	30-39	36	34.00	5.237	.873
	40 and above	10	35.40	1.578	.499
	Total	54	33.74	4.911	.668
Positive relations with others	Below 30	8	32.75	3.882	1.373
	30-39	36	35.28	4.645	.774
	40 and above	10	33.60	3.307	1.046

	Total	54	34.59	4.372	.595
Purpose in life	Below 30	8	29.00	2.928	1.035
	30-39	36	32.22	4.543	.757
	40 and above	10	32.40	3.502	1.108
	Total	54	31.78	4.268	.581
Self acceptance	Below 30	8	28.50	5.155	1.822
	30-39	36	33.00	5.335	.889
	40 and above	10	33.20	.789	.249
	Total	54	32.37	5.007	.681
Total psychological well being score	Below 30	8	172.25	17.523	6.195
	30-39	36	191.06	18.815	3.136
	40 and above	10	192.20	8.066	2.551
	Total	54	188.48	18.228	2.480

The above table represents the mean scores of respondents for 6 factors of psychological well being and total PWB score on basis of their age category. It also depicts the Standard deviation for all factors. The mean varies for different age categories in almost each factor. But to test whether this difference in mean is significant or not, results of ANOVA table should be seen.

One of the assumptions of the one-way ANOVA is that the variances of the groups in comparison are similar. The table ‘Test of Homogeneity of Variances’ shows the result of Levene's Test of Homogeneity of Variance. If the significance value is greater than 0.05 then it means there is homogeneity of variances. The results are depicted in table 4:

Table 4: Test of Homogeneity of Variances

	Levene Statistic	**df1**	**df2**	**Sig.**
Autonomy	3.691	2	51	.032

Environmental Mastery	1.106	2	51	.339
Personal Growth	5.443	2	51	.007
Positive Relations With Others	.659	2	51	.522
Purpose In Life	.929	2	51	.402
Self Acceptance	8.461	2	51	.001
Total PWB	3.850	2	51	.028

From the table it is clear that the assumption of homogeneity of variance is met in the case of Environmental Mastery, Positive relations with others and Purpose in life. For these factors ANOVA table would be referred for significance (p) value. For remaining factors where assumption of homogeneity of variance is not met, ‘Robust Tests of Equality of Means’ Table (output of Welch test) would be referred for p value. The values given in the table 5 are mentioned accordingly.

Table 5: Summary of ANOVA Results For Psychological Well Being According To Age of Respondents

		Sum of Squares	df	Mean Square	F	Sig.
Autonomy	Between Groups	167.159	2	83.580	4.724	.001**
	Within Groups	902.322	51	17.693		
	Total	1069.481	53			
Environmental Mastery	Between Groups	13.381	2	6.691	.646	.528
	Within Groups	528.100	51	10.355		
	Total	541.481	53			
Personal Growth	Between Groups	113.970	2	56.985	2.496	.042*

	Within Groups	1164.400	51	22.831		
	Total	1278.370	53			
Positive Relations With Others	Between Groups	53.915	2	26.957	1.433	.248
	Within Groups	959.122	51	18.806		
	Total	1013.037	53			
Purpose In Life	Between Groups	72.711	2	36.356	2.077	.136
	Within Groups	892.622	51	17.502		
	Total	965.333	53			
Self Acceptance	Between Groups	140.993	2	70.496	3.027	.070
	Within Groups	1187.600	51	23.286		
	Total	1328.593	53			
Total PWB	Between Groups	2484.493	2	1242.246	4.189	.029*
	Within Groups	15124.989	51	296.568		
	Total	17609.481	53			

The table clearly depicted that some of the factors of psychological well being and total PWB are significantly different ($p<0.05$) across different categories of age. These factors are: Autonomy, Personal Growth and Total PWB. But this does not tell which of the specific groups differed. This could be found from the ‘Multiple Comparisons Table’ of post hoc tests. The Tukey *post-hoc* test is generally the preferred test for conducting post-hoc tests on a one-way ANOVA when equal variances are assumed and Games-Howell test when equal variances not assumed. So for all the three variables Games-Howell test has been seen and the results are as under:

Table 6: Results of Post-Hoc Analysis (Games Howell Test) For Age

Dependent	**(I) AGE**	**(J) AGE**	**Mean**	**Std.**	**Sig.**

Variable			**Difference (I-J)**	**Error**	
Autonomy	Below 30	30-39	-3.972	1.515	.052
		40 and above	-6.050*	1.382	.005**
	30-39	Below 30	3.972	1.515	.052
		40 and above	-2.078	.930	.077
	40 and above	Below 30	6.050*	1.382	.005**
		30-39	2.078	.930	.077
Personal Growth	Below 30	30-39	-3.500	2.003	.234
		40 and above	-4.900	1.871	.070
	30-39	below 30	3.500	2.003	.234
		40 and above	-1.400	1.005	.354
	40 and above	below 30	4.900	1.871	.070
		30-39	1.400	1.005	.354
Total Psychological Well Being Score	Below 30	30-39	-18.806*	6.944	.050
		40 and above	-19.950*	6.700	.036*
	30-39	below 30	18.806*	6.944	.050
		40 and above	-1.144	4.042	.957
	40 and above	Below 30	19.950*	6.700	.036*
		30-39	1.144	4.042	.957

On basis of above results following significant pairs came out:

Table 7: Significant Pairs of Difference on the Basis of Age

Dimension	**Significant Pairs**
Autonomy	A1 vs. A3
Personal Growth	No significant pair

Total PWB	A1 vs. A3

This means that the Autonomy differ for ‘Below 30’ age group and ‘40 and above’ age group significantly. In case of ‘Personal Growth’, no significant pair of difference came out. In case of total PWB, again ‘Below 30’ age group and ‘40 and above’ age group are significantly different. If we see the results of table 3, it is clearly evident that with increase in age, Autonomy, personal growth and total Psychological well being increases. This is because with age as maturity increases, we are able to take decisions on our own. Even with increase in age we become more aware about the personal growth and become more inclined toward it. Total PWB also increase with age because with time we become more stable and adaptive and so we can have a better mental health. This null hypothesis is partially accepted and partially rejected as some of the factors are not influenced by Age, whereas some are significantly influenced.

Experience and Psychological Well Being

According to experience the respondents were divided into three categories, i.e. ‘Below 10Years’, ‘11-19years’, ‘20 Yrs. and above’. To find out the impact of experience on psychological well being of faculty members, ANOVA was applied (as the number of categories was more than 2). Descriptive statistics of PWB scores of respondents according to different experience categories are depicted in table 8:

Table 8: Summary of Mean Score and Standard Deviation of PWB score on the basis of Experience of Respondent

Factors	**Experience**				
Autonomy	Below 10years	24	25.08	5.149	1.051
	11-19	26	29.38	2.844	.558
	20 and Above	4	30.00	.000	.000

	Total	54	27.52	4.492	.611
Environmental Mastery	Below 10years	24	28.25	3.442	.703
	11-19	26	28.77	2.833	.556
	20 and Above	4	28.00	4.619	2.309
	Total	54	28.48	3.196	.435
Personal Growth	Below 10years	24	32.58	5.649	1.153
	11-19	26	34.38	4.300	.843
	20 and Above	4	36.50	1.732	.866
	Total	54	33.74	4.911	.668
Positive Relations With Others	Below 10years	24	34.33	3.667	.749
	11-19	26	35.15	4.880	.957
	20 and Above	4	32.50	5.196	2.598
	Total	54	34.59	4.372	.595
Purpose In Life	Below 10years	24	30.92	3.900	.796
	11-19	26	32.23	4.769	.935
	20 and Above	4	34.00	1.155	.577
	Total	54	31.78	4.268	.581
Self Acceptance	Below 10years	24	30.92	5.348	1.092
	11-19	26	33.54	4.810	.943
	20 and Above	4	33.50	.577	.289
	Total	54	32.37	5.007	.681
Total Psychological Well Being Score	Below 10years	24	182.08	17.288	3.529
	11-19	26	193.46	18.368	3.602
	20 and Above	4	194.50	13.279	6.640

	Total	54	188.48	18.228	2.480

The above table represents the mean scores of respondents for 6 factors of psychological well being and total PWB score on basis of their experience. It also depicts the Standard deviation for all factors. The mean varies for different experience categories in almost each factor. But to test whether this difference in mean is significant or not, results of ANOVA table should be seen.

First we should check the table ‘Test of Homogeneity of Variances’ which shows the result of Levene's Test of Homogeneity of Variance. If the significance value is greater than 0.05 then it means there is homogeneity of variances. The results are depicted in table 9:

Table 9: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Autonomy	4.598	2	51	.015
Environmental Mastery	2.504	2	51	.092
Personal Growth	2.282	2	51	.112
Positive Relations With Others	.626	2	51	.539
Purpose In Life	2.049	2	51	.139
Self Acceptance	2.824	2	51	.069
Total PWB	.044	2	51	.957

From the table it is clear that the assumption of homogeneity of variance is met in the case of Environmental Mastery, Personal Growth, Positive relations with others, Purpose in life, Self Acceptance and Total PWB. For these factors ANOVA table would be referred for significance (p) value. For remaining factors where assumption of homogeneity of variance is not met, ‘Robust Tests of Equality of Means’ Table (output of

Welch test) would be referred for p value. The values given in the table 10 are mentioned accordingly.

Table 10: Summary Of ANOVA Results For Psychological Well Being According To Experience Of Respondents

		Sum of Squares	Df	Mean Square	F	Sig.
Autonomy	Between Groups	257.494	2	128.747	8.086	.001**
	Within Groups	811.987	51	15.921		
	Total	1069.481	53			
Environmental Mastery	Between Groups	4.366	2	2.183	.207	.813
	Within Groups	537.115	51	10.532		
	Total	541.481	53			
Personal Growth	Between Groups	73.383	2	36.692	1.553	.221
	Within Groups	1204.987	51	23.627		
	Total	1278.370	53			
Positive Relations With Others	Between Groups	27.319	2	13.660	.707	.498
	Within Groups	985.718	51	19.328		
	Total	1013.037	53			
Purpose In Life	Between Groups	42.885	2	21.442	1.185	.314
	Within Groups	922.449	51	18.087		

	Total	965.333	53			
Self Acceptance	Between Groups	91.298	2	45.649	1.882	.163
	Within Groups	1237.295	51	24.261		
	Total	1328.593	53			
Total PWB	Between Groups	1772.187	2	886.093	2.853	.067
	Within Groups	15837.295	51	310.535		
	Total	17609.481	53			

The table clearly depicted that the experience of respondent has no impact on their total psychological well being score, as p value is greater than 0.05. But 'Autonomy' one of the factors of psychological well being is significantly different ($p<0.05$) across different categories of experience. But this does not tell which of the specific groups differed. This could be found from the 'Multiple Comparisons Table' of post hoc tests. The Tukey *post-hoc* test is generally the preferred test for conducting post-hoc tests on a one-way ANOVA when equal variances are assumed and Games-Howell test when equal variances not assumed. So for 'Autonomy' Games-Howell test has been seen and the results are as under:

Table 11: Results of Post-Hoc Analysis (Games Howell Test) For Experience

Dependent Variable	**(I) Experience**	**(J) Experience**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Autonomy	Below 10Years	11-19	-4.301*	1.190	.003**
		20 and Above	-4.917*	1.051	.000**
	11-19	Below 10years	4.301*	1.190	.003**

		20 and Above	-.615	.558	.521
	20 and Above	Below 10years	4.917*	1.051	.000**
		11-19	.615	.558	.521

Difference between all the pairs is not significant. On the basis of above results following significant pairs came out:

Table 12: Significant Pairs of Difference on Basis Of Experience

Dimension	**Significant Pairs**
Autonomy	E1 vs. E2 E1 vs. E3

This means Autonomy is different across two experience categories: ‘below 10 years’ and ‘11-19 years’, ‘below 10 years’ and ‘20 years and above’. If we see table 8, it is evident that Autonomy increases with experience. So, this null hypothesis is partially accepted and partially rejected. Some factors are influenced by Experience, whereas some other factors are not at all influenced by it.

CONCLUSION

The results of t test and ANOVA depict that there is a significant impact of ‘Age’ and ‘Experience’ of faculty members on their psychological well being. ‘Autonomy’ is the main factor of PWB which is significantly influenced by ‘Age’ and ‘Experience’. With increase in age, Autonomy, personal growth and total Psychological well being increases. Whereas ‘gender’ of faculty members has no significant impact on their PWB score.

REFERENCES/BIBLIOGRAPHY

Aristotle (1947), “Nicomachean Ethics” (Translated by Ross W D), in McKeon R, *Introduction to Aristoltle*, Modern Library, New York.

Bar-On, R. (2005), “The Impact of Emotional Intelligence on Subjective Well-Being”, *Perspectives in Education*, 23(2), 41-62.

Crose, R.; Nicholas, D.R.; Gobble, D.C. and Frank, B. (1992), “Gender and Wellness: A Multidimensional Systems Model for Counselling”, *Journal of Counselling and Development*, 71, pp. 149-156.

Deci, E. L. and Ryan, R.M. (2008), “Hedonia, Eudaimonia and Well being an introduction”, *Journal of Happiness Studies,* 9, pp. 1-11.

Huppert, F. A., Baylis, N., & Keverne, B. (2004), “Introduction: Why Do We Need A Science of Well-Being?”, *Philosophical Transactions of the Royal Society of London: Biological Sciences,* 359(1449), pp. 1331-1332.

Kerlinger, F.N. (1986), *Foundations of Behavioral Research*, Fort Worth: Harcourt Brace Jovanovich College Publications, pp.348.

Kothari, C.R. (2006), Research Methodology: Methods and Techniques (Second Edition), New Age International (P) Limited, Publishers, New Delhi.

Krishnaswamy, K.N., Sivakumar, A.I., & Mathirajan, M. (2009), *Management Research Methodology: Integration of Principles, Methods and Techniques,* Dorling Kindersley (India) Pvt. Ltd., Delhi.

Lu, L. (2000), “Gender and Conjugal Differences In Happiness”, Journal of social psychology, 140 (1).

Malhotra, Naresh K. (2007), *Marketing Research: An Applied Orientation*, (Fifth Edition), Pearson Prentice Hall

Nargundkar, Rajendra (2009), *Marketing Research: Text and Cases* (Third Edition), Tata McGraw Hill, New Delhi.

Nunnally, Jum & Bernstein, Ira (1994), *Psychometric Theory*, McGraw-Hill Humanities/Social Sciences/Languages, 3rd edition, pp.251-261.

Ryff, C.D. (1989), "In The Eyes Of The Beholder: Views Of Psychological Well Being Among Middle And Old Age Adults", *Psychology and Aging*, Vol. 4, No. 2, pp. 195-210.

Ryff, C.D. (1989b), "Happiness Is Everything, Or Is It? Explorations On The Meaning Of Psychological Well-Being", *Journal of Personality and Social Psychology*, 57(6), pp. 1069–1081.

Ryff, C., & Keyes, C. (1995), The Structure Of Psychological Well-Being Revisited, *Journal of Personality and Social Psychology, 69*, pp. 719–727.

Ryff, C.D. and Singer B.H. (2008), "Know Thyself And Become What You Are: A Eudaimonic Approach To Psychological Well Being", *Journal of Happiness Studies*, 9, pp. 13–39.

Stephens, T.; Dulberg, C. & Joubert, N. (1999), *"Mental Health of The Canadian Population: A Comprehensive Analysis"*, Chronic Disease in Canada, 20 (3).

EFFECT OF DEMOGRAPHIC VARIABLES ON ATM BANKING SERVICE QUALITY DIMENSIONS

Dr. Rajiv Sindwani

Assistant Professor

Department of Management Studies

YMCA University of Science and Technology

Faridabad, India

rajiv_sindwani@yahoo.co.in

ABSTRACT:

The objective of this study is to investigate the effect of demographic variables on five dimensions (Reliability, Convenience, Responsiveness, Ease of use and Fulfillment) of ATM banking service quality. The demographic variables covered under the study were Gender, Age, Education, Occupation and Income. Data was collected from 216 ATM banking service users in Panipat city. Levene's test of equality of variance, t test, one-way analysis of variance (ANOVA) and post-hoc tests were performed on the collected data. The results demonstrated the significant influence of Age on Responsiveness dimension. The study presents an interesting finding that none of the demographic variable except age has a significant effect on ATM banking service quality dimensions. The research suggest to the bankers to arrange customized education and training programs for ATM banking customers of different age groups as per their requirements.

Keywords: *Demographic Variables, ATM Banking Service Quality, t test, ANOVA, Levene's Statistics, Post hoc test*

INTRODUCTION

The development of ICT has brought revolution in the banking sector. The banking sector has embraced the use of technology to serve its customers better and one of the major contributions of technology is electronic banking (e-banking). Researchers have classified e-banking broadly into ATM Banking, internet banking, tele banking and mobile banking (Joseph and Stone, 2003; Sindwani & Goel, 2012a). Although these electronic delivery channels were launched by private and foreign banks in order to overcome their restraint of limited branches, but in the last decade public sector banks have also heavily invested in automation (Joshua, 2009; Sindwani & Goel, 2014a). The services provided by electronic banking modes are advantageous for both the banks and their customers. E-banking results in cost reduction and less pressure on branches. It also helps in standardizing service delivery. For the customers, e-banking modes provide value to customers in the form of anytime, anywhere banking (Sindwani & Goel, 2015a). In the 21st century, almost all the commercial banks in India are offering electronic banking services to its customers through multiple channels (Joshua, 2009; Sindwani & Goel, 2016). As the products offered by the banks are mostly indistinguishable in nature, banks are trying to get competitive advantage on aspects like service quality to enhance customer satisfaction and loyalty (Stafford, 1996; Sindwani & Goel, 2015b). This is so because customer satisfaction and loyalty is considered critical for an organization's survival and success (Hallowell, 1996; Ganguli and Roy, 2011; Sindwani & Goel, 2014b). HSBC bank was the pioneer to start automated banking services in India by establishing ATM for the first time in 1987. Undoubtedly, ATM banking has become the most popular mode among the various available e-banking modes. While ATMs facilitate an assortment of banking options for the customers, but their maximum usage has been for cash withdrawal and balance enquiry (Bishnoi, 2013). Branch banking is progressively being replaced by automated banking in India (Sindwani & Goel, 2015c). Acceptance of automated banking services including ATM banking is increasing among Indian bank customers day by day and this growth has resulted in rising interest of academicians and bankers in measuring ATM and other automated modes banking service quality (Sindwani & Goel, 2012b).

With time, various scales representing dimensions (factors) of ATM banking service quality have been proposed by various researchers (Sindwani & Goel, 2012c). The previous research suggested that consumer demographics have an influence on service quality dimensions of banking technologies (Gupta & Bansal, 2011). The aim of this paper is to investigate the effect of demographic variables on the dimensions of ATM banking service quality.

LITERATURE REVIEW

ATM Banking Service Quality

The significance of alternate banking channels service quality has increased over the years. Some of the important studies conducted in various countries across the world for finding the dimensions of ATM banking service quality are described below

Lovelock (2000) asserted that effective service delivery in ATM system results in excellence in quality, autonomy to the customers and superior performance. He found adequate number of ATMs, secure and convenient location, functionality of ATM and user-friendly system as factors of ATM banking service quality.

Dilijonas et al. (2009) inspected the vital elements of ATM banking service quality in Baltic States. Researchers identified essential resources (convenient and secure location, adequate number of ATMs, user-friendly system); important dimensions of operation of ATM (minimum errors, high uptime, maximum speed, cash backup) and value-based aspects (maximum offering to cover maximum needs of customers, quality service at reasonable cost,) as crucial aspects.

Khan (2010) examined key dimensions of ATM service quality and its influence on customer satisfaction. Analysis results showed reliability, efficient operation, convenience, security and privacy, and responsiveness as the dimensions of ATM service quality. Results also confirmed that ATM service quality positively affect customer satisfaction.

Kumbhar (2011a) found various dimensions of ATM service quality as Convenience, System Availability, Security & Responsiveness, Fulfillment and Efficiency, Problem Handling and Contact, Easiness, and Cost Effectiveness.

Narteh (2013) identified the ATM service quality dimensions and also evaluated relative importance of these dimensions. Five dimensions of the “ATMqual” indentified in order of importance were reliability, convenience, responsiveness, ease of use and fulfillment.

Embiale (2016) conducted a study examine the influence of ATM service quality on customer satisfaction. Researcher established five ATM service quality dimensions namely security, reliability, user-friendliness, convenience, and responsiveness. Analysis results showed that convenience, reliability, responsiveness, user-friendliness and security dimensions of ATM service quality were positively and significantly related to customer satisfaction.

On the basis of review of the above mentioned studies on ATM banking service quality, it has been found that different studies have identified different service quality dimensions of ATM banking. Among these important studies, the study conducted by **Narteh (2013)** was based on strong clear-cut theoretical base and was conducted using sound methodology. Moreover, the ATMqual scale proposed by researcher demonstrated good psychometric properties as a result of a number of reliability and validity tests. Therefore, five dimensions indenfied by **Narteh (2013)** were used in this research to study the effect of demographic variables. The various attributes covered by **Narteh (2013)** under five dimensions of ATM service quality are briefed below

Reliability: The Reliability dimension included the following three attributes: ATM Functions all the time, ATM provides consistent services and ATM provides accurate services.

Convenience: The attributes covered under Convenience are: ATM provides different range of services, ATMs are conveniently located and ATM waiting time is acceptable.

Responsiveness: Responsiveness includes the following attributes: ATM system compensates for wrongful Deductions, ATM problems are settled to my satisfaction, ATM contact person is available for redress of Problems and Breakdown ATMs are fixed promptly.

Ease of use: It is related to following aspects: ATM provides clear instructions on usage, ATMs are easy to use for transactions, ATM language is easy to understand, ATM provides graphics and adverts of bank services, and ATM provides education and direction of usage.

Fulfillment: This dimension covers attributes: ATM provides receipt to confirm transactions, ATM gives quality bank notes, ATM provides fast services, ATM provides enough money during transactions.

Demographic Variables and ATM Banking Service Quality

The influence of demographic variables on service quality has been examined by various researchers for different services.

Al-Tamimi and Al-Amiri (2003) conducted a research on Islamic banks in UAE and found that there were differences in the perception of service quality based on age, education level and the number of years for which the customer has been associated with the bank.

Ilias et al. (2008) investigated the influence of demographic factors on the higher education institutions students' satisfaction and service quality. Furthermore, their work also tested the relationship of age with students' satisfaction and service quality. The demographic variables gender, age, race, and a semester of studies were not found to have any significant effect on student satisfaction. Also, there was no significant difference in service quality on the basis of demographic variables gender, a semester of studies and ethnicity.

Ganesan-Lim et al. (2008) found that age was the significant factor in the perception of service quality of passenger transport services, but gender and income were not found have a significant effect.

Kumbhar (2011b) studied the relationship of demographic characteristics of customers on service quality, service value and overall satisfaction in Internet banking services offered by Indian banks. He found that perceived service quality, perceived value from Internet banking services and overall satisfaction in Internet banking differ by age group, education level, profession and income level of the customers, whereas no difference was found based on gender.

Gupta and Bansal (2011) analyzed the effect of demographic variables on customer perception of Internet banking service quality offered by banks in India. Demographic variables covered under study were gender, age, occupation, education level and income. Analysis revealed a significant difference between male and female customers' perceptions on Security/Privacy and Responsiveness dimensions. Results also suggested a significant difference in customers' perceptions by occupation and income groups whereas no significant difference was found on the basis of age and education level.

Palli and Mamilla (2012) conducted a study on the students studying in a higher education institution. The analysis showed that there was no significant difference in the overall satisfaction of the respondents in terms of age, occupation of the parent and total household income, but gender showed a significant difference in the students’ opinion with regard to the service quality of departments of the university.

Min and Khoon (2013) investigated the role of demographic factors in the evaluation of service quality. The study used the data from a survey conducted in a private higher education institution in Singapore. The results revealed that gender, nationality and the present level of the study were influential in the evaluation of service quality, but the age factor did not make any significant difference in the service quality evaluation. Nationality was found to be the most influential factor on service quality. Gender was found to have more impact on the level of satisfaction of the service than on service quality.

Many studies have been conducted to understand the impact of demographic variables on alternate banking channels adoption and service quality. But studies analyzing the effect of demographic characteristics on ATM banking service quality are limited in nature. Studies in banking and non banking contexts have found that demographic variables have an effect on service quality. ATM banking customers come from different personal and social backgrounds, and that may influence an individual’s overall evaluation of service quality. Therefore, data corresponding to demographic profile of the respondents was collected in this study and the effect of demographic variables on customers’ perceptions of ATM service quality was examined using the following five hypotheses

H1: There is a significant difference in perception of ATM service quality dimensions between males and females

H2: There is a significant difference in perception of ATM service quality dimensions across age groups

H3: There is a significant difference in perception of ATM service quality dimensions across education levels

H4: There is a significant difference in perception of ATM service quality dimensions across occupations

H5: There is a significant difference in perception of ATM service quality dimensions across income groups

METHODOLOGY

A survey was conducted on ATM banking customers in Panipat city to investigate the influence of demographic variables on ATM banking service quality dimensions. Out of 300 distributed questionnaires to ATM banking customers of different banks, 257 were received back. Only 216 from 257 responses were usable, resulting in response rate of 72 percent. The survey questionnaire constituted questions related to consumer characteristics and five dimensions of ATM banking service quality. Five fixed alternative closed ended questions were used to gather customers' demographic information. A 5-point scale is used to capture respondents perception related to various dimensions of ATM service quality.

Descriptive statistics was used to summarize the respondents' characteristics. For data analysis, statistical techniques like Levene's test, t-test and analysis of variance were used. Levene's test was used to test the equality of variances for a variable calculated for two or more groups (Levene, 1960). t-test and analysis of variance are used to compare the results based on the demographic variables.

ANALYSIS AND RESULTS

Simple descriptive statistics were used to summarize the respondents' characteristics. Demographic profile of the respondents is shown in table-1. The analysis results pointed out that the sample represents the entire population as survey capture responses from sizeable number of ATM banking customers from different background.

Table-1 Demographic Characteristics of the respondents

		Percent
Gender	Male	67
	Female	33
Age	18- up to 30 yrs	32
	More than 30 -up to 40 yrs	27
	More than 40- up to 50 yrs	24
	Above 50 yrs	17
Highest Completed Education	Graduate	48
	Post Graduate and above	37
	Others	15
Occupation	Student	18
	Self employed	36
	Salaried	30
	Others	16
Annual Income (in INR)	up to 5 Lacs	44
	More than 5- up to 10 Lacs	34
	More than 10- up to 20 Lacs	14
	Above 20 Lacs	08

Effect of Demographics on ATM Service Quality Dimensions (Hypothesis Testing)

The demographic variables covered in this research were gender, age, education, occupation and income. The t-test and Analysis of Variance (ANOVA) were used to find whether there was any significant difference in ATM service quality dimensions on the basis of demographic variables at a significance value of 0.05. Post hoc analysis was used corresponding to ANOVA test if the significant difference was found. The t-test and ANOVA assume that the populations from which the samples are drawn have equal variances. Levene's test was used to test the homogeneity of variance.

To analyze the significant difference in ATM service quality dimensions on the basis of gender, following five sub-hypotheses were tested corresponding to H1.

H1.1: There is a significant difference in perception of Reliability dimension between males and females

H1.2: There is a significant difference in perception of Convenience dimension between males and females

H1.3: There is a significant difference in perception of Responsiveness dimension between males and females

H1.4: There is a significant difference in perception of Ease of Use dimension between males and females

H1.5: There is a significant difference in perception of Fulfillment dimension between males and females

In table 2, the significance value of Levene's test was found to be greater than 0.05 for all the five ATM banking service quality dimensions. This depicted that the condition of homogeneity of variances is met. As shown in table 2, the results of the t-test indicated that there was no significant difference in all five ATM service quality dimensions (Reliability, Convenience, Responsiveness, Ease of use and Fulfillment) by gender at the significance level of 0.05. Therefore, H1.1, H1.2, H1.3, H1.4 and H1.5 were not supported.

Table 2: Effect of Gender on ATM Service Quality Dimensions (T Test Results)

	Levene's Test for Equality of Variances		**t-test results**	
ATM Service Quality Dimension	**Levene Statistic**	**Sig.**	**t value**	**Sig.**
Reliability	1.295	0.435	0.822	0.163
Convenience	0.217	0.561	0.492	0.241
Responsiveness	1.287	0.456	0.429	0.635
Ease of use	1.772	0.238	0.121	0.377
Fulfillment	0.632	0.322	0.934	0.458

To analyze the difference on the basis of age, following five sub-hypothesis were tested corresponding to H2.

H2.1: There is a significant difference in perception of Reliability dimension across age groups

H2.2: There is a significant difference in perception of Convenience dimension across age groups

H2.3: There is a significant difference in perception of Responsiveness dimension across age groups

H2.4: There is a significant difference in perception of Ease of Use dimension across age groups

H2.5: There is a significant difference in perception of Fulfillment dimension across age groups

Significance value more than 0.05 corresponding to Levene's test for all five dimensions implied that the samples were drawn from the populations having equal variance. The ANOVA results indicated that only for the Responsiveness dimension, the significance value was less than 0.05, which means F value of Responsiveness dimension was significant. Thus H2.3 was supported and H2.1, H2.2, H2.4 and H2.5 were not supported.

Table 3: Effect of Age on ATM Service Quality Dimensions (ANOVA Results)

	Levene's Test for Equality of Variances		**ANOVA test results**	
ATM Service Quality Dimension	**Levene statistic**	**Sig.**	**F value**	**Sig.**
Reliability	1.254	0.608	1.773	0.176
Convenience	0.240	0.372	0.211	0.717
Responsiveness	1.402	0.270	2.435	0.037
Ease of use	2.172	0.108	0.238	0.248
Fulfillment	0.429	0.852	1.333	0.718

Post hoc analysis of Responsiveness dimension was carried out for in-depth analysis. Post hoc analysis results in table 4 showed that respondents of age group '18-30 years' differ significantly from the respondents having age 'Above 50 years' on Responsiveness dimension. However, no significant difference was observed among other age groups.

Table 4: Post hoc analysis of Age on Responsiveness dimension

					95% Confidence Interval	
(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
18- up to 30 yrs	More than 30 -up to 40 yrs	.17330	.11330	.421	-.1190	.4656

	More than 40- up to 50 yrs	.19866	.11849	.337	-.1070	.5044
	Above 50 yrs	.40952*	.15768	.028	.0027	.8163
More than 30 -up to 40 yrs	18- up to 30 yrs	-.17330	.11330	.421	-.4656	.1190
	More than 40- up to 50 yrs	.02537	.10150	.995	-.2365	.2872
	Above 50 yrs	.23623	.14534	.366	-.1388	.6112
More than 40- up to 50 yrs	18- up to 30 yrs	-.19866	.11849	.337	-.5044	.1070
	More than 30 -up to 40 yrs	-.02537	.10150	.995	-.2872	.2365
	Above 50 yrs	.21086	.14942	.493	-.1746	.5964
Above 50 yrs	18- up to 30 yrs	-.40952*	.15768	.028	-.8163	-.0027
	More than 30 -up to 40 yrs	-.23623	.14534	.366	-.6112	.1388
	More than 40- up to 50 yrs	-.21086	.14942	.493	-.5964	.1746

*. The mean difference is significant at 0.05 level

Five sub-hypothesis were tested corresponding to hypothesis H3 to find the difference in ATM service quality dimensions on the basis of education

H3.1: There is a significant difference in perception of Reliability dimension across education levels

H3.2: There is a significant difference in perception of Convenience dimension across education levels

H3.3: There is a significant difference in perception of Responsiveness dimension across education levels

H3.4: There is a significant difference in perception of Ease of Use dimension across education levels

H3.5: There is a significant difference in perception of Fulfillment dimension across education levels

In table 5, significance value greater than 0.05 in Levene’s test illustrated that the samples were drawn from populations having equal variances. The result of ANOVA test depicted that none of the ATM service quality dimensions were influenced by the education variable. Accordingly, H3.1, H3.2, H3.3, H3.4 and H3.5 were not supported.

Table 5: Effect of Education on ATM service quality dimensions (ANOVA results)

	Levene's Test for Equality of Variances		**ANOVA test results**	
ATM Service Quality Dimension	**Levene statistic**	**Sig.**	**F value**	**Sig.**
Reliability	1.114	0.621	0.601	0.988
Convenience	0.346	0.529	2.633	0.151
Responsiveness	0.137	0.923	2.704	0.622
Ease of use	0.209	0.675	1.427	0.906
Fulfillment	0.121	0.655	0.239	0.877

Corresponding to hypothesis H4, following five sub-hypothesis were tested to find the difference in ATM service quality dimensions on the basis of occupation

H4.1: There is a significant difference in perception of Reliability dimension across Occupations

H4.2: There is a significant difference in perception of Convenience dimension across Occupations

H4.3: There is a significant difference in perception of Responsiveness dimension across Occupations

H4.4: There is a significant difference in perception of Ease of Use dimension across Occupations

H4.5: There is a significant difference in perception of Fulfillment dimension across Occupations

The result of Levene's test in table 6 reflected the significance value higher than 0.05 corresponding to five dimensions. This implied that the samples were drawn from the populations having equal variance. ANOVA test results illustrated that dimensions reliability, convenience, responsiveness, ease of use and fulfilment did not vary significantly by occupation of the respondents. So, H4.1, H4.2, H4.3, H4.4 and H4.5 were not supported.

Table 6: Effect of Occupation on ATM service quality dimensions (ANOVA results)

	Levene's Test for Equality of Variances		**ANOVA test results**	
ATM Service Quality Dimension	**Levene statistic**	**Sig.**	**F value**	**Sig.**
Reliability	0.112	0.387	1.244	0.454
Convenience	0.542	0.982	1.776	0.183
Responsiveness	2.666	0.507	0.290	0.505
Ease of use	0.446	0.751	1.608	0.297
Fulfillment	0.756	0.304	1.322	0.488

Five sub-hypothesis mentioned below were tested for hypothesis H5 for investigating the difference in ATM service quality dimensions on the basis of income

H5.1: There is a significant difference in perception of Reliability dimension across income groups

H5.2: There is a significant difference in perception of Convenience dimension across income groups

H5.3: There is a significant difference in perception of Responsiveness dimension across income groups

H5.4: There is a significant difference in perception of Ease of Use dimension across income groups

H5.5: There is a significant difference in perception of Fulfillment dimension across income groups

In table 7, significance value greater than 0.05 in Levene's test signified that the assumption of homogeneity of variances was met. Significance value higher than 0.05 in case of ANOVA implied that none of the ATM service quality dimension differed significantly on the basis of demographic variable income. Consequently, H5.1, H5.2, H5.3, H5.4 and H5.5 were not supported.

Table 7: Effect of Income on ATM service quality dimensions (ANOVA results)

	Levene's Test for Equality of Variances		**ANOVA test results**	
ATM Service Quality Dimension	**Levene statistic**	**Sig.**	**F value**	**Sig.**
Reliability	0.843	0.118	1.980	0.176
Convenience	0.450	0.614	1.119	0.235
Responsiveness	1.335	0.291	0.703	0.417
Ease of use	0.454	0.631	1.220	0.817
Fulfillment	1.880	0.865	0.541	0.976

FINDINGS AND IMPLICATIONS

This research empirically investigated the effect of demographic variables (Gender, Age, Education, Occupation and Income) on ATM banking service quality dimensions (Reliability, Convenience, Responsiveness, Ease of use and Fulfillment). The results of t-test exemplified that none of the five ATM service quality dimension differed significantly on the basis of gender. ANOVA results demonstrated that there was a significant difference in Responsiveness dimension on the basis of Age. The result of Post hoc analysis revealed that respondents in age group 18-30 years differed significantly from the respondents of age above 50 years on Responsiveness dimension. The positive mean difference indicated that the 18-30 years respondents considered ATM services more Responsive as compared to respondents having age more than 50 years.

The analysis results illustrated that none of the demographic variables except age has a significant effect on ATM banking service quality dimensions. This finding may be attributed to the fact that ATM banking is the oldest among the various automated banking channels available in India. It was launched in India 30 years back. Today, customers from all demographic backgrounds feel almost equally comfortable in using ATM banking services, resulting in no significant effect of demographics on ATM service quality dimensions. Responsiveness is the only dimension that got influenced by age. This may be because of the lack of awareness related to various attributes covered under Responsiveness. This has implications for bankers that they should give special consideration towards the needs of the customers belonging to higher age brackets. This implies that rather than having a common education and training platform for all customers, banks may arrange customized education and training programs for ATM banking customers of different age groups as per their requirements for enhancing service quality levels.

REFERENCES/BIBLIOGRAPHY

Al -Tamimi, H. A. H. & Al-Amiri, A. (2003), Analysing service quality in the UAE Islamic banks, *Journal of Financial Services Marketing*, *8*(2), pp.119-132.

Bishnoi, S. (2013), An empirical study of customers' perception regarding Automated Teller Machine in Delhi and NCR, *Integral Review: A Journal of Management*, *6*(1), pp.47-60.

Dilijonas, D., Krikšciunien, D., Sakalauskas, V. & Simutis, R. (2009), Sustainability based service quality approach for Automated Teller Machine Network, *5th International Vilnius Conference.*

Embiale, Y. (2016), The Effect of Automatic Teller Machine Service Quality on Customer Satisfaction: The Case of Commercial Bank of Ethiopia in Hawassa City, *Journal of Engineering and Economic Development*, *3*(2), pp.1-13.

Ganesan -Lim, C., Russell-Bennett, R. & Dagger, T. (2008), The impact of service contact type and demographic characteristics on service quality perceptions, *Journal of services Marketing*, *22*(7), pp.550-561.

Ganguli, S. & Roy, S. K. (2011), Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty, *International Journal of Bank Marketing*, *29*(2), pp.168–189.

Gupta, K. K. & Bansal, D. I. (2011). Effect of demographic variables on customer perceived Internet banking service quality: empirical evidence from India, *Paradigm*, *15*(1-2), pp.83-92.

Hallowell, R. (1996), The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study, *International journal of service industry management*, *7*(4), pp.27-42.

Ilias, A. I., Hasan, H. F. A., & Rahman, R. A. (2008), Student Satisfaction and Service Quality: Any Differences in Demographic Factors?. *International Business Research*, *1*(4), pp.131-143.

Joseph, M., & Stone, G. (2003), An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector, *International Journal of Retail & Distribution Management*, *31*(4), pp.190-202.

Joshua, A. J. (2009), Adoption of Technology Enabled Banking Self Services antecedents and consequences. PhD thesis, Cochin University of Science and Technology, Kochi, India.

Khan, M. A. (2010), An empirical study of automated teller machine service quality and customer satisfaction in Pakistani banks, *European journal of social sciences*, *13*(3), pp.333-344.

Kumbhar, V. (2011a), Factors affecting on customers' satisfaction: an empirical investigation of atm service, *International journal of business economics and management research*, *2(3)*, pp. 144-156.

Kumbhar, V. (2011b), Service quality perception and customers' satisfaction in internet banking service: a case study of public and private sector banks, *Cyber Literature: The International Online Journal*, 4 (2), pp. 21-30.

Levene, Howard (1960), Robust tests for equality of variances. In *Ingram Olkin*; *Harold Hotelling*; et al. Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling. Stanford University Press. pp. 278–292.

Lovelock, C. (2000), Functional integration in services, *Handbook of Services Marketing & Management', Sage*, *Thousand Oaks*, pp.421-437.

Min, S., & Khoon, C. C. (2013), Demographic factors in the evaluation of service quality in higher education: International students' perspective, *International Review of Management and Business Research*, *2*(4), pp.994-1010.

Narteh, B. (2013), Service quality in automated teller machines: an empirical investigation, *Managing Service Quality: An International Journal*, *23*(1), pp.62-89.

Palli, J. G., & Mamilla, R. (2012), Students' opinions of service quality in the field of higher education.,*Creative Education*, *3*(04), pp.430-438.

Sindwani, R., & Goel, M. (2012a), Developments in Electronic Banking Service Quality, *International Journal of Research in IT & Management*, *2*(5), pp.37-43.

Sindwani, R., & Goel, M. (2012b), Online banking service quality: A review, *International Journal of Marketing and Technology*, *2*(7), pp.114-124.

Sindwani, R., & Goel, M. (2012c), An analysis of ATM banking service quality and its dimensions, *International Journal of Marketing and Management Research*, *3*(5), pp.50-57.

Sindwani, R., & Goel, M. (2014a), Dimensions of Technology Based Self Service Banking Service Quality, *YMCAUST International Journal of Research*, *2*(2), pp.17-25.

Sindwani, R., & Goel, M. (2014b), Acceptance of technology based self service banking among mature customers. *PRIMA: Practices and Research in Marketing*, *5*(1/2), pp.17-20.

Sindwani, R., & Goel, M. (2015a), The Impact of Technology based Self Service Banking Service Quality on Customer Loyalty, *International Journal of Marketing & Business Communication*, *4*(3), pp.13-22.

Sindwani, R., & Goel, M. (2015b), The Impact of Technology Based Self Service Banking Dimensions On Customer Satisfaction, *International Journal of Business Information Systems Strategies*, *4*(1/2), pp.1-13.

Sindwani, R., & Goel, M. (2015c), Technology Based Self Service Banking Service Quality Evaluation: a Graph Theoretic Approach , *International Journal of Advanced Science and Technology*, *80*, pp.1-18.

Sindwani, R., & Goel, M. (2016), The Relationship between Service Quality Dimensions, Customer Satisfaction and Loyalty in Technology based Self Service Banking , *International Journal of E-Services and Mobile Applications*, *8*(2), pp.54-70.

Stafford, M. (1996), Demographic discriminators of service quality in the banking industry, J*ournal of services marketing*, *10*(4), pp.6-22.

DIGITALISATION OF RAMRAJYA'S DREAM

Dr. Saroj Vats

Associate Professor

Swami Sahajanand School of Management (SSSM)

Bhavnagar, Gujarat

saroj_vats@yahoo.com

ABSTRACT

In the words of Shri Morari Bapu (famous Ram Katha narrator), A "RamRajya" means to facilitate the last man of the state. If anyone is deprived, it is the responsibility of the state to clear such hindrances and reach to them. India is on the same path to make a RamRajya. In 1990 when computers were launched by Rajiv Gandhi people were having no idea that one day India will become the pivot for the IT sector in the world. Indian IT companies are generating high revenue out this sector but for Indian youth and Indian public, these services are limited to simple internet surfing. The dream of PM Modi to launch digital India is simply related to empower Indian public. The commitment towards this project can be seen in all the foreign visits of PM. Mark Zuckerberg changed his profile picture to support digital India during PM's US visit. From Sunder Pichai to Satya Nadela all mentioned digital India more or less in their speeches. Typography in Gujarati is a gift to PM by Google.

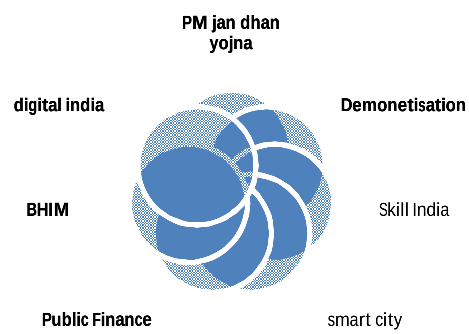
The government is projecting it as a step towards transparency, better economy and to fight with corruption digitally. Digital India is aimed at digital literacy from urban to rural and availability of digital resources for every citizen of the country in all regional languages. Digital India, skill India, ease of doing business and make in India all are the part of the same big picture. India, gradually moving towards paper to plastic to e-payment. It's a new concept but in the promising stage. Digital wallet still accounts for a *smaller number of users. Though, demonetization gave a little help to digital India movement.*

In this paper, we tried to depict 360-degree reality check of digital India movement and its impact in the last 2 years, M-governance to E-governance.

***Keywords**: Digital India, Transparency, Growth.*

INTRODUCTION

Digital means the technology which saves process and generates data virtually. There are examples in the world where economies transformed themselves from knowledge savvy to techno savvy. When the things are available just a click/finger tip then the virtual transformation is quite easy and obvious. Digitalization is a great window to accelerate the engine of growth. The focus of present government is very high on digital transactions. PM Modi is on the way to design a new India which is more empowered, more skilled and more independent. In the last 3 years, there are many reforms which have been taken place. From parade on Republic day to the visit to the Middle East, everything is just under the plan of the transformation of India, which is newly designed by the new government. The planning commission is named as Neeti Aayog. In last 3 years government introduced following scheme -



REASONS FOR LAUNCHING DIGITAL INDIA

- To connect every citizen of India with internet by all means;
- To connect the whole system on digital platform to keep good governance;
- To connect panchayats to ministry directly with open access to record;
- Public access to ABC of government;
- E governance for reform in public services;
- Job generation by this dream projects;
- To strengthen the IT sector;
- Dream of M- governance;
- From panchayats to state secretariat direct digitalization;
- To reduce imports of electronic products.

THE BUILDING BLOCKS OF DIGITAL INDIA PROGRAMME

Demonetisation came like angel in disguise for Digital India programme. During demonetization 86 percent of the currency notes were out of circulation and government was replacing this old stock. There was a limiting factor to capacity to print. To give money to people government printed 2000 Rs. Note which was creating another trouble as there was no change available for this big note. It resulted in a liquidity crisis. So the people those who were having bank debit and credit cards but not started shopping out of it, need to use it. 2.5 lakh villages will be connected through this scheme by 2019 with broad band connectivity, 4 lakh public internet spots, 2.5 lakh hot spot points. At schools colleges and universities full Wi-Fi will be done. An investment of 4.5 lakh crore will be done for this project and 18 lakh jobs will be created by this project.

Any program needs a concrete architecture to succeed. In order to make the Digital India program the most efficacious initiative, the government of India defines the nine pillars of Digital India. Each pillar not only supports the ambit of the program but also comprehensively contributes to the uninterrupted success of the program.

RESEARCH PROBLEM

Can Digitalization help in reaching the poor for upliftment on the contrary we would like to see the authenticity & application of Digital India program?

OBJECTIVES OF THE STUDY

1. How is Digital India playing a key role in the growth & upliftment of poor?
2. How much focus is given to technology sector when India would like to position it as direct service economy?
3. How many opportunities are created under the Digital India initiative?
4. What are the hindrances of this ambitious campaign?

RESEARCH METHODOLOGY

For this paper the data source is secondary. It is collected from different official websites of the government of India, books, and magazines. As, not much data is available in primary form so this paper is based on information extracted from the internet through the journal, research papers from 2014 to 2017. Some data is collected through the speech of Leading CEO's of major IT companies.

LITERATURE REVIEW

Dr. A P J Abdul Kalam (1998), India2020: A Vision for the New Millennium mentioned that a distinctive profile of a developed India would include a nation which is the best destination for the most talented scholars, scientists, and investors from around the world, and a nation where governance is responsive. To achieve such profile he suggested five areas where India has a core competence, one of them was Information & Communication Technology.

Nirvikar Singh & Sarbjit Singh (2015) Information Technology and its Role in India's Economic Development mentioned in their paper that it's a paradox in India that leading IT firms are doing big business in European-American countries but the rural India is still untouched and derived from good IT services. Rural India is deprived of health services, education, and other development facilities. Basic IT services will boost the local village art. The conventional retail chain system needs to be challenged.

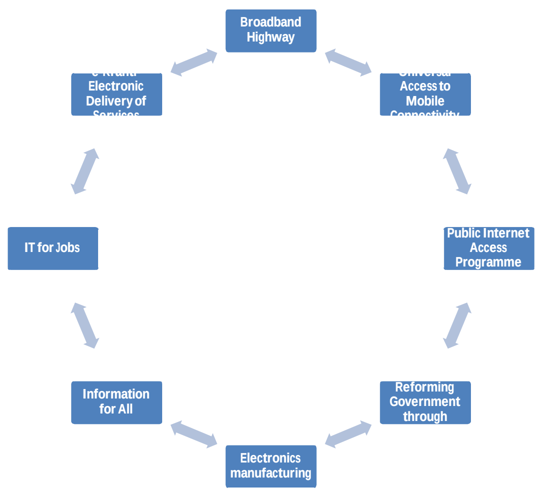
Gupta & Aurora (2015), digital India: a roadmap for the development of rural India, mentioned in their paper about how digital India program on the empowerment of rural women from Telangana to Maharashtra through ArogyaSakhi, Internet Saathi, W2E2 schemes. Promotion of rural entrepreneurship is done through CSCs and MUDRA Yojana. The cyber kiosk like a tablet, PC, Internet connections is turning locals into entrepreneurs.

Himakshi Goswami (2016), opportunities and challenges of digital India Programme, mentioned that purpose of this program is to make India a knowledge economy. But the success of this program is totally dependent on political hierarchy, their priorities, and tools of digitalization and realm of technologies.

Sunder Pichai, CEO, Google, (2017), India is the fastest growing country in the world as an internet sensation. India has most innovative spirit other than anyone else. Indian entrepreneurs are as hungry for growth and development as Silicon Valley entrepreneurs are. 3,000 start ups in India, some of them are highly successful. Indian success stories are now global success theories. There are two keys for digital India- computer and connectivity. Android and Chrome are playing a key role. Android 1 is the version for anyone who is holding a smart phone with their native languages. India has most innovative spirit other than anyone else. Giving access to information, knowledge is the heart of Google.

Satya Nadela, CEO, Microsoft, technology is a powerful tool to make things and making things happen, to bring efficiency to the next level Indian education research team is using TV white space to make low-cost broad band connectivity. The government of India, state government, communication companies and local IP’s are determined to provide low-cost connectivity with cloud community in 5,000 villages in India. This will give fire to the make in India and digital India campaign. Bringing the world class technology should be held on with a cyber-security feature. Severity and privacy are the key mile stones.

PILLARS OF DIGITAL INDIA



Source- Authors conceptualization

1. "**Broadband Highway,"** the first pillar of Digital India program, plans to connect 2.5 lakh village panchayats via National Optical Fibre Network (NOFN). This will empower the rural population to access government programs easily and effectively. In order to push NOFN to its logical destination, Bharat Broadband Network Limited (BBNL) has been established by the Government of India with an authorized capital of Rs.1000. BBNL is mandated to create the NOFN by connecting around 2,50,000 gram panchayats spread over 6,600 Blocks and 641 Districts. This project will provide access universally to all citizens across panchayats.

2. "**Universal Access to Mobile Connectivity"** The second pillar to all inaccessible regions in the country. Today, roughly 42,000 villages in India do not have mobile coverage. The department of telecommunications as the nodal agency manages the

project with cost slated at Rs.16, 000 crores during 2014-18. This indicates that by 2018, India will have complete mobile coverage.

3. **"Public Internet Access Programme,"** Under the third pillar the government plans to create 2.5 lakh CSCs spreading across 1.62 lakh panchayats. CSCs would be multifunctional end-points for delivery of government and business services.

4. **"e-Governance Reforming Government through Technology"** The fourth pillar enables the government to use IT to simplify and transform government processes more efficiently so that the delivery of government services can be more effective across various government departments.

5. **"e-Kranti-Electronic Delivery of Services"** is the fifth pillar of Digital India program Considering the rationality of transforming E-Governance and M-Governance to deliver good governance to all citizens in India, e-Kranti carries the vision of "transforming e-Governance for Transforming Governance". Already 44 mission mode projects are executed under e-Kranti. Today, e-Kranti offers 3325 e-Services, making it a huge success.

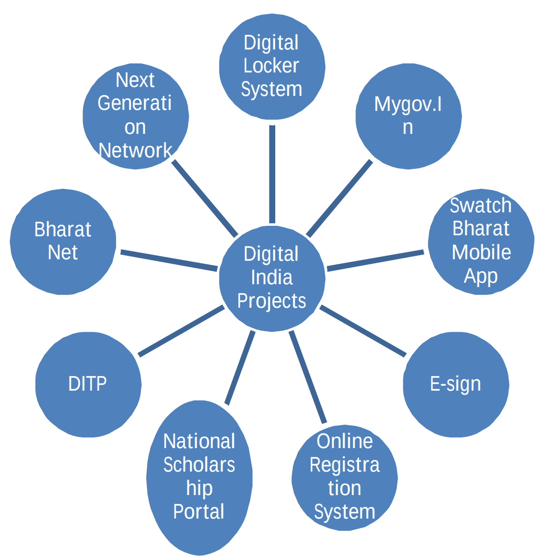
6. **"Information for All,"** the sixth pillar of the Digital India Programme drives transparency in governance. Under open data platform, ministries/departments release information proactively for public use. Online hosting of information and documents facilitates open and easy access to information.

7. **"Electronics Manufacturing"** is the seventh and the most important pillar of the Digital India Programme. A study by the Government suggests that the demand for electronic goods is drastically rising with 22% CAGR and is expected to touch USD 400 billion by 2020. In order to give electronics manufacturing a boost, the Government has launched several initiatives for the development of electronics sector in the country. Over 250 investment proposals for electronics manufacturing have been received in the last 2 years, with a total investment of Rs.1.28 lakh crore.

8. **“IT for Jobs”** is the eighth pillar, focuses on providing necessary training to the youth in smaller towns and villages for availing employment opportunities in the IT/ITES sector. The government targets to train 10 million students from smaller towns and villages for IT sector jobs over the next few years. The government also has a target to train 3 lakh service delivery agents as a part of skill development to run viable business delivering IT services. The India BPO promotion scheme (IBPS), envisaged under this program, seeks to incentivize entrepreneurs for establishing 48,300 seats in BPO/ITES operations across the country, with an employment potential of 1,50,000 youths in rural and smaller cities. With project outlay of Rs.493 crore, this scheme would help in creating more jobs.

9**. Early harvest program** is a ninth pillar of digital India. It is a web based software application which takes thumb print of associates of the central government and allows documentation of attendance of central as well as state government employees irrespective of their type i.e. bureaucrats, politicians (M.P. & M. L.A.) or employees. Infect the Aadhaar card is also centrally attached to it. So no attempt to fake attendance can be made by anyone.

PROJECTS UNDER DIGITAL INDIA



Source- Author's conceptualization

1. **Digital Locker system**- The main purpose of this project is to reduce the dependency on physical documents. Under this project, a person needs to put documents officially online and it can be used anywhere anytime. Documents like PAN Card, mark sheets, degree certificate can be easily verified by government officials and if details filled properly then individual and government both can save time, energy and money. It will help in reducing the duplication and fraud in the education system;
2. **My Gov. In:** This service is started for joining the hands with people. Discuss, apply and promote is the motive of this service. It is an app and keeps others nearer to you. It will help in curbing the corruption in agriculture. It will give real price information for agricultural goods and will remove the mediators;
3. **SBM Mobile App-** Swatch Bharat is the biggest dream of the present government. In fact, the government is doing lots of advertising to promote the Swachh Bharat mission. Local people and government agencies will come together with this help. People can give their suggestions as well as complaints about this app;
4. **E- Sign Frame Work-** This is a program to put digital signatures into practice. With the help of the crypto system, this is furnished. There are two keys of the digital signature. Second, can be used after finishing the first stage and biometric verification;
5. **ORS- Online Registration System-** This project is launched through the E-Hospital app. All the important services like registrations, fee collection, an appointment with a doctor, prescription, blood bank and another service can be seen online. It will help in creating a transparency in hospitals.

6. **National Scholarship Portal-** Indian government gives multiple types of scholarships to students in all the disciplines. This portal is projected for online applications, their verification, approval and record maintenance of scholarships. It helps in keeping transparency in the system. E-Bag is sister concern of the same program. Students of state government can read state board text books online. The students are having the heavy pressure of school bags. Through this, the students will be little free from carrying bags;
7. **DET-** This program is related to Digital India platform. It is turning all the documents of the Indian government into digital documents. By this, any citizen of India can see any government document from anywhere. People in rural India are still in the underprivileged situation. This program will provide them a platform to connect with government and its policies till date. The inspiration of this program was taken from star island, USA;
8. **Bharat Net-** This project of government is connecting 2.5 lakh village panchayats to high speed digital high way. One should notice that it is the biggest rural broadband connectivity project in the world where the optical fiber cable is used. Indians should take pride in it. Rural India really needs attention for development;
9. **Next Generation Network-** Popularly known as NGN. This project is initiated by BSNL. Under this project 30 years old telephone exchange would be renewed and modernized. This program is based on IP address technology. That is why the government is asking to connect Aadhaar card to mobile phones. Voice data, multimedia, video calling and other packet switched communication services will be provided by this program. Broad band Wi Fi implications are also an adjoining project of it;

DIGITAL INNOVATIONS: ANOTHER STEP FOR DIGITALIZATION

In fiscal policy are the *du jour* for the each macro policy makers, especially in the post-demonetisation India. India showcases the early three experiments of digitization in public finance - especially financial inclusion through digital financial services in the recent Economic Survey. It highlights that digitization in public finance helped the government to identify the beneficiaries correctly, given the technology it uses. It also helped in the removal of ghost beneficiaries and thus plugged leakages and identification errors. An early figure suggests that digitization in public finances in India has helped to transfer the benefits of welfare programmes to the extent of 41 per cent in MGNREGS, 37 per cent in PAHAL (the LPG subsidy scheme), 14 per cent in National Social Assistance of Program (NSAP) and 7 per cent in national scholarship schemes. (Economic Survey of India, 2015-16).

Figure 1- Initials for a digital fiancé.

Yet another successful experiment in digitization of fiscal policy is the new scheme, Pradhan Mantri Jan Dhan Yojana. It has ensured financial wit inclusion in financial services through opening savings accounts by the masses so that the money is transferred to the genuine beneficiaries. Learning from the global experience, India has experimented with the JAM Trinity (Jan Dhan, Aadhaar, and Mobile) for the efficient use of resources. Mainly, the subsidy transfer system in India is fraught with inefficiencies such as leakages and ghost or duplicate beneficiaries. Following are the details of jump start of Digital Engine-

	Before demonetization	**After demonetization**
Rupay	0.39 million	1.85 million
E-Wallets	2.2 million	5.6 million
POS	5.02 million	9.81 million

USSD	97 million	2444 million
UPI	3721 million	67,225 million

Source- Ministry of IT & communication, Jan. 2, 2017

Most Indians have little appetite towards cash. The related experiment has been the introduction of Aadhaar cards which provides a unique online identity to each individual in the country and has been linked to bank accounts and mobile numbers in order to ease transactions. Greater use of mobile banking to transfer funds faster and to solve the last mile banking problem has also been encouraged. The use of Jan Dhan accounts, Aadhaar cards, and Mobile Banking has helped India take a step closer to the digital revolution that awaits it.

Micro ATM is another strategy to completely utilize phone and bank accounts of 350 million people. The micro ATM is ideal for Aadhaar enabled services. Authentication works on 2G and 3G networks for these devices. It can be easily used at Kirana stores which are quite common in India. There is a nominal transaction fee. Currently, there is 1,30,000 micro ATM's which are working efficiently. The best results are seen in Andhra Pradesh where major of Kirana stores adopted it and for petty shopping rather than payments they are using these Micro ATM's. It becomes a low-cost point of sale machine.

UPI and Aadhaar enabled system are designed to be highly secure and using latest encryption technology. A lot of thought has gone in making and launching these services and to make them secure. But still, they need to be upgraded.

REALITY CHECK OF PUBLIC FINANCE AFTER DIGITIZATION

Taking forward the crusade against black money the Finance Minister proposed the following major reforms:

- Cash expenditure up to Rs 10,000/- only is allowed as a deduction to businesses;

- A charitable trust can receive cash donation up to Rs 2000 only from a single source;
- Restricting cash expense to Rs. 2 Lakh only for a single transaction and in the case of violation a penalty of equal amount would levy;
- Primary Agriculture Credit Societies which are susceptible to misuse by parking black money are to be computerized and integrated with the Core Banking Cooperative Banks.

Exemption from long-term capital gains tax has been restricted to shares on the purchase of which Securities Transaction Tax has been paid (and other “ genuine cases “ such as public offers). Same way dealing in the public finance becomes more transparent. The purpose of Rupay and use of other cards is the key to success. Surprisingly private sector banks are not cooperating much.

Table1: Digitization in Public Finance: Financial inclusion through financial services (in crore)

Bank Name	**Rural**	**Urban**	**Total**	**No. of Rupay Cards**	**Aadhaar Seeded**	**Balance in Accounts**
Public Sector Bank	12.32	10.22	22.54	17.58	14.93	49266.04
Regional Rural Bank	3.97	0.66	4.63	3.53	2.76	11708.05
Private Banks	0.55	0.37	0.91	0.84	0.44	2127.40
Total	16.84	11.24	28.08	21.95	18.13	63101.49

Note: This is the number of accounts opened under Pradhan Mantri Jan DhanYojana as of 22nd March 2017. All figures are in crore. The data updates as on April 2, 2017 (**Source: Government of India (2017), PMJDY).**

ARTHASHASHTRA OF DIGITAL INDIA 2017-18

To boost the pace of Digital India Programme, the government has announced a slew of measures in the union budget 2017-18. The government has announced substantial steps for increasing Digital payments in the country, along with a boost to the optical fiber network in rural areas to improve internet connectivity and access. The government also targets 2,500 crore digital transactions for 2017-18 through various digital payment platforms including UPI, USSD, Aadhaar Pay, IMPS and debit/credit cards. The government has also set a target for banks to introduce additional 10 lakhs new PoS terminals by March 2017 and banks are encouraged to introduce 20 lakh Aadhaar based PoS by September 2017. The budget unveils that high-speed broadband and optical fiber will be available in over 1.5 lakh gram panchayats with hotspot and access to Digital services at low tariffs by 2018. Under the Bharat Net optical fiber has been laid in 1.55 lakh kilometers. In this regard, the budget allocates Rs.10, 000 crore for Bharat Net Project.

IMPACT OF DIGITIZATION ON TAX ADMINISTRATION FOR A CLEAN ECONOMY

Following path breaking measures have been taken to address the menace of black money:

- Special Investigation Team (STI)- headed by former SC judge M.B. Shah was formed to probe black money.
- ‘The Black Money (Undisclosed Foreign Income and Assets) and Imposition of tax Act, 2015’ with stringent penal provisions including rigorous imprisonment of 3-10 years have been enacted to effectively deal with the issue of black money

stashed away abroad, Tax evasion has been made a predicate offence, under Prevention of Money Laundering Act (PMLA).

- Rs.8186 crore illegally kept in offshore banks b Indians, has been brought under tax ambit despite several constraints.
- Multi-Agency Group (MAG) was set up for facilitating coordinated and speedy investigation of cases of Panama Papers Leaks.
- Signing Double Taxation Avoidance Agreements (DTAAs)/ Tax Information Exchange Agreements (TIEAs) / Multilateral Conventions etc. with other nations.
- Joining Multilateral Competent Authority Agreement in respect of Automatic Exchange of Information to support global efforts against black money.
- Signing information sharing arrangement with USA under its Foreign Accounts Tax Compliance Act (FATCA).
- Renegotiation of DTAA with Mauritius, Singapore, and Cyprus to curb treaty abuse, tax evasion and round- trapping of funds.
- Through Participatory Notes (PN) bring they have been red flagged as a conduit to route black money back into the country by SIT on black money. SEBI mandated increases disclosure requirements and restricted transfer of PN to curb money laundering in order to keep track of their beneficial owners.
- Enactment of Benami Transactions (Prohibition) Amendment Act, 2016 ‘which empowers the government to confiscate Benami properties – assets (without any compensation) held in the name of another person or under a fictitious name. The act has a provision for imprisonment up to seven years. As per Department of Revenue, more than 245 Benami transactions have already been identified and provisional attachments of properties worth Rs. 55 crores have been made in 124 cases.
- 23064 searches/ surveys have been conducted (income Tax 17525; Customs 2509; Central Excise 1913; Service Tax 1120) to detect tax –evasion of

more.1.37 Lakh crore (Income Tax 69434; customers 11405; Central Excise 13952; service tax 42727).

- Launching prosecutions in 2814 cases leading to arrest of 3893 persons.
- ED registered 519 cases and conducted 396 searches leading to arrests in 79 cases and attachment of properties worth RS. 14933 crore.
- 64,275 dilatants made disclosures of Rs. 65,250 crores under the Income Declaration Scheme (IDS), 2016 which provided a chance to domestic black money holders to come clean.

BHIM- THE NEW WEAPON TO DIGITAL REVOLUTION

- A series of initiatives to digital payments on a mass level – BHIM Aadhaar card platform for merchants, cash back and referral bonus schemes for BHIM –was launched by the prime minister on the 126th birth anniversary of Dr. Bhim Rao Ambedkar in Nagpur on 14th April 2017.
- BHIM – Aadhaar, the merchant interface of the BHIM App, will pave the way for making digital payments by using the Aadhaar platform. Any Indian citizen can pay digitally using their biometric enabled device which could be smart phone having a biometric reader. any citizen without access to smart phones, the internet, debit or credit cards is able to transact digitally through the BHIM Aadhaar platform. Already, 27 major banks are now on board with lakh merchants so that they can start accepting payment using BHIM Aadhaar.
- The other two new incentive schemes for the BHIM are Cash back and Referral bonus –with an outlay of Rs. 495 crore for a period of six months. This is to ensure that the culture of digital payments permeates down to the grassroots. Under the referral bonus scheme, both the existing user who refers BHIM and the new user who adopts BHIM would get a cash bonus credited directly to their account. Under the Cash back scheme, the merchants will get cash back on every transaction using BHIM. Both schemes are to be administered by Ministry of

electronics and information technology (MEITY) and implemented by National Payments Corporation of India (NPCI).

- The initial two incentives scheme viz., Lucky Grahak Yojana and Digi Dhan Vyapar Yojana, came to an end after a rigorous 100-day information, education and communication campaign led by NITI Aayog to make digital payments a mass movement in India. Under the scheme Rs. 258 crore of prize money was won by 16 lakh winners, including customers and merchants belonging to different corners of the country and from varied walks of life. The Prime Minister felicitated the winners of the Mega draw of the two major incentive schemes to promote digital payments Lucky Grahak Yojana and Digidhan Vyapar Yojana.
- 100 days of Digidhan Melas, led by NITI Aayog in 100 cities across India, have had a huge impact in enabling increased usage of digital across each one of the 27 states and 7 UTs. With a turnout of over 15 lakhs from cities, small towns and villages, The Melas have enabled lakh to open new bank accounts as well as create new Aadhaar cards.
- BHIM App has already created a new world record by registering 1.9 crore downloads in just four months since its launch in December 2016. More importantly, India has also seen an unprecedented in a number of transactions made using several user-friendly digital payment methods. Until November 2016, the volume of all digital transactions was 2, 80,000 which amounted to Rs.101 crore in value terms. In just four months, by March this year, the volume of payments using various digital payments models saw an increase of about 23 times amounting with 63,80,000 digital transactions for a value of Rs. 2425 crore. Aadhaar Enabled Payments have increased from 2.5 crores in November 2016 to over 5 crores in March 2017. Immediate Payment Service (IMPS) transaction have also increased from 3.6 crores to 6.7 crores during the same period.
- In order to achieve the target of 2500 crore digital transaction during the current financial year, the Prime Minister will also announce about 75 townships spread

all over India as ‘Less-cash townships’. A less-cash township is one where the deployment of payment acceptance infrastructure is complete; all the families in the township are covered under training programs. The townships selected for the launch have been subjected to independent third party assessment by Price water house Coopers (PwC) and only those townships which have reported more than 80% of the total number of transaction in the township being done through digital modes of payments during the review period are included in this list. These townships are likely to generate over 1.5 lakh digital transaction every day thereby leading to about 5.5 crore digital transactions in a year.

BARRIERS TO DIGITAL INDIA

- In the diversified country like India, Digital India program aims to connect the whole country digitally. A federal system of technology and language is one of the main challenges the mission.
- There is no standardize internet protocols to avoid connectivity glitches.
- Lack of Co-ordination and Co-operation between the various governments’ departments.
- Need 30,000 km optical fiber cable line every day. Presently we have only 500 km
- Rural India is not having connectivity to operate the system
- Services of International level are required
- No one talks about digital rights
- There is 31,000 lakhs hot spot are needed to meet the dream presently 80 lakh hot spots are available.
- Lack of 2 lakh telecom workers.
- Technical illiteracy is the biggest problem
- As per Akamai reports, India holds 114th rank in the internet speed with 2.8 Mbps Avg. speed of internet
- Cybercrime is the next challenge to the digitalization

- 42 % people even do not feel difference in 2G and 3G

Consumer Pattern towards Digital India

Reason	%
Cash is a habit	68
Digital is too complex	55
Lack of a compelling value proposition	48
Inertia of noncash methods	33
Incentives/offers from other methods	29
Fraqud/ hidden charges	27
Reach	16

Source- Google-BCG study based on Nielsen survey of 1516 consumers.

Merchants	%
No clear benefits over other payments	87
Productivity towards cash	78
Lack of clarity	77
Not enough customer pull	67
Technical issues	48

Source- Google-BCG study based on Nielsen survey of 917 merchants

- The internet speed is still slow, particularly in rural areas.

"Computer me Angootha chap India"- (Knowledge about computers is -)

State	% of people not knowing even sending Email
Bihar	95

Uttar Pradesh	92
Madhya Pradesh	91
Tripura	96
Manipur	93
Odessa	93
Chhattisgarh	95
Jharkhand	92
West Bengal	91

Where India Stands Today

Country name	**No of internet users (in millions)**
China	721.43
India	462.12
USA	286.94
Brazil	139.11
Russia	13.15
Japan	115.11
Indonesia	88
Mexico	69
Philippines	54

Source- www.statista.com

The above table says usage internet is 2nd highest in India after China. Even it is more than the USA. But as per internet statist reports only 12% people know how to and only 14% people know how to send a text file. Rest is not using the internet for governance purpose.

Use of Internet in India Over The Period Of Time

Year	**No of internet users (in millions)**
2015	408.04
2016	451.04
2017 E	493.01
2017 E	532.05

Source- www.statista.com

The data usage is huge now a day but the question is about purpose. The majority of the people are using it for entertainment. In fact, women are not participating in this era of digitalization.

Categorical and Geographical Status of Indians on the Internet

Area	**Males**	**Females**
Urban	62%	38%
Rural	88 %	12%

Source- www.statista.com

These statistics are disappointing. Already the percentage of women entrepreneurs is quite countable in India. Generally, women are not allowed to work out of the house but digitalization may help them to work from home. But everything's depends on participation.

CONCLUSION

Benefits of cloud technology are huge. Andhra Pradesh government build machine based models to find correct drop out ratios from public and government schools. Bake well biscuits to Fortis, uses, and approaches are unlimited. Making of smart cities and much more but dream of Digital India would not be successful, meanwhile, it reaches to the last man in rural India. That is why the government is having a focus on rural development too. From the above, we can say that with the ICT development in accounting system a transparency can be generated. People should accept Cashless transactions, e-commerce utilization, on line payments as part of their life. As per statement of prime minister if Indians can work in Google, HCL, Microsoft at the high position then why Google cannot be made in India. A country whose 60% of the population is below 35, this dream is not even too big. The bold step taken by the governments to combat corruption and to clean the economy is showing appreciable results. These reforms will result in equal vigor and imagination of myriad benefits from rich to poor. The honest will not be touched and the culprit will not get escape. It will reduce poverty, creating employment for the youth through skill development workshops, clean and transparent economy. Nothing comes in free. Follow the rules, pay your taxes and grow with digitalization. This the strongest ever message of government to launch digital India. If people of India educate themselves technically then conversion of the dream of digital India from developing India is not far. The plane is ready to take off, we know the way too but all that needed is the fuel of knowledge, acceptance, and connectivity. Still half of the way is need to be covered up. It needs a highly trained and equipped environment led with innovation to hold such a huge program. But the way to fulfill the dream of RamRajya is digital India because DT + DT = DI (Domestic Talent + Domestic Technology = Digital India.)

REFERENCES/BIBLIOGRAPHY

Dr. APJ Abdul Kalam (1998), India2020, A Vision for The New Millennium.

Singh, Nirvikar. & Singh, Sarbjit. (2015), Information Technology and its Role in India's Economic Development: A Review, *India Growth and Development Review*, 1 (2), pp. 212-236.

Goswami, Himakshi. (2016), Opportunities and Challenges of Digital India Programme, *International Education And Research Journal*, pp. 78-79

Gupta & Aurora (2015), Digital India: A Roadmap for the Development of Rural India, *International Journal Of Business Management*, pp. 1333-1341

Recommendation of the Council on digital Government strategies, adopted by the OECD Council on 15th July 2014, OECD

http://deity.gov.in/sites/upload_files/dit/files/Digital%20India.pdf

MARKET SENTIMENTS AND TRENDS IN GROWTH OF MUTUAL FUND SCHEMES: AN INSIGHT INTO INDIAN MUTUAL INDUSTRY

Dr. Rashmi Bhargava

Assistant Professor

DAV Institute of Management

NH-3, NIT, Faridabad

rashmibhargava.4@gmail.com

ABSTRACT

The paper examines the growth of mutual fund industry in India in terms of number of schemes and assets under management of various schemes for the period 1997 to 2017.The growth of Mutual Fund Industry is presented in terms of growth year on year and CAGR of the number of Mutual Fund schemes sector wise and category wise. Also the effect of market sentiments on the growth of different types of schemes is shown. For the attainment of Objectives the data of asset under management, number of schemes and number of funds operating in India have been used. All this information has been collected from AMFI website. the data is tabulated in various tables for the purpose of evaluating the trend in growth under different categories. It is found that there is a phenomenal growth in Mutual Fund Industry. The numbers of mutual funds schemes, with various features, have risen from the year 1997-98 to the year 2016-17. Also, the effect of market sentiments is seen in the growth in the number schemes and its assets under management. The effects of Market sentiments could be clearly observed in the assets under management of the schemes. In the year 2006-07 and 2007-08, when the entire economy was enjoying the fruits of Bullish Market, the Mutual Fund market also was flourishing as the assets under management rose by 40.77 percent and 54.77 percent in the year 2006-07 and 2007-08 respectively.

Keywords: *Assets under management, Bullish, Bearish, CAGR, Market Sentiments, Mutual Funds.*

INTRODUCTION TO THE INDIAN MUTUAL FUND INDUSTRY

In India, the first mutual fund made its entry in 1964 when Unit Trust of India launched its Unit Scheme (US) 64. Till 1986-87, UTI was the only Institution functioning as Mutual Fund in India and its first scheme (US-64) remained the largest Mutual Fund scheme in the country. The Investible funds of UTI increased to Rs.4563.7 crore in 1986-87 from Rs. 206.8 crore in 1976-77. In 1987, the Government of India permitted Public sector Banks to launch Mutual Funds. Consequently, the period of five years (1987-92) witnessed rapid expansion of the capital markets, both in terms of the total funds raised and turnover on the stock exchanges. The total funds raised through Public Sector Mutual Funds went up to Rs. 47733.5 crore in 1992-93. The period 1987-92 is termed as the broadening base phase of Mutual Fund Industry in India. The Government of India under its economic reforms and liberalization policy allowed Private sector to enter into Mutual Funds in February 1992. The year 1993 marked a turning point in the history of Mutual Funds in India as the Securities and Exchange Board of India (SEBI) issued the Mutual Funds regulation in the beginning of this year. The cumulative resources mobilized by Mutual Funds increased to Rs. 75050.2 crores in 1994-95. The above may be attributed to the competition created due to the entry of large number of Private and Public sector mutual funds. However, the years 1995 and 1996 brought erosion in the value of investments of unit holders due to a decline in the NAVs of the equity funds. Investor's perception about Mutual Funds gradually turned negative because of the poor performance of all categories of Mutual Funds irrespective of the sector to which they were concerned. But beyond 1997, the flow of funds into the kitty of Mutual Funds sharply increased due to a more positive sentiment in the capital market, significant tax benefits, improvement in the quality of investor services, and use of better information technology.

Concept of Mutual Fund

A Mutual Fund is a financial intermediary that pools the savings of investors for collective investment in a diversified portfolio of securities. A fund is “mutual” as all of its returns minus its expenses, are shared by the fund investors. Mutual fund invests in a number of companies across various industries, sectors and securities. This diversification reduces the riskiness of the investments. They make possible an organised investment strategy, which, is hardly possible for an individual investor. Besides professional management and risk diversification, Mutual Funds offer the benefits of increased liquidity, flexibility, tax benefits, transparency and stability to the stock market. On account of the numerous benefits offered by mutual funds, they have grown phenomenally.

Market Sentiments: Market sentiments are the subjective measure of how investors are feeling about a security or market. Because feelings sometimes change more slowly than a market's underlying fundamentals, market sentiment helps explain why securities have a tendency to become either overvalued or undervalued (www.financialdictionary.com). Some investors plan to make investment decisions in a way that disregards market sentiment, while others attempt to profit from it. It is an intuitive feeling of the investment community regarding the expected movement of the stock market. Market sentiment is the general prevailing attitude of investors as to anticipate price development in a market. This attitude is the accumulation of a variety of fundamental and technical factors, including price history, economic reports, seasonal factors, and national and world events. For example, if investors expect upward price movement in the stock market, the sentiment is said to be bullish. On the contrary, if the market sentiment is bearish, most investors expect downward price movement.

The performance of Mutual fund scheme is judged under different Market conditions i.e. Bull and Bear phase to evaluate the whether the fund has underperformed or over performed under different situations. Mutual fund managers design their investment strategy by assessing the market sentiments then only they would be able to successfully time the market. Successful fund managers are those who are capable of assessing correctly the direction of the market, whether bull or bear, by positioning their portfolios accordingly. If managers are expecting a declining market, they could change their portfolio suitably by increasing the cash percentage of the portfolio or by adjusting their equity investments in favor of defensive securities having lower beta. In case of a rising market, fund managers could reduce the cash position or adjust their equity portfolio in favour of aggressive securities having higher beta. By adjusting their portfolios correctly to the market timing, fund managers can generate superior returns compared to the market (Raju and Rao 2009). Mutual fund managers having good market timing abilities design the Investment portfolio pattern of the Mutual fund schemes by analyzing the sentiments. Various tools and techniques are applied to know the superiority of the schemes in relation to the other schemes in terms of judging the market timing skill of the fund managers.

LITERATURE REVIEW

Hasan (2013) discussed the performance of the Indian Mutual Fund Industry in the past and also the rate of growth it has achieved after being exposed to regulatory changes by SEBI and international factors. It was also analyzed that funds that are at least 5 years old have the ability to deliver higher than benchmark returns. He also found that the funds must have the ability to withstand market downturns better than its benchmarks.

Sekhar (2013) intended to examine the role of Mutual Fund organization in financial inclusiveness with reference to performance through public and private sector. The data for the study was collected through secondary sources. However, Unit Trust of India had shown significant growth in the year 2008-2009. Hence, according to the study, 37 organizations in mutual fund industry were working together for financial inclusion.

Umarani (2012) made an attempt to assess the growth of funds and suggested certain steps that need to be taken by all the players of the industry in a rigorous manner to create an atmosphere that will take the Indian Mutual Fund industry to its next level of growth. It was found that most of the growth in the assets under management has come not due to the increased retail participation, but due to the higher corporate investments in liquid schemes of the industry and due to the appreciation of the capital markets.

Kale and Panchpagesan (2012) presented an overview of the Indian Mutual Fund Industry and the reasons for its poor penetration, which is due to the lack of objective research. It was found that the industry keeps the entire global industry as its benchmarks. The sensitivity of fund flows to performance, and the importance of regulation to its growth have been largely under researched in India.

Sareen Prateek (2012) attempted to find out the growth in Indian Mutual Fund Industry. He studied the participation of retail and institutional investors in Mutual funds. The level of investment in Systematic Investment Plans viz a viz one time investment plan was also studied. In the study it was concluded that the Indian mutual fund industry has significantly high ownership from the institutional investors.

Geetha (2012) discussed the growth of Mutual Fund Industry in India in terms of Asset Under Management and also explained the important concepts involved in Mutual Funds. It was concluded in the study that Mutual funds in India is gaining importance because of various advantages offered by it such as diversification, regulatory oversight, choice of scheme, well regulated, no guarantees, fees and commissions and taxes.

Purandare and Mehra (2010) have assesed the key growth drivers for the industry and have identified the factors which may impede growth in the future. The study recommended that however, in order to fully establish inclusive growth, several components of such an initiative like investor awareness, broadening investor participation and product innovation need to be aligned.

Parmar (2010) evaluated the growth of Mutual Funds in India and examined the return from selected Mutual Fund schemes. Sample study period was January 2005 to December 2009. This study was completely based on the secondary data. Average, Standard deviation, beta, R squared and Sharpe ratio were used as tools of analysis The NAV of all the schemes had shown that in the January 2008 they had given highest return and in December 2008 they had given the lowest return.

Kumar, Gayatri and Kartikha (2010) analysed the objectives, challenges and opportunities of Mutual fund. They explained that the challenges of the Mutual fund Industry are leading to consolidation of the industry, pressures on margins, innovation and product differentiation and outsourcing trends. They concluded that this time is an interesting time for the industry. It is truly said that change is the only constant.

Pandey (2009) covered various aspect of mutual funds industry in India. He started the study with the basic concept of Mutual Fund and gave details about the growth of Mutual Fund Industry in India over a period of years. It also covered the different phases of growth of mutual fund industry. It was concluded in the study that Mutual Fund is gaining importance in India due to numerous advantages offered by it to the investors.

Samar (2009) analysed the growth of Mutual fund industry in India. The secondary data was collected from the websites of AMFI, Value research, SEBI and India Infoline during the study period 2008-09. Sharpe Ratio was comparatively favorable in case of ICICI Prudential balance fund.

Bodla and Bishnoi (2008) aimed to bring out the trends in Mutual Fund Industry in India. The reference period ranged from 1998–2006. The study was based on secondary data which was collected from various websites and journals. The study brought out the facts that the mutual fund investors in India had 609 schemes with variety of features such as dividend, growth, cumulative interest income, monthly income plans, sectoral plans, equity linked schemes, money market schemes, etc. It was also highlighted that though both open-end and close-end schemes had registered excellent growth in fund mobilization, the former category of schemes is more popular among the investors. Portfolio-wise analysis has brought that income schemes have an edge over growth schemes in terms of assets under management.

Singh and Mall (2008) focussed on the growth of the Mutual Fund Industry. Growth of Mutual funds in India was studied under various parameters like Assets under Management (AUM), resource mobilized and the transactions done by the Mutual Fund Industry in the stock market. The growth of Mutual Fund Industry in India was studied from April 2000 to Dec 2007. It was found in the study that the private sector mutual funds are having a lion's share of Asset Under Management and Open-ended funds dominated the Assets under Management.

Tripathi (1996) evaluated the growth and performance of Indian Mutual Fund Industry. He found that the Indian capital market has grown tremendously during the last few years. The study also suggested some measures to make Mutual Fund Industry successful in India.

Panigrahi (1996) studied the origin and growth of Mutual Fund Industry in India. She examined that why mutual funds have prospered in the last few years, what is the extent of growth and whether the regulatory framework for their operations reflects the change in environment. The study was based on secondary data which was collected from various websites. It was found in the study that Mutual Fund has been able to attract more investors due to its tight regulatory framework.

OBJECTIVES OF THE STUDY

1) To examine the growth of mutual fund industry in India in terms of number of schemes and assets under management of various schemes.

2) To study the growth year on year and CAGR.
3) To study the pattern of number of schemes sector wise and category wise.
4) To study the effect of market sentiments on category wise and sector wise AUM.

RESEARCH METHODOLOGY

Data and its Source: For the attainment of objective one of the study the data of asset under management, number of schemes and number of funds operating in India have been used. All this information has been collected from AMFI website. Quarterly newsletters have been downloaded from AMFI websites for the study period and the data is consolidated from these newsletters. The growth performance of India's mutual fund industry has been measured in terms of increase in numbers of schemes, amount of funds mobilised and assets under management.

Sample Size: The overall Mutual Fund Industry have been selected to study the growth.

Period of study: The period of study for this objective is from the year 1997-98 to 2016-17.

Tools of Analysis: For the achievement of objective the data related to number of schemes and Asset under Management is collected for 16 years, the data is tabulated in various tables for the purpose of evaluating the trend in growth under different categories.

The data has been tabulated under various categories such as:

- Category wise AUM
- Portfolio wise AUM
- Category wise number of schemes
- Portfolio wise number of schemes
- Number of Mutual fund houses operating in India

GROWTH OF MUTUAL FUND INDUSTRY

In India the first Mutual Fund made its entry in 1964 till 1987. UTI was the monopolist in the Mutual Fund Industry in 1987. Government of India permitted Public sector Banks to start their Mutual Funds. Then in 1992 Government of India permitted Private sector to enter into Mutual Funds. Year 1993 was marked as a turning point in the history of Mutual Funds as SEBI issued regulations for Mutual Funds. Because of these concerns the confidence of investors started increasing and investors found better and safe options of investment in Mutual Funds. It is the best suitable investment options for individuals/small investors as it provides portfolio diversification, convenience and affordability to the investors.

Table 1: Number of Mutual Fund Houses from March 2002-2017

Year/Category	Public Sector				Private Sector				
	1	2	3	4	5	6	7	8	Total
2002-03	5	0	0	4	7	0	6	11	33
2003-04	5	0	0	3	8	1	5	9	31
2004-05	3	1	0	2	10	0	3	10	29
2005-06	3	1	0	1	10	0	5	9	29
2006-07	3	1	0	1	10	0	5	10	30
2007-08	2	2	0	1	11	3	5	9	33
2008-09	1	2	1	1	14	5	5	6	35
2009-10	1	2	1	1	16	5	5	7	38
2010-11	2	2	1	1	18	7	4	6	41
2011-12	2	3	1	1	18	9	5	5	44

2012-13	2	4	1	1	17	8	6	4	43
2013-14	2	4	1	2	19	7	7	4	46
2014-15	2	4	1	2	19	5	7	3	43
2015-16	2	4	1	2	18	4	8	3	42
2016-17	3	3	1	2	18	4	8	2	41

Source: (Compiled From Quarterly Update, March Issue, AMFI)

Note: 1= bank sponsored, 2 =Bank Sponsored Predominantly Indian, 3 = Bank Sponsored predominantly Foriegn, 4= Institutions 5= Indian, 6= Foreign, 7= JV Predominantly Indian, 8= JV Predominantly Foreign

Table 1 shows the number of Mutual Fund houses operating in India from the year 2002-03 to the year 2014-15. In the year 2002-03 the number of Mutual fund houses was 33. The number came down to 29 in the years 2004-05 and 2005-06 then, there was a continuous increase in the number of Mutual Fund houses. It can be viewed from the table that in the year 2011-12 the number of Mutual Fund houses operating in India reached to 44. In the year 2012-13 the number is 43 which grew to 46 in the year 2013-14. A downtrend could be observed in the year 2014-15,2015-16 and 2016-17 when the number of Mutual funds operating in India came down to 43,42 and 41 respectively due to deduction in Foreign sector Mutual Fund houses operating in India.

NUMBER OF MUTUAL FUND SCHEMES

After presenting the number of Mutual Fund houses the forthcoming part is explaining the growth and trends of Mutual Fund on the basis of number of Mutual Fund schemes according to their categories and objective. The position of Mutual Fund schemes across various categories and portfolios is presented in table 2. The various categories of mutual funds include open-end, close-end and assured return schemes and interval funds. The portfolio wise classification comprises of Income, Growth, Balanced, Liquidity, Gilt and ELSS schemes. The year-on-year percentage change in number of schemes and market share has been analyzed and presented in different tables.

Hypothesis: that the number of schemes launched category wise have not grown significantly over the years.

Table 2: Category wise Total Number and Growth in Number of Mutual Fund Schemes

Year	Open ended Schemes		Close ended schemes		Assured return schemes		Interval Fund schemes		Total	
	No.	% □	No.	% □	No.	% □	No.	% □	No.	% □
1997-98	63		125		47				235	
1998-99	102	61.9	146	16.8	29	-38.3			277	17.87
1999-2000	168	64.7	128	-12.33	41	41.38			337	21.66
2000-01	240	42.85	118	-7.81	35	-14.63			393	16.62
2001-02	304	26.67	87	-26.27	26	-25.71			417	6.11
2002-03	329	8.22	47	-45.98	6	-76.92			382	-8.39
2003-04	363	10.33	40	-14.89					403	5.5
2004-05	403	11.02	48	20					451	11.91
2005-06	463	14.89	129	168.75					592	31.26
2006-07	486	4.98	270	109.3					756	27.7
2007-08	592	21.81	364	34.81					956	26.46
2008-09	589	-0.51	344	-5.49			68		1001	4.71
2009-10	641	8.83	202	-41.28			39	-42.64	882	-11.89
2010-11	727	13.42	368	82.18			36	-7.69	1131	28.23
2011-12	745	2.42	530	44.03			34	-5.56	1309	15.74
2012-13	751	0.8	501	-5.47			42	23.53	1294	-1.14

2013-14	777	3.46	796	58.88			65	54.76	1638	26.54
2014-15	810	4.24	1002	25.87			72	10.76	1884	15.01
2015-16	829	2.35	1513	51.00			78	8.33	2420	28.45
2016-17	829	0.00	1388	-8.26			64	-17.95	2281	-5.74
CAGR	16.89**		14.32**		-33.75**		1.03**		15.23**	
Ho	Rejected		Rejected						Rejected	
Ha	Accepted		Accepted						Accepted	

Source: (Compiled From Quarterly Update, March Issue, AMFI)

** Indicates significant growth at 99 percent level of confidence

Table 2 indicates that as per the category wise classification, the total number of Mutual Fund schemes have rose from 235 in the year 1997-98 to 1001 in 2008-09. In year 2009-10, total number of Mutual Fund schemes declined to 882, but again after 2009-10 a major rise is seen in the year 2010-11, 2011-12 and 2013-14 due to introduction of many new schemes in the close-ended category and open-ended category but interval schemes, which were newly introduced, were still reducing. The phenomenon of growth of number of schemes was sustained till May 2007-08 but, due to recession a major decline was observed as the number of schemes increased by 4.71 percent in the year 2008-09 and the number of schemes have registered negative growth in the year 2009-10 and 2012-13. The growth of total number of Mutual Fund schemes has been found highest in the year 2005-06 showing 31.26 percent followed by the years 2010-11, 2006-07 and 2013-14 where 28.23, 27.70 and 26.54 percent growth is found respectively. This growth has been contributed due to a major augmentation of new schemes in the close ended category leading to the percentage change to 168.75 as compared to negative growth between 1999-2000 and 2003-04. The CAGR of close ended schemes has also been noticed higher than those of open ended category for the duration 1999-2014 but overall the CAGR of open ended schemes (16.89 percent) is found greater than the close ended schemes (14.32

percent). Interval Fund which was a new category of schemes also appeared in the picture in the year 2008-09. This type of scheme combines the features of both open ended and close ended funds. These schemes are open for sale and repurchase at a predetermined period. There are 68 schemes of interval fund coming into the picture in the year 2008-09, but after 2008-09, a downtrend is being seen in this category. After 2009-10 till 2011-12, conducive investment climate was seen in India as many bars were raised like entry load was removed, KYC norms were made mandatory in December 2008-09 and the economy had recovered from global recession, the number of schemes in the Interval scheme category again rose to 65 in the year 2013-14. In the 2014-15 a steep rise can be observed in case of close ended schemes where there is a rise of 25.87 percent in the number of scheme from 2013-14.In the year 2016-17, a sudden decline in the number of schemes is observed. However, the CAGR and the significant values are clearly indicating that the increase in number of schemes is significant over the years. Hence, the rejection of null Hypothesis is supported.

Table 3: Portfolio Wise Growth of Mutual Fund Schemes in India

	Income Schemes		**Growth Schemes**		**Balanced Schemes**		**liquid/ money market**		**Gilt**		**ELSS**		**Others (ETFs and Funds of Funds)**		**TOTAL**	
Year	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**	**No.**	**% □**
1997-98	84		74		19		0		0		58				235	
1998-99	100	19.05	83	12.16	17	-10.53	17		0		60	3.45			277	17.87
1999-00	113	13	105	26.51	23	35.29	18	5.88	13		65	8.33			337	21.66
2000-01	126	11.5	110	4.76	32	39.13	26	44.44	19	46.15	80	23.08			393	16.62

2001-02	146	15.87	114	3.64	34	6.25	31	19.23	29	52.63	63	-21.25			417	6.11
2002-03	117	-19.86	120	5.26	35	2.94	32	3.23	31	6.9	47	-25.4			382	-8.39
2003-04	131	11.97	126	5	37	5.71	36	12.5	30	-3.23	43	-8.51			403	5.5
2004-05	159	21.37	151	19.84	35	-5.41	39	8.33	30	0	37	-13.95			451	11.91
2005-06	251	57.86	194	28.48	36	2.86	45	15.38	29	-3.33	37	0			592	31.26
2006-07	367	46.22	227	17.01	38	5.56	55	22.22	28	-3.45	40	8.11	1		756	27.7
2007-08	506	37.87	270	18.94	37	-2.63	58	5.45	30	7.14	42	5	13	1200	956	26.46
2008-09	509	0.59	293	8.52	35	-5.41	56	-3.45	34	13.33	47	11.9	27	107.7	1001	4.71
2009-10	367	-27.9	307	4.78	33	-5.71	56	0	35	2.94	48	2.13	36	33.3	882	-11.89
2010-11	591	61.04	328	6.84	32	-3.03	51	-8.93	37	5.71	48	0	44	22.2	1131	28.23
2011-12	775	31.13	303	-7.62	30	-6.25	55	7.84	42	13.51	49	2.08	55	25	1309	15.74
2012-13	760	-1.94	298	-1.65	32	6.67	55	0	42	0	49	0	58	0.05	1294	-1
2013-14	1081	42.24	311	4.36	30	-6.25	53	-3.64	44	4.76	52	6.12	67	0.16	1638	27

2014-15	1249	15.54	379	21.86	25	-16.67	52	-1.89	45	2.27	55	5.77	79	18	1884	15
2015-16	1737	39.07	413	8.97	28	12.00	53	1.92	41	-8.89	60	9.09	88	11.39	2420	28.45
2016-17	1582	-8.92	420	1.69	30	7.14	52	-1.89	41	0.00	64	6.67	92	4.55	2281	-5.74
CAGR	17.32**		11.21**		1.27**		7.74**		9.21**		-0.33**		88.52**		15.23**	
Ho	Rejected		Rejected		Rejected		Rejected		Rejected						Rejected	
Ha	Accepted		Accepted		Accepted		Accepted		Accepted						Accepted	

Source: (Compiled From Quarterly Update, March Issue, AMFI)

** Indicates significant growth at 99 percent level of confidence

Table 3 shows the Portfolio wise growth of Mutual Fund schemes in India for the period 1997-98 to 2016-17

Hypothesis: That the number of schemes launched portfolio wise have not grown significantly over the years.

It presents that the number of growth schemes rose to 194 in 2005-06 from 74 schemes in 1997-98. In the year 2013-2014, the number of growth schemes was 311 and in the year 2014-15, the numbers of growth schemes were 379. The growth scheme has secured the highest growth (28.48%) in 2005-2006. It was the result of bullish trend in the Indian equity market. After 2005-06, a major decline in growth rate of growth schemes was seen in 2008-09 (8.52%) owing to Bearish trend in the economy and in 2009-10 (4.78%). In the year 2010-2011, 6.84 percent growth rate was registered. In the year 2011-12 there was a downward movement till 2012-13. Positive growth rate was observed in the year 2013-14 (4.36 %) and in the year 2014-15 (21.86 %). Year 2014-15 registered a robust growth in Growth schemes owing to positive market sentiments. By looking into the income schemes which have enjoyed maximum share, lost their glow in the year 2002-03 where numbers of growth schemes (120) were more than income schemes (117). From the year 2003-04 an upward trend could be seen in the income schemes till the year 2008-09 after which the scheme got a major setback when the number of income schemes came down by 27.9 percent in the year 2009-10, but they again gained a ground in the market during the year 2010-11 when the number of income schemes grew by 61.04 percent. The impact of bear and bull market can be clearly observed from these trends.

Balanced schemes are the schemes that seek to maintain a balance between growth and regular income. In contrast to growth and income schemes, the balanced schemes have faced the uncertain and volatile scenario in terms of the growth in number of schemes. The number of schemes declined sharply in the year 1998-99 which increased appreciably in the year 1999-2000. These schemes have encountered a negative growth from the year 2009 to 2015.Again a trend reversal is observed in the year 2015-16 when the increase in number of growth scheme became higher than increase in income scheme.

CAGR of Income schemes (17.32 %) is found better than the growth scheme (11.21%). The value of CAGR regarding income, growth, liquid and ELSS schemes supports the rejection of null Hypothesis.

ASSETS UNDER MANAGEMENT

Another measure of the performance of mutual fund is assets under management (AUM). This section attempts to bring forth analysis the category-wise and type-wise AUM of Mutual Fund in India.

Category wise Asset Under Management: After analysing sector wise AUM of Mutual Funds, table 4 exhibits data on the Asset Under Management according to category of Mutual Fund schemes. The data is examined and tabulated in table 5. The testable Hypothesis under this section is that there is no significant increase in category wise Asset Under Management over the years.

Table 4: Category Wise Asset Under Management
(Amount in Crores)

Year	Open ended Schemes		Close ended Schemes		Assured return schemes		Interval Fund		Total	
	AUM	% □	AUM	% □	AUM	% □	AUM	% □	AUM	% □
1998-99	37240		16439		14793				68472	
1999-2000	68833	84.84	21608	31.44	22564	52.53			113005	65.04
2000-01	57293	-16.76	13613	-37	19681	-12.77			90587	-19.84
2001-02	71938	25.56	10977	-19.36	17679	-10.17			100594	11.05
2002-03	75071	4.35	4033	-63.26	360	-97.96			79464	-21.01
2003-04	134523	79.19	5093	26.28					139616	75.7
2004-05	137983	2.57	11571	127.19					149554	7.12
2005-06	193713	40.39	38149	229.69					231862	55.04
2006-07	217417	12.24	108971	185.65					326388	40.77
2007-08	369239	69.83	135913	24.72					505152	54.77
2008-09	325161	-11.94	89249	-34.33			2890		417300	-17.39
2009-10	532886	63.88	65519	-26.59			15574	438.89	613979	47.13
2010-11	447196	-16.08	126897	93.68			18157	16.58	592250	-3.54

2011-12	441610	-1.24	137634	8.46			7973	-56.08	587217	-0.85
2012-13	573201	29.8	120652	-12.34			7590	-4.8	701443	19.45
2013-14	620317	8.22	192899	59.88			12024	58.42	825240	17.65
2014-15	910077	46.71	164344	-14.8			8366	-30.42	1082757	31.2
2015-16	1053762	15.79	171235	4.19			7827	-6.44	1232824	13.86
2016-17	1573929	49.36	176743	3.22			4584	-41.43	1755256	42.38
CAGR	23.71**		16.52**				22.68**		22.31**	
Ho	Rejected		Rejected						Rejected	
Ha	Accepted		Accepted						Accepted	

Source: (Compiled From Quarterly Update, March Issue, AMFI)

** Indicates significant growth at 99 percent level of confidence

It is depicted from table 4 that Open-end schemes have registered a compounded annual growth rate of 23.71 percent in their AUM. The year-on-year growth in AUM of open-end schemes was found the highest (79.19%) in 2003-04 followed by 2007-08 (69.83%). On an overall basis 2008-09 has registered a sharp decline owing to bearish market sentiments in the market whereas year 1999-2000, 2003-04, 2005-06, 2006-07, 2007-08, 2009-10 and 2014-15 have registered a very high growth in terms of AUM due to Bullish Market sentiments prevailing in the economy. Again a sharp increase is seen in the year 2013-14 where the growth in AUM of closed ended scheme is 59.88 percent. Similarly in case of open ended category, a sharp increase can be seen in AUM in the year 2014-15 where AUM increased by 46.71 percent. AUM observed a sharp decline in the year 2015-

16 which again went up in the year 2016-17. To conclude it can be mentioned that the Asset Under management of category wise schemes has increased over the years.

Portfolio wise Asset Under Management: The current section presents the portfolio wise share of schemes in Asset Under Management. The data is presented in table 5. Regarding this table the Hypothesis is that the portfolio wise share in Asset Under Management of Mutual Fund scheme has not increased significantly over the years.

Table 5: Portfolio Wise Share in Asset Under Management

(amount in crores)

Year	Income Schemes		Growth Schemes		Balanced Sch.		Liquid Sch		Gilt		ELSS		Gold ETF,		TOTAL	
	Amt.	**%**	**Amt.**	**%**	**Amt.**	**%**	**Amt.**	**%**	**Amt.**	**%**	**Amt.**	**%**	**Amt.**	**%**	**Amt.**	**%**
1998-99	48372		14622		1909		1092		-		2477				68472	
1999-00	48004	-0.76	30611	109.35	26757	1301.62	2227	103.94	2370	-	3036	22.57			113005	65.04
2000-01	48863	1.79	13483	-55.95	19273	-27.97	4128	85.36	2317	-2.24	2523	-16.9			90587	-19.84
2001-02	55788	14.17	13852	2.74	16954	-12.03	8069	95.47	4163	79.67	1768	-29.92			100594	11.05
2002-03	47564	-14.74	9887	-28.62	3141	-81.47	13734	70.21	3910	-6.08	1228	-30.54			79464	-21.01
2003-04	62524	31.45	23613	138.83	4080	29.89	41704	203.66	6026	54.12	1669	35.91			139616	75.7
2004-05	47605	-23.86	36711	55.47	4867	19.29	54068	29.65	4576	-24.06	1727	3.48			149554	7.12
2005-06	60278	26.62	92867	152.97	7493	53.96	61500	13.75	3135	-31.49	6589	281.53			231862	55.04
2006-07	119322	97.95	113386	22.1	9110	21.58	72006	17.08	2257	-28.01	10211	54.97	96		326388	40.77
2007-08	220762	85.01	156722	38.22	16283	78.74	89402	24.16	2833	25.52	16020	56.89	747	50.6	505152	54.77
2008-09	197343	-10.61	95817	-38.86	10629	-34.72	90594	1.33	6413	126.37	12427	-22.43	4077	81.68	417300	-17.39
2009-10	311715	57.96	174054	81.65	17246	62.25	78094	-13.8	3395	-47.06	24066	93.66	5409	24.62	613979	47.13

2010-11	291975	-6.33	169754	-2.47	18445	6.95	73666	-5.67	3409	0.41	25569	6.25	9432	42.65	592250	-3.54
2011-12	290844	-0.39	158432	-6.67	16261	-11.84	80354	9.08	3659	7.33	23644	-7.53	14023	32.74	587217	-0.85
2012-13	395985	36.15	149777	-5.46	16307	0.28	93392	16.23	8074	-99.9	22731	-3.86	15177	8.22	701443	19.45
2013-14	461550	16.56	165560	10.54	16793	2.98	133280	42.71	6115	120.66	25547	12.39	16395	8.02	825240	17.65
2014-15	516951	12	305669	84.63	26368	57.02	162562	21.97	14614	-24.26	39470	54.5	17123	4.44	1082757	31.21
2015-16	567189	9.72	344707	12.77	39146	48.46	199404	22.66	16306	11.58	41696	5.64	24376	42.36	1232824	13.86
2016-17	749691	32.18	482183	39.88	84763	116.53	314086	57.51	14875	-8.78	61403	47.26	51663	111.94	1758664	42.65
CAGR	20.12**		29.32**		26.34**		52.13**		16.31**		24.21**		32.13**		22.31**	
Ho	Rejected		Rejected		Rejected		Rejected		Rejected		Rejected		Rejected		Rejected	
Ha	Accepted		Accepted		Accepted		Accepted		Accepted		Accepted		Accepted		Accepted	

Table 5 throws light on the Portfolio wise AUM. It is evident that during 2014-15, the AUM is the highest for income/debt-oriented schemes (Rs. 516951 crores) while the AUM under growth/equity-oriented schemes is Rs. 305669 crores. In the year 2011-12 poor earnings season, downgrade of banks by Moody's, huge current account deficit and depreciating currency have played spoilsport. In terms of growth in AUM, in the year 2012-13 there was still a negative growth (-5.46 %) in the growth scheme which became positive in the year 2013-14 (10.54 %). In the year 2006-07 and 2007-08, when the entire economy was enjoying the fruits of Bullish Market, in the Mutual Fund market also the AUM rose by 40.77 percent and 54.77 percent in the year 2006-07 and 2007-08 respectively. The AUM decreased by -17.39 percent from 2007-08 to 2008-09 owing to Bearish Sentiments prevailing in the Market. In the year 2009-10 when the economy was again witnessing Bullish run, the AUM rose by 47.13 percent. A similar trend could be observed in the year 2014-15 when due to Bullish trend the total AUM of Mutual Fund Industry raised by 31.21 percent.

FINDINGS AND CONCLUSION

There is a phenomenal growth in Mutual Fund Industry. The numbers of mutual funds schemes, with various features, have risen to 2281 in 2016-17 from 235 in 1997-98**.** The effect of market sentiments is seen in the growth in the number schemes and its AUM. Close ended schemes have regained their charms which were not getting attraction during the years between 2003-04 to 2016-17. In the year 2013-2014, the number of growth schemes was 311 and in the year 2014-15, the number of growth schemes was 379. By looking into the income schemes which have enjoyed maximum share, lost their glow in the year 2002-03 where number of growth schemes (120) was more than income schemes (117). From the year 2003-04 an upward trend could be seen in the income schemes till the year 2008-09 after which the scheme got a major setback when the number of income schemes came down by 27.9 percent in the year 2009-10, but they again gained a ground in the market during the year 2010-11 when the number of income schemes grew by 61.04 percent. Balanced schemes are the schemes that seek to maintain a balance between growth and regular income. In contrast to growth and income schemes, the balanced schemes have faced the uncertain and volatile scenario in terms of the growth in number of schemes. The number of schemes declined sharply in the year 1998-99 which increased appreciably in the year 1999-2000. These schemes have encountered a negative growth from the year 2009 to 2017. CAGR in respect of number of schemes, AUM category wise and portfolio wise was grown significantly over the years referred under study. Hence it can be concluded that Mutual Fund Industry has a significant growth trend in various terms.

The effects of Market sentiments could be clearly observed in the AUM of the schemes. In the year 2006-07 and 2007-08, when the entire economy was enjoying the fruits of Bullish Market, the Mutual Fund market also was flourishing as the AUM rose by 40.77 percent and 54.77 percent in the year 2006-07 and 2007-08 respectively. The AUM decreased by -17.39 percent from 2007-08 to 2008-09 owing to Bearish Sentiments prevailing in the Market. In the year 2009-10 when the economy was again witnessing Bullish run, the AUM rose by 47.13 percent. A similar trend could be observed in the year 2014-15 when due to Bullish trend the total AUM of the Mutual Fund Industry rose by 31.21 percent.

REFERENCES/BIOBLIOGRAPHY

Aggarwal Deepak (2007), “Measuring Performance of Indian Mutual Funds”, www.ssrn.com (id 1311761), *Finance India*, June 2011.

Bodla B. S. and Bishnoi Sunita (2008), “Emerging Trends of Mutual Funds in India: A Study across Category and Type of Schemes”, *The Journal of Indian Management and Strategy 8 M*, 13(1), pp. 15-27.

Geetha (2012), “Mutual funds in India”, *IJMFSMR*, 1(2), pp. 49-60.

Hasan Jafri Arshad (2013), “The Performance Evaluation of Indian Mutual Fund Industry: Past, Present and Future”, *I.J.E.M.S.*, 4 (2), pp. 223-226.

Kale Jayant R and Panchapagesan Venkatesh (2012), “Indian Mutual Fund Industry: Opportunities and Challenges”, *IIMB Management Review*, pp. 245-258.

Kamiyama Tetsuya (2008), "India's Mutual Fund Industry", www.ssrn.com (id: 1103758), *Nomura Capital Market Review* 10(4), pp.57-72.

Kumar G. Lenin, Gayathri S. and Kartikha S. (2010), "Mutual Funds in India-Emerging Prospects, Issues and Challenges", ssrn.com(id 1634302).

Mondal Samar (2009), "Growth of Mutual Fund in India with Comparative Performance Analysis with SBI equity & ICICI Prudential Mutual Fund", ssrn.com (id 1970256).

Pandey Anoop (2009), "Mutual fund Industry – Analysis and recent trends", sage journals, (http://abr.sagepub.com/content/7/2/60.abstract).

Panigrahi Madhu S (1996), "Mutual Funds: Growth, Performance and Prospects", Economic and Political Weekly, 31 (12).

Parmar Chetna (2010), "An Empirical Investigation on Performance of Mutual Fund Industry in India", Saurashtra University Theses Service (ssrn id: 11821437).

Purandare Jairaj and Mehra Gautam (2010), "Indian Mutual Fund Industry - Towards 2015 Sustaining Inclusive Growth – Evolving Business Models", *CII 6th Mutual Fund Summit 2010*.

Sareen Prateek (2012), "Scope and Growth of Mutual Funds in India", http://www.studymode.com/essays/Scope-of-Mutual-Fund-In-India-933712.html.

Sekhar and Satya G. V. (2013) "Role of Indian Mutual Funds in Financial Inclusion: Public Vs Private Sector." *Journal of Business and Management Sciences*, pp. 4-9.

Singh Anand and Mall C. P. (2008), "Mutual Fund Industry in India: Recent Trends and Progress"," httpwwwsmvaranasi.com.

Tripathi Nalini Prava (1996), “Mutual Fund in India: A financial Service in Capital Market”, Finance India, 10(1), pp. 85-91.

Umarani M.B. (2012), “Growth of Indian Mutual Fund Industry in the Past Decade”, IOSR Journal of Business and Management (IOSR-JBM) , 6 (2) , pp. 27-29.

Websites:

- www.amfiindia.com
- www.mutualfundindia.com
- www.moneycontrol.com
- www.rbi.com
- www.sebi.com
- www.bseindia.com
- www.nseindia.com
- www.ssrn.com

HUMAN RESOURCES ACCOUNTING IN PUBLIC SECTOR UNDERTAKINGS: A CASE STUDY OF MMTC

Dr. Sonia Kapoor
Assistant Professor
DAV Centenary College
Faridabad, Haryana
drsonianarula@gmail.com

ABSTRACT:

Human resources accounting refers to the method of reflecting the rupee value of the human capital in the firm's balance sheet. Human capital refers to the basic skill, capabilities, the perception know-how and expertise. Investment in human resources refers to all forms of investments directed to raise knowledge skills and aptitudes of organization's workforce. The treatment of HR as asset is desirable with a view ensuring compatibility and completeness of financial statements and improves efficient allocation of funds as well as providing more useful information to management for decision-making.

For this purpose we use primary and secondary data and our research instrument is a structured questionnaire. At the end of the study we conclude that HRA system is progressive approach as well as HR practices are acceptable by employees and are in right direction but as it is not mandatory, some Public sector undertakings are using it as a management tool only.

Keywords: *Human Resource, Human resource accounting, Public sector undertakings, HRA system, HR practices.*

INTRODUCTION

Skillful, knowledgeable and Competent workforce can take the organization ahead even out of the adverse environment. In traditional accounting practices, human resources, a vital asset didn't find its place. The expenses incurred in respect of selection, lay off, training, promotion, etc. of employers were treated as revenue expenditure. It is argued of late that such expenditure yields benefits to an enterprise in the form of services rendered by the manpower and such expenditure should be capitalized and shown in the balance sheet. It is also considered essential to collect and report the human resource information which is useful for different types of users. At last a new concept introduced known as Human Resources Accounting (HRA) which refers to accounting for human assets as organizational resources. It involves measuring the costs incurred by business firms and other organizations to recruit, select, hire, train and develop human assets. It also involves measuring the economic value of people to the organization. And now a day in India besides a few private corporate entities, some leading PSUs like SAIL, ONGC, OIL, NTPC etc. are practicing HRA. They have adopted the" Economic evaluation method and the basic model as formulated by LEV and SCHWARTZ incorporating certain requirements as suggested by FLAMTHOLTZ and JAGGI and LAU. Now not only India but some other nations have recognized that a business firm being a blend of man ,machines, and materials; human resource is the organic component of this blend that infuses life into the firm and imparts to it the attributes of a going concern.

LITERATURE REVIEW

A literature review before starting a research is always desirable for the following reasons:

- It examines what has and has not been investigated.
- It develops a general explanation for observed variations in a behavior or phenomenon.
- It identifies potential relationships between concepts and to identify researchable hypotheses.
- It examines how other researchers have defined and measured key concepts.
- It identifies the data sources that other researchers have used.
- It develops alternative research projects.
- It discovers how a research project is related to the work of other researchers.

Human Resources Accounting was first introduced in 1960s by Theodore Schultz. Prior to 1960s, political economists had dealt with the concept of value of organizational workforce. As early as 1676, Sir William Petty tried to attribute the profit of an organization to the labour of the people (Petty, 1691). In the late 1950s Rensis Likert, first used the term "human assets" to describe the human resources available to a firm. Shultz (1961) originated the term Human Capital. In his later work in 1981, he elaborated on the concept by stating that all human abilities can be considered either innate or acquired. He referred to all attributes which can be augmented by appropriate investment as human capital. Human Resource Accounting was developed in the 1960's. According to Schultz (1961), human capital can be defined as abilities and skills of certain group of people or an individual person that have value. Embodied in this are behavior, knowledge, experience, attitude and morale, corporate culture to mention a few which when put together becomes of economic value to the organization. According to the American Association of Accountants as cited in Rao (2005) "*Human Capital Accounting is a process of identifying and measuring data about human resources and communicating this to interested parties.*"

RESEARCH METHODOLOGY

Research methodology is the guiding principle for the creation of knowledge. For the present study we have employed both case research and survey methods and hence used primary and as well as secondary data to collect, data, both qualitative and quantitative. Primary data have been collected by structured questionnaires, opinion surveys and personal interviews of respondents. This study is, by and large, an empirical investigation of a micro nature and not a sample study. It is a humble attempt to investigate the influences of HRA in an enterprise. For this investigation, data have been collected from different beneficiaries concerned with public enterprises. The annual reports of the selected companies were scanned for the period ranging from 2006-07 to 2010-11 to find out the HRA system of these organizations.

Research Instrument

With a view to harvesting information from respondents, a questionnaire was designed. The instrument has 6 items. The items in the questionnaire related to category wise number of employees, Human assets valuation, Term of HRA in practice; Objective of practicing HRA, Model of HRA in practice, Main benefits reaped through HRA vis-a-vis performance and productivity of employees. The items for the questionnaire were selected on the basis of review of literature as also discussions with experts, and executives and HR Managers of selected Public Undertakings. Based on their comments and preliminary analysis of data, changes were made and the questionnaire was finalized for the main study. For analyzing the study we use Line diagrams & Histograms. In the present paper we had taken a case study of MMTC.

HISTORY OF MMTC

The Company was incorporated on 26th September, at New Delhi. The Corporation started functioning on 1st October. The main objects of the company Export of mineral ores and Import of essential metals.

1995 - The company continued to purchase rough diamonds, emeralds, rubies and semi-precious stones from overseas markets. Its New York Office was being developed as a marketing base for Jewellery, Exports to U.S.A. Also, its office at Dubai is involved in bullion trade. A duty-free jewellery show room was opened at Sahara International Port. With a view to tapping country's vast potential the company proposed to have its own manufacturing plant at Delhi for production of gold/silver medallion.

A MOU was signed with the government of Orissa for development of existing Gopalpur minor port into an all-weather, deep water and direct berthing port. The project gained significance in view of the two port-based steel plants viz. TISCO & L & T with initial steel production capacity of 5 TPA by 2000 AD with planning for expansion up to 20 TPA of finished steel by 2015 A.D.

-BIFR approved scheme of merger-cum-amalgamation of Mica Trading Corporation of India Ltd. (MITCO) with MMTC.

- 46,500,000 Bonus shares issued.

1996 - Export of iron ore marginally declined due to the major constraints faced during the year such as frequent breakdown in port equipments, reduced staking area in ports and supreme court judgment banning mining activities in forest land.

- The purchase of Rough emeralds, Rubies and other semi-precious stones from overseas market continued.

- Chemical items and Homeopathic Medicines were imported by the company.

2001 - MMTC has signed a memorandum of understanding with the Department of Commerce in the Ministry of Commerce and Industry.

2002 - MMTC board has approved for Capital Reduction Scheme to ensure transfer of Rs.15cr to the government

-MMTC has opened a new outlet at Thiruvananthapuram - a duty free business.

-MMTC has signed a Memorandum of Understanding with the department of commerce setting an turnover target of Rs.6780crs.

-MMTC has unveiled a new line of silverware, Sanchi-Silver in Style.

2003-MMTC Ltd recorded a 38% growth in its export of minerals and metals during the first three quarters of the current fiscal.

-MMTC Ltd, which holds the golden super star trading house status, has successfully penetrated the Chinese market for the mineral ores.

-MMTC files application with Central Government Industrial Disputes Act 1947, seeking permission for closure of 'Mica Division of MMTC Ltd.'

-MMTC Ltd has acquired Rs.800cr deal from Japanese and South Korean companies for the supply of iron ore.

-MMTC's joint venture with the Orissa government - Neelchal Ispat Nigam Ltd. has emerged as the second largest exporter of pig iron from the country.

2004 - MMTC, Ennore Port together to set up iron ore facility

2005- MMTC wins 4 gold medals for exports - MMTC Vizag office reports 135-pc rise in turnover

2006 - MMTC mulls to set up 50 MW wind plant - MMTC enters into LTA with Japanese, Korean and Chinese steel mills

2007 -MMTC Ltd has informed that in pursuance of communication dated the May 07, 2007 from Ministry of Commerce & Industry, Department of Commerce, Govt. of India, Shri. Sunir Khurana has assumed the charge of Director (Marketing) of the Company on May 07, 2007.

2008 - MMTC has signed a pact with Swiss metal company PAMP to set up a gold refinery in Sohna, Haryana.

- MMTC Wins D & B Top Ranking Corporate Award in Trading Sector For 2007.
- MMTC signs agreement with Swiss firm for gold refinery.

2009 - MMTC records highest ever trade turnover.

DATA ANALYSIS REGARDING HRA IN MMTC

Data Analysis is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains.

RESULTS OF MMTC

Value addition by all the components over the years

We can easily see that the turnover of the organization is increasing over the years.

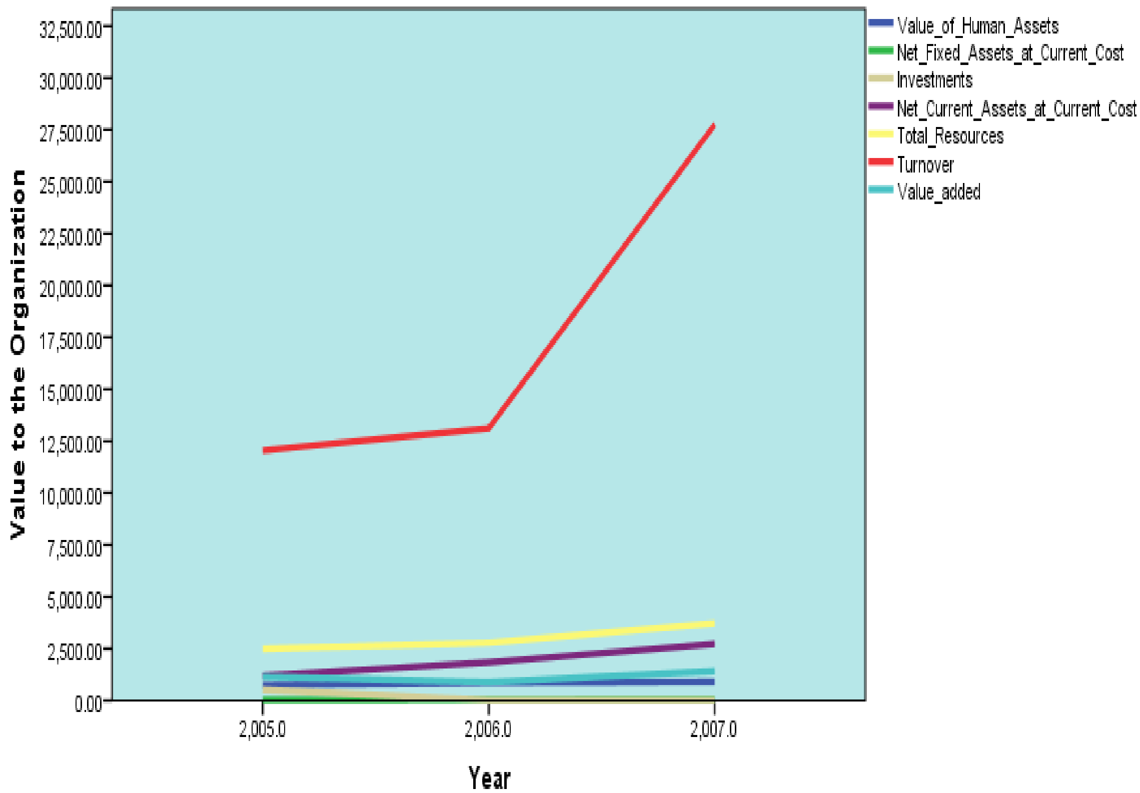


Figure 1: Value addition by all the Components over the years (MMTC)

In the below mentioned graph we can notice that only investment to the organization is going down rest others are increasing.

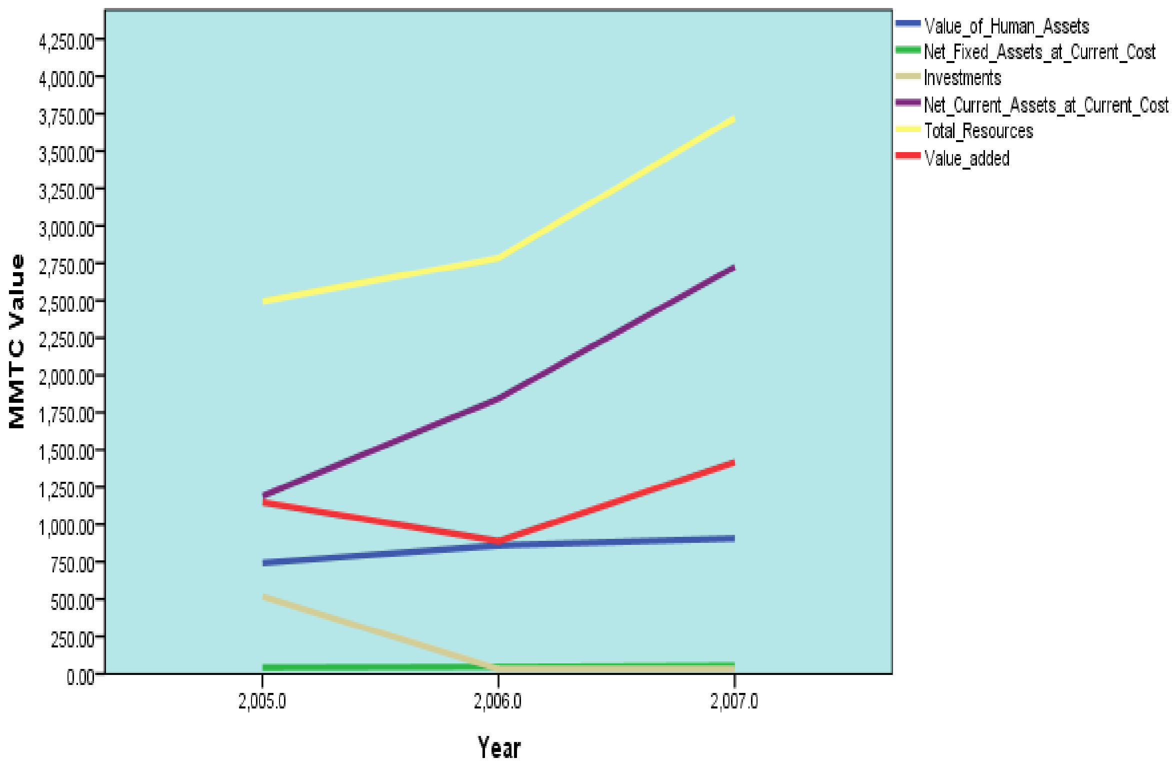


Figure 2: Score Card of MMTC

Now let us see the pattern of investment and turnover over the years.

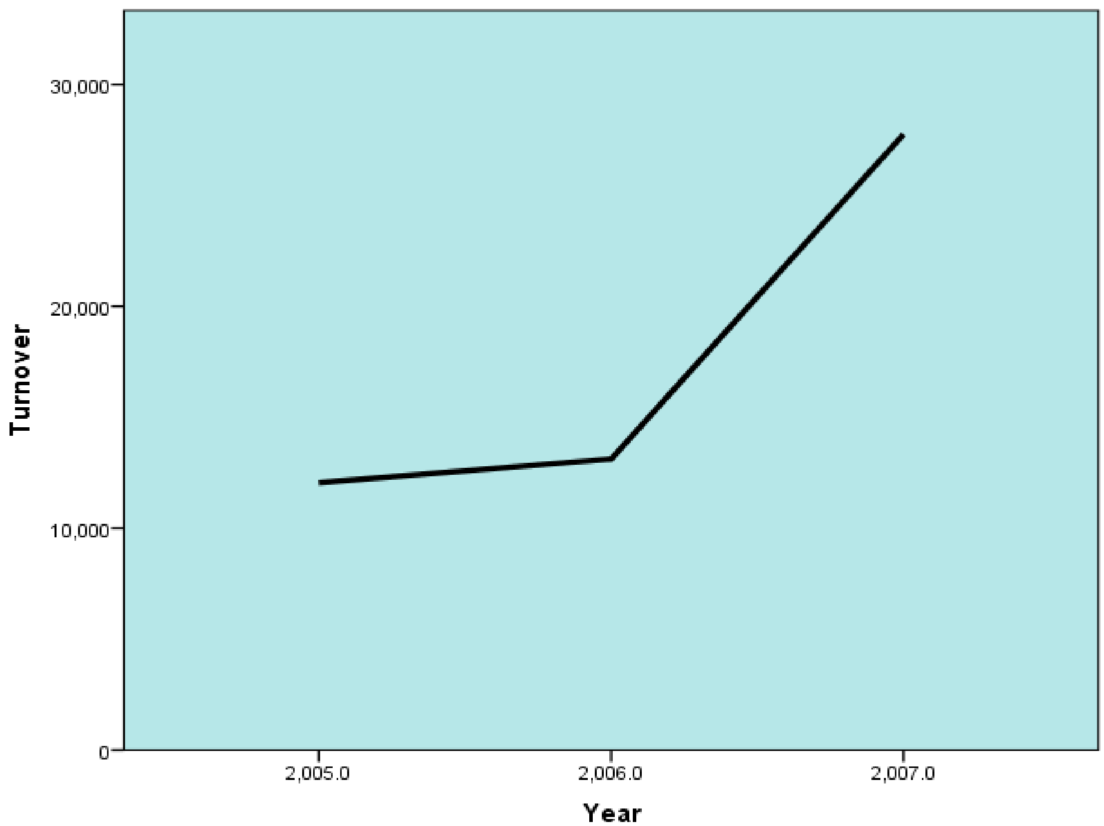


Figure 3: Pattern of investment and turnover over the years (MMTC)

The investment is sharply increasing while in the below mentioned graph we can see that organization have even shorten the investment.

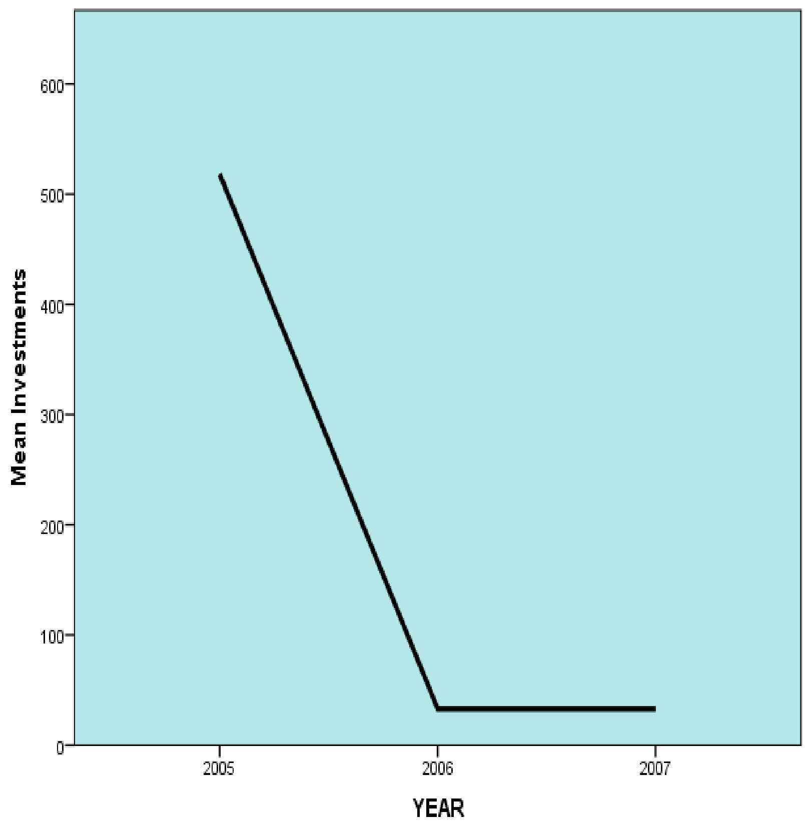


Figure 4: Investment Pattern over the years (MMTC).

Now Let us see the pattern of Net Fixed Assets and Net Currents at the Current cost.

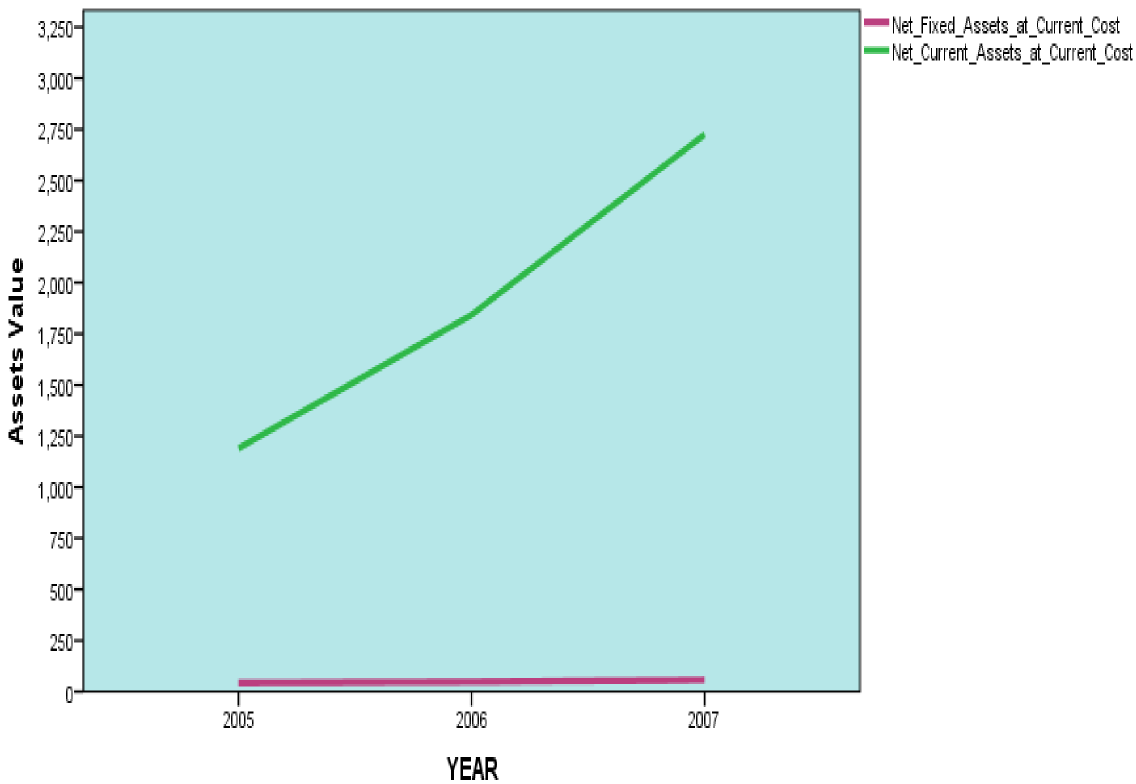


Figure 5: Pattern of fixed assets and net current assets at the current cost

We can see that Net Current Assets at Current Cost is increasing exponentially compare to the stable Net Fixed Assets.

Now we can also see that values added and resources by the organization.

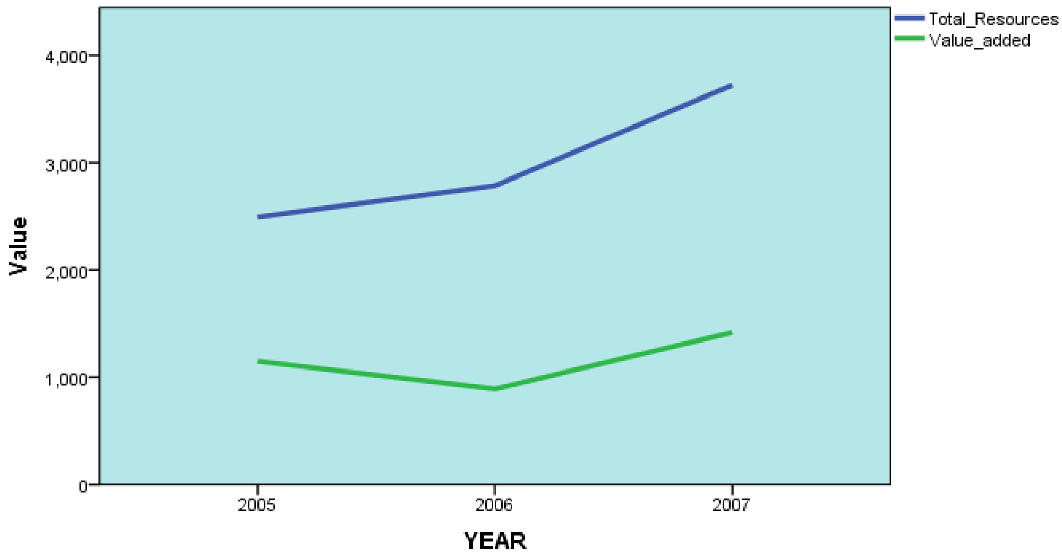


Figure 6: Value added and resources.

In the above figure we can see that Total resources added to the organization is increasing.

So from the above results we can conclude that the HR is following the progressive approach for the organization.

FINDINGS OF THE STUDY

The study has revealed that the users of human resources data consider information regarding human capital and changes thereof as valuable aids to management. The usefulness of such data in decision-making by investors and financiers, besides their potential impact on union-management relations are also by and large established during the study. It is true that executives are found to be not so clear about the suitability of particular methods of human resource valuation. At the same time, a number of companies in the public sector and some in the private sector have started measuring the value of human resources and disclosing the same as supplementary statements along with their annual reports. With computerized facilities, it should be possible for large organizations to carry out the computations involved in the process of valuation. The method of valuation so far adopted in India by some companies happens to be based on the future service potentials of employees. The study concern in the present thesis has not been directed towards the relative merits or demerits of the alternative measures. As the findings show, there is a wide acceptance among executives and stakeholders of the usefulness of human resource values. Developing a suitable model for the purpose of computing the value leaves scope for further research in the area and this will hopefully throw greater insight into the scope for measuring and using human resource data by management as well as others concerned. It is to be noted that-

- The researcher hereby recommends the need to address the issues of human capital development and investment at both the micro and macro levels and that human capital value should be included in the balance sheet of corporate undertakings to aid HR and investment decisions.
- Further prospective for prospective research scholar is that they can take in to consideration the area where research on HRA is not taken in to consideration.
- It is evident from the research that human resources accounting is a progressive approach.
- Moreover study approves the preconceived notion that the major motivator and talent retention factor is human resource.
- Public enterprises are using human resource accounting practices as a management tool only.

CONCLUSION

Human resources represent the heart and brain of organization. For the last few decades, the accounting scenario across the world is much concerned with the valuation of organizational human resources and reporting the same in the annual accounting statements. The accounting scholars are also deeply engrossed in the subject, even though they do not agree in all aspects in the area. In spite of rapid technological advancement, human resource continues to play a dominating role towards the effective use of physical and financial inputs. The treatment of human resource as assets is desirable with a view to ensuring compatibility and completeness of financial statements and more efficient allocation of funds as well as providing more useful information to management for decision-making. The quality of manpower is crucial to the success of a business. Employees in terms of their productive capabilities have a decisive impact on a firm’s business efficiency. Therefore, it is necessary to regularly monitor the skills level of the people so as to upgrade them whenever needed.

It could be concluded that human capital accounting is highly significant to HR managers in making relevant HR decisions and that the inclusion of human capital accounting in financial reporting is desirable to aid investors in making rational decisions. It is evident from the research that human resource accounting is a progressive approach. Moreover study approves the preconceived notion that the major motivator and talent retention factor is human resource. PSUs are using human resource accounting practices as a management tool only. It is suggested that the authorities concerned make it mandatory to practice HRA in PSU.

SCOPE FOR FURTHER RESEARCH

Human Resources Accounting has a great potential in the modern age of professionalization particularly in the case of labor-intensive service industry where human resource constitutes prime resource. HRA information thus would be of immense help in decision making both for internal and external users. Therefore, organizations should adopt HRA system. The conceptual thinking about valuation of human resources is still in a developing stage. No model of HRA is accepted by the accounting bodies all over the world. The models devised so far for valuation of HRA have been developed in the USA taking into consideration the prevailing environment. Most of the Public Enterprises are using the Lev & Schwartz model with or without modifications as per their convenience. Considering the significance of human resources in knowledge based sectors initiatives should be taken by the government along with other professionals, researchers and accounting bodies both at the national and international levels for the measurement and reporting of such valuable assets. Researchers should come forward to review the models as per the requirements of our country. The present research also highlights the need for further research in HRA focusing on comparative study of the subject in public and private sector to measure the impact of HRA on performance of the undertakings.

BIBLIOGRAPHY AND REFERENCES

AAA Committee (1973), "Report of the committee on Human Resource Accounting", *The Accounting Review*, Supplement to Vol. XL VIII.

Appelbaum, S.H; & Hood, J. (1993), "Accounting for the Firm's Human Resources", *Management Auditing Journal*, 8 (2).

Batra, G. S. & Bhatia, B. S. (1994), Human Resource Valuation: A Study of Indian Corporate Sector. *Journal of Accounting and Finance*, 8(1), pp. 43-57.

Bhargava, P.P. (1991), *Human Resources Accounting: A tool for Control and Management of Assets*. New Delhi: Anmol Publications, New Delhi.

Bhat, V.P. (2000), "India: Towards Transparency and Uniformity", *Business Line*, Chennai.

Chauhan, Mukesh and Shivani Gupta (2009), "Human Resource Accounting-Concepts & Practices in India", *The Management Accountant*, Jan. Vol. 44.

Chhabra, T.N. (2006), *Text and Cases in Human Resource Management*, Dhanpat Rai and Co. Ltd., New Delhi.

Chakraborty, S. K. (1976). *Human Asset Accounting: The Indian Context in Topics in Accounting and Finance*, Oxford University Press.

Dasgupta, N. D. (1978), *Human Resource Accounting*, Sultan Chand and Sons, New Delhi.

Gupta, R.K. (2003), *Human Resource Accounting*, Anmol Publications Pvt. Ltd., New Delhi.

Gupta, S.C. (2009), *Advance Human Resource Management: Strategic Perspective*, Ane Books Pvt. Ltd., New Delhi.

Kaplan, R.S. and Norton, D.P. (1992), "The Balanced Scorecard: Measures that Drive Performance", *Harvard Business Review*, Jan-Feb, pp.71-79.

Kumar, Ashutosh (1999), "Human Resource Accounting – An Overview", *The Management Accountant*, 34 (8), p. 596.

Kumar, Ravinder (2004), "Human Resources Accounting - Some Basic Issues", *Business Analyst*, XXV (2), pp. 19-24.

Kumar, Ravinder (2005), "Human Resources Accounting Practice in Indian Context in the Light of HRA Models", *Abhigyan: The Quarterly Journal of Foundation for Organizational Research and Education*, XXIII (1), pp. 2-9.

Lev, B., & Schwartz, A. (1971), "On the Use of the Economic Concept of Human Capital in Financial Statements", *The Accounting Review*, 41(7), pp. 123-9.

Malik, R.K. (1997), *Human Resource Accounting and Decision Making*, Anmol Publication Pvt. Ltd, New Delhi.

Mirza, S. (2003), *Human Resource Management*, Tata McGraw Hill Publishing Co. Ltd, New Delhi.

Parameswaran, R. & Jothi, K. (2005), "Human Resource Accounting", *The Chartered Accountant*. January, pp. 867-74.

Patra , R., and S.K. Khatik (2003), "Human Resource Accounting Policies: A case study of Bharat Heavy Electricals Limited, Bhopal, India", *International Journal of Human Resources Development and Management*, 3 (4), p 285.

Patra R., S.K. Khatik, and Kolhe, M. (2003), "Human resource accounting policies and practices: A case study of Bharat Heavy Electricals Limited, Bhopal, India", *International Journal of Human Resources Development and Management.*

Patra, R. (2005), *Human Resource Accounting in Public Enterprises: A Case Study*, Himalaya Publishing House, New Delhi.

Prakash, O. (1997), Human Resource Accounting Practices in Bharat Heavy Electricals Limited, *Finance India*, 11(1), 92-94.

Rao, P, Subha (2007), *Essentials of Human Resource Management and Industrial Relations, 2nd ed., Himalaya Publications*, New Delhi.

Rao, Prabhakar D (1993), "Human Asset Accounting: An Evaluation of the Indian practices", *ASCI Journal of Management*, XXII (2).

Rao, V.S.P. (2005), *Human Resource Management: Text and Cases* (2nd ed), New Delhi: Excel Books.

Sonara, C. K. & Patel, A. (2009), Valuation and Reporting Practices of Human Resource Accounting in India, *The Management Accountant*, 44, 16-19.

Verma, S. B. (1999), HRA Practices in Public Sector Undertakings in India, *The Management Accountant*, 34(8), 575-82.

Sweiby, Karl B (1997), "The Intangible Assets Monitor", *Journal of HRA*, Spring 1997.

Websites

http://www.scribd.com/doc/8358363/Human-Resource-Accounting

http://www.charteredclub.com/what-is-human-resource-accounting/

http://www.wikipedia.org/h

COMPARATIVE STUDY OF WEB CRAWLERS

Dr. Deepika Punj

Department of IT & CA

YMCA University of Science and Technology

Faridabad, India

deepikapunj@gmail.com

ABSTRACT

As the size of World Wide Web (WWW) increases at very high rate, so it is difficult to extract the meaningful information from it. The information retrieval process provides such information to the end users. Search Engines are used to get useful information from the World Wide Web. The Web Crawler is the main component of search engine which is responsible for extracting information. It crawl the Web in some manner in order to get valuable information and this process is called as web crawling. In this paper, on the basis of web crawling pattern, classification of Web Crawlers has been done.

Keywords: *Search Engine, Information Retrieval, Web Crawler, Parallel, Focussed, Migrating, Incremental Distributed, Hidden.*

INTRODUCTION

Due to increase in size of WWW **(Arasu et al., 2001, Terrence, 2003),** to get useful information from web becomes a challenging task. Search engine are responsible for providing useful information from Web to users **(Grossan, 1997, Dixit & Singhal, 2009).** There are many components in the working of a search engine. The Web crawler is the vital component of search engine which crawl the web and extract information and downloaded in the search engine database. This process is called as Web Crawling. The working of a crawler is shown in figure 1.

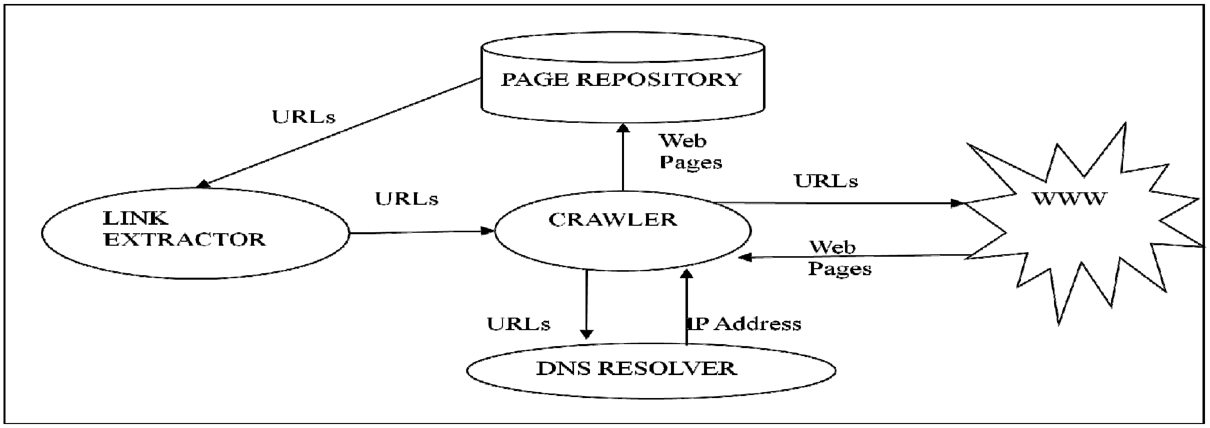


Figure 1: Working of a Crawler

There are several of ways of doing crawling and also there are many design issues related to crawler (**Punj & Dixit, 2012).** On the basis of their crawling ways, the web crawlers are classified into various types. The next section discussed these types in detail.

WEB CRAWLER CLASSIFICATION

Based on their working, the Web crawler can be classify into various types as discussed below

a) Parallel Crawler

As the size of web increases, it gets more difficult to crawl the entire web. In Parallel crawler **(Dixit & Seth 2010),** multiple instances of crawler are doing crawling process to cover the web as maximum as possible. It not only increases web coverage but also speed up the download rate. It is clear from the figure 2 given below that now crawling is not depend only on single crawler but on multiple crawlers that are running in parallel.

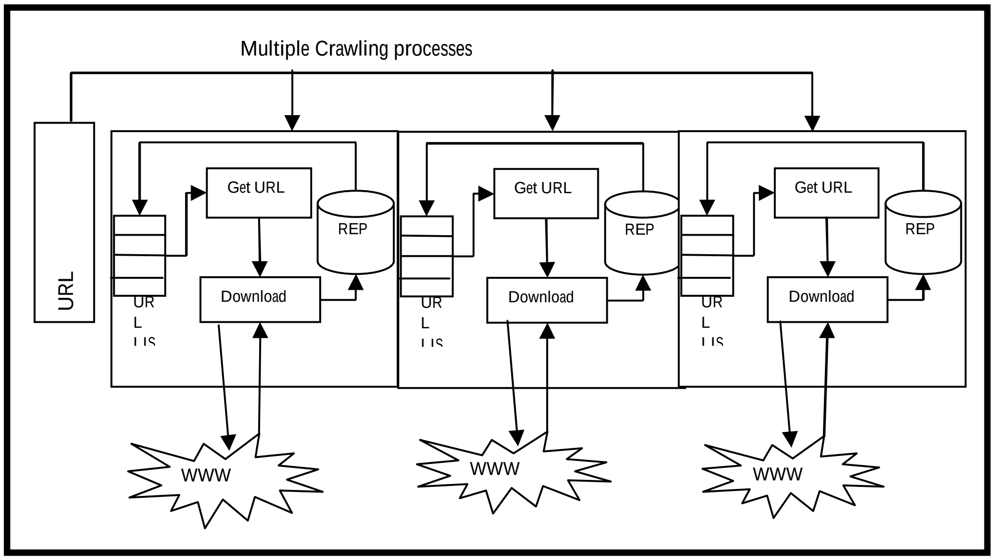


Figure 2: Flow of Multiple Crawling processes

The figure above shows how multiple crawling processes works in order to achieve the desired results in efficient and manageable manner. The crawling instances first gets the URL from URL list, traverses the web, downloads the web pages, stored in repository and from repository embedded links are extracted and again supplied to the crawling instances.

b) Focussed Crawler

The focussed crawler crawls only pre-defined topics related web documents **(Chakrabarti et al 1999, Agre & Mahajan 2015, Kale & Dahiwale 2015)**. The goal is to select only those links that are of topic related other links are avoided. The focussed crawler crawls links that are given priority on the basis on given topic whereas other crawlers follow every link on a page in breadth first manner. For selecting the most promising links on related page, it uses an additional classifier. The seed URLs provided are of relevant to pre-defined topic. The relevancies of links that are embedded in web pages are calculated both based on content of the source page and links structure of the web. After finding relevancy, the crawling crawls the calculated relevant links and process go on. The architecture of focused crawler is given in figure 3:

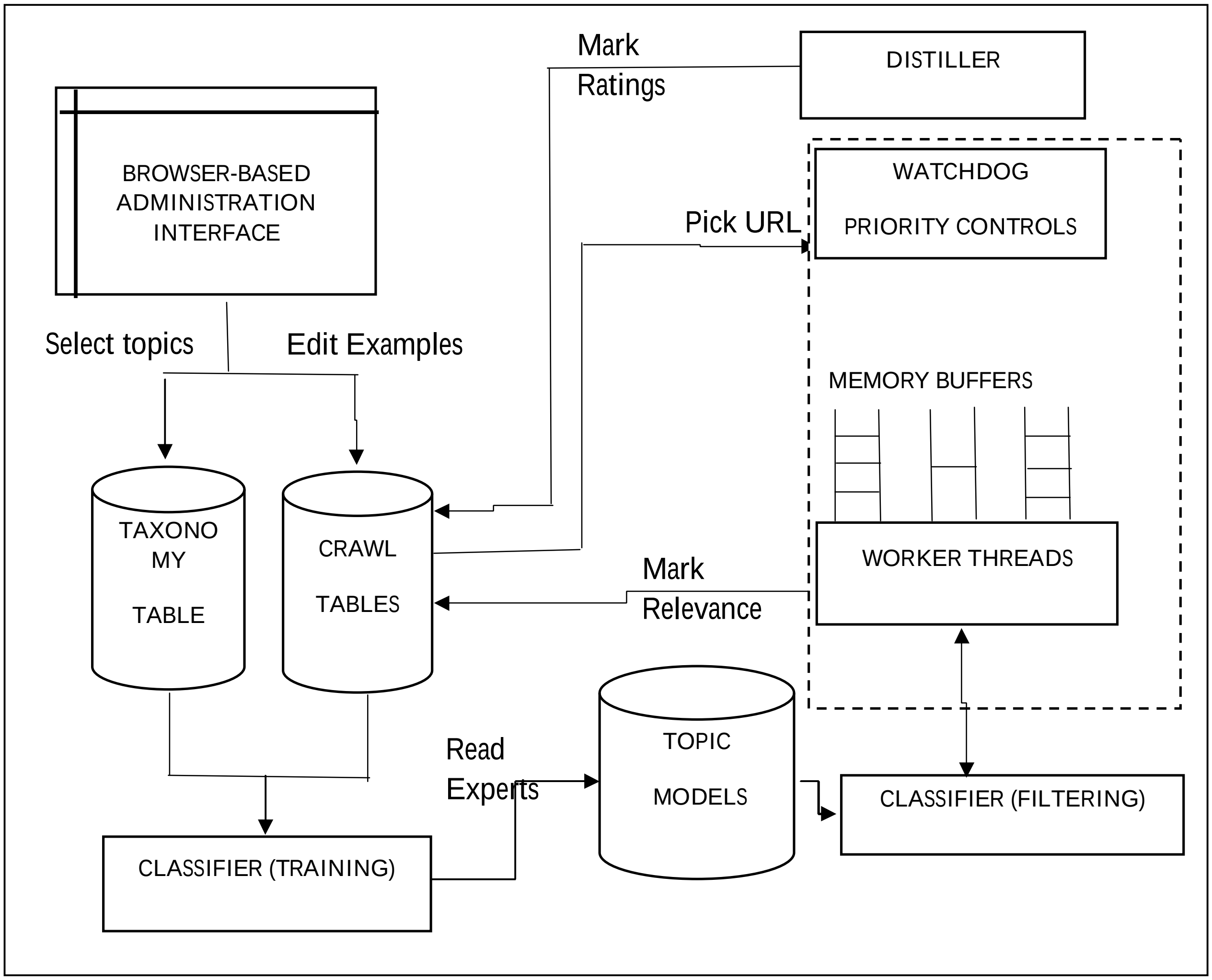


Figure 3: Architecture of Focused Crawler

The focused crawler has three main components: a classifier which makes relevance judgments on pages crawled to decide on link expansion, a distiller which determines a measure of centrality of crawled pages to determine visit priorities and a crawler with dynamically reconfigurable priority controls which is governed by the classifier and distiller. The three classifier are used namely page classifier, form classifier and the link classifier. The page classifier is used to find whether the page belongs to the topic taxonomy or not. The link classifier identifies whether the links points to page that contain searchable forms or not. The form classifier is used to filter out useless forms. After classifying searchable forms, form classifier put them in database if they are not present there. The topic taxonomy is maintained with the help of users' feedback by asking interesting pages as they browse. The basic idea is to categorize crawled pages to be placed in this taxonomy. By searching to the limiting area, focused crawler avoids crawling through unproductive paths.

c) Incremental Crawler

The main purpose of Incremental crawler is to crawls only those pages that have changed unlike other crawler that periodically checks the old pages and replaced them accordingly **(Dixit & Sharma, 2008).** During this process, the crawler has two goals:

1. Keep the local database updated

To keep the database updated, crawler should revisit the web pages in timely manner. The revisit frequency for every page is estimated and then revisits them accordingly.

2. Improve the local database quality

The crawler enhances the quality of database by fetching more important pages and replacing the less important one.

An incremental crawler (Cho et al., 2000a) is one, which brings up to date a current set of downloaded pages instead of revisiting them from beginning every time. The revisiting policy has been defined and on that revisiting frequency web pages are re-crawled. The architecture of Incremental Crawler is given in figure 4:

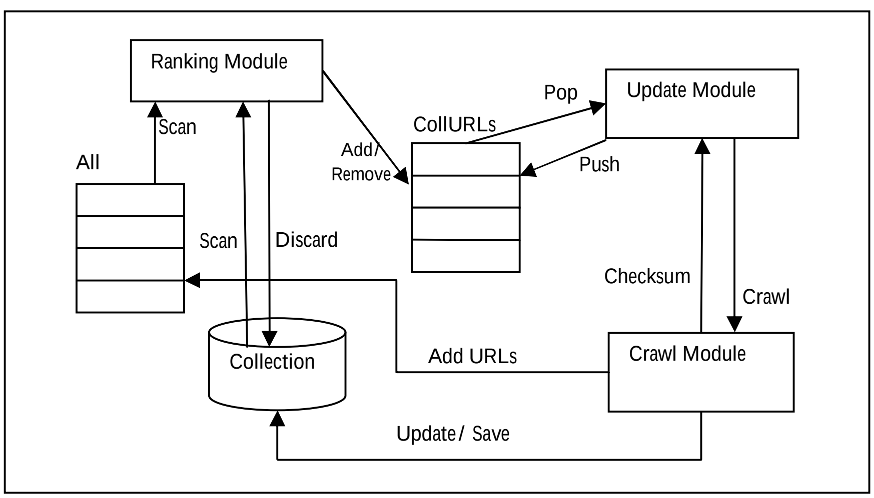


Figure 4: Architecture of Incremental Crawler

It consists of three modules:-

1. Ranking Module

It is responsible of assigning importance to the URLs so that they will be selected first for crawling.

2. Update Module

It is responsible for maintaining the freshness and quality of database. It takes the URLs from ranking module for maintaining quality and provided them to Crawl module.

3. Crawl Module

It crawls the URLs provided by Update module.

Following lists are used in working of Incremental Crawler:-

1. AllUrls: - list of URLs crawled by crawler. It is used by ranking module to assign priority to them and placed in CollUrls list

2. CollUrls: - URLs are stored in priority order by ranking module and taken by update module to assign them revisit frequency. This list is then supplied to crawl module for crawling.

d) Distributed Crawler

In Distributed web crawler **(Quoc et al., 2016)**, a URL server scatters individual URLs to different crawlers, which download web pages in parallel (Pu Q 2016). The Crawler sends these downloaded pages to a central indexer for further processing. In this crawler, multiple crawling processes are running in parallel to increases the download speed. These multiple crawling instances may be geographically far away from each other. The IglooG **(Liu et al 2005)** is a distributed crawler and its architecture is shown in figure 5:

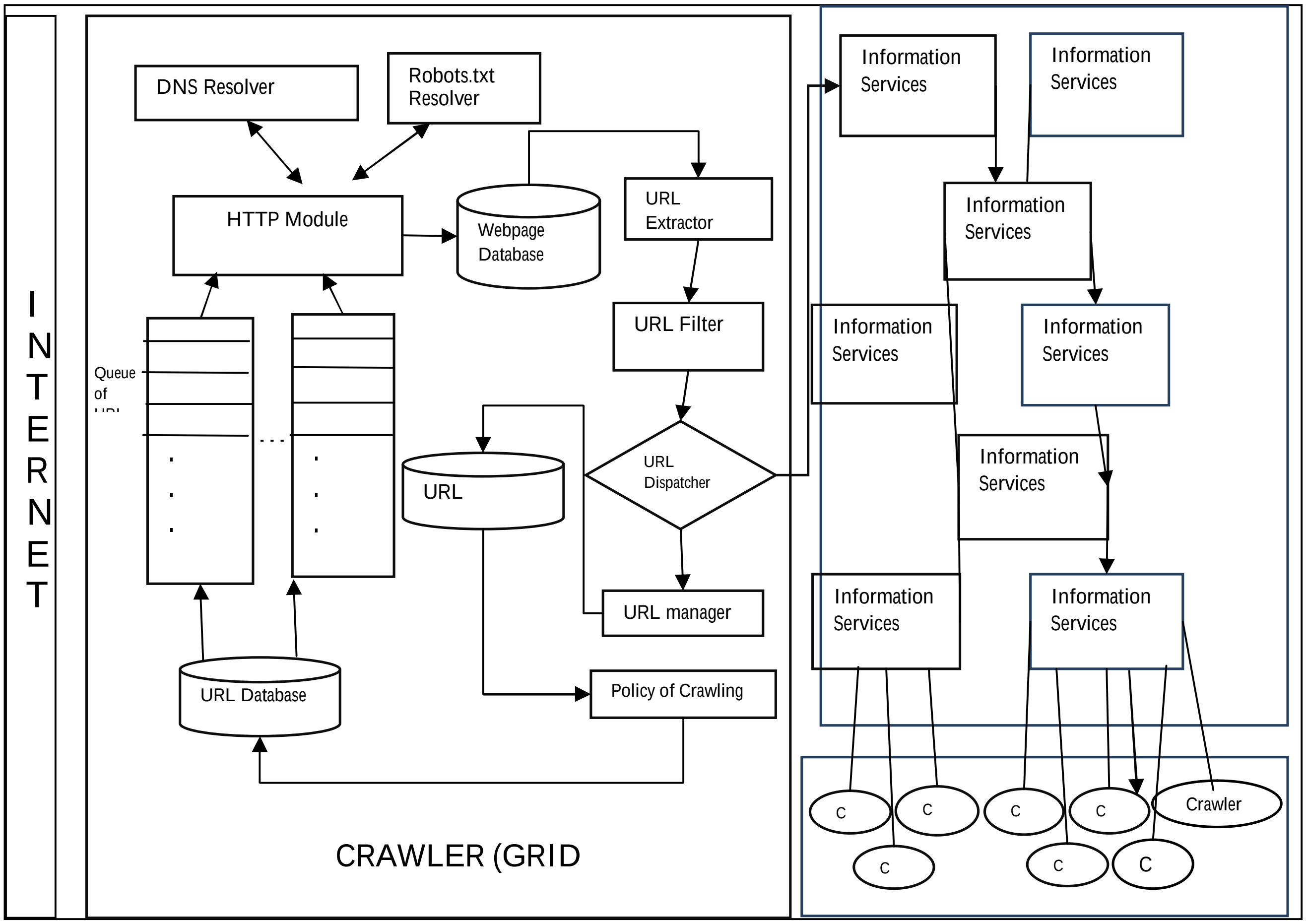


Figure 5: Architecture of Distributed Crawler

A Distributed Crawler, IglooG based on grid platform. Each crawler is arranging as grid service to improve the scalability of the system. The module Information services are responsible for distributing URLs in order to balance loads of the crawlers.

Information services are structured as Peer-to-Peer overlay network. According to the ID of crawler and semantic vector of crawl page that is calculated by Latent Semantic Indexing, the crawler can decide whether pass on the URL to information service or hold itself. URL filter is used to filter out URLs that are according to the specified criteria. There are many ways of URL Filtering **(Takano & Miura, 2016).**

e) Hidden Web Crawler

A crawler which has the capability of extracting information from the hidden web is called as Hidden Web Crawler **(Sharma & Bhatia 2016, Sharma & Sharma 2011, Manvi et al 2015).**

As search forms are the entry-points into the hidden Web, Hidden Web Exposer (HiWE) **(Raghavan & Gracia 2001)** is designed to automatically process, analyze, and submit forms, using an internal model of forms and form submissions. The architecture of Hidden Web is given in figure 6:

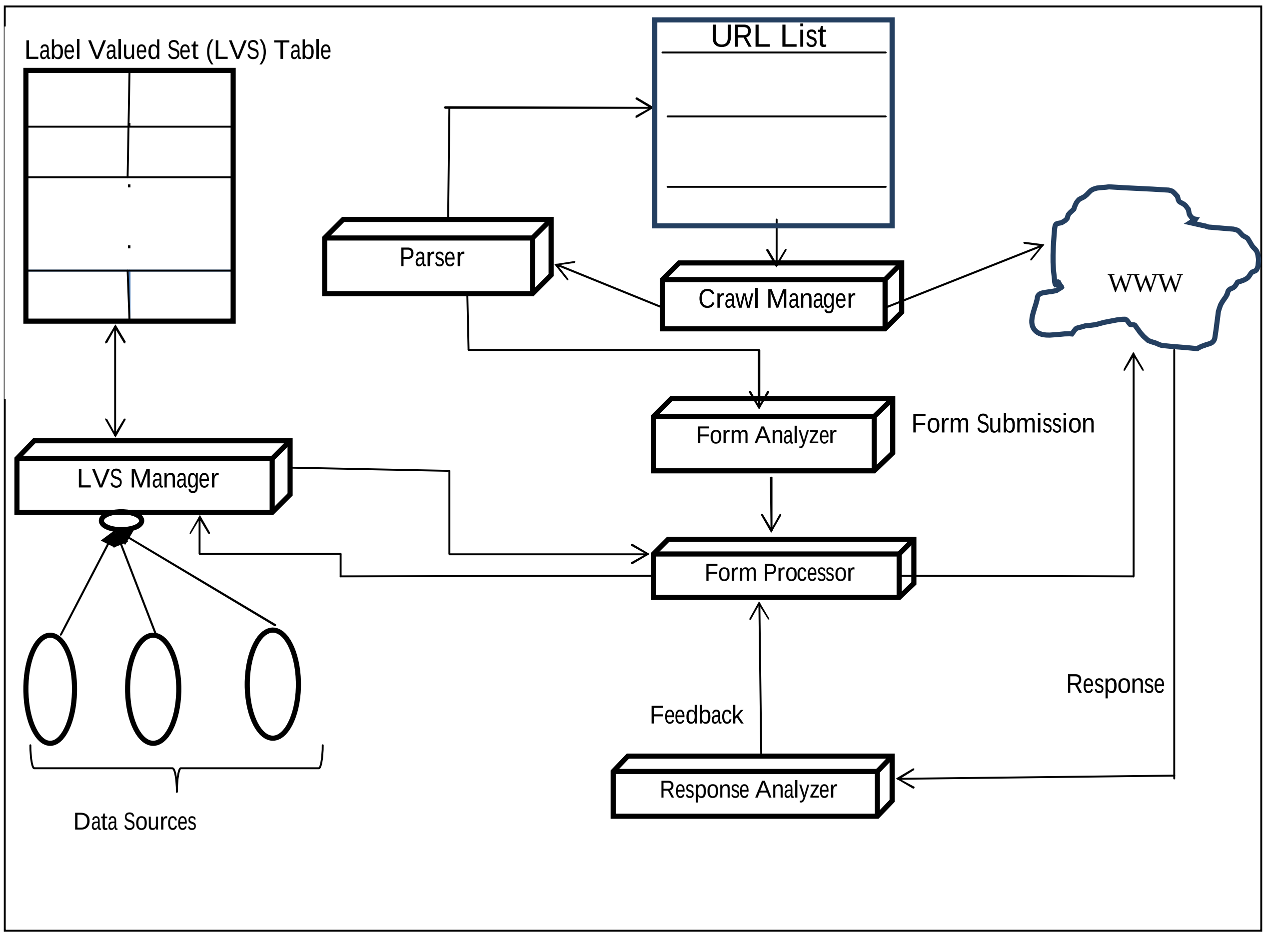


Figure 6: Architecture of Hidden Web Crawler

This model treats forms as a set of *(element*, *domain)* pairs. A form element can be any one of the standard input objects such as selection lists, text boxes or radio buttons. The architecture of HiWE has following steps:-

1. Analysis of Forms

2. Candidate Value Assignment: The value is assigned to form elements based on LVS (Label-Value Set) table and then weight is assigned by applying fuzzy aggregation function. These weights are then used as rank to these form elements.

3. Submission Form
4. Analysis of Response: The forms submitted are then analyzed for valid results.

The Hidden web performs inefficiently when the size of its crawl area increases. It is also unable to process the forms which are in different formats like .jpg, .pdf etc. Its efficiency depends on relevancy function and if this function computes wrong values, results will be wrong. So, its crawling highly depends on relevancy calculator and it should be accurate to get accurate results.

f) Migrating Crawler

In this work, the capabilities of migrating crawlers **(Punj & Dixit, 2015, Punj & Dixit, 2017)** have been utilized to achieve scalability, reliability, maximum web coverage and better network utilization.

The Web crawling approach utilized in this work departs from the centralized architecture of traditional search engines where the data retrieval component, the Web crawler are distributed **(Papapetrou et al., 2003).**

Migratability can be defined in the context of Web crawling as the ability of a crawler to migrate to the data source (e.g., a Web server) before the actual crawling process starts on that Web server. Thus, migrating crawlers are able to move to the resource, which needs to be accessed in order to take advantage of local data access. The migrating crawler can perform a complete local crawling. The architecture of migrating crawler is shown in figure 7.

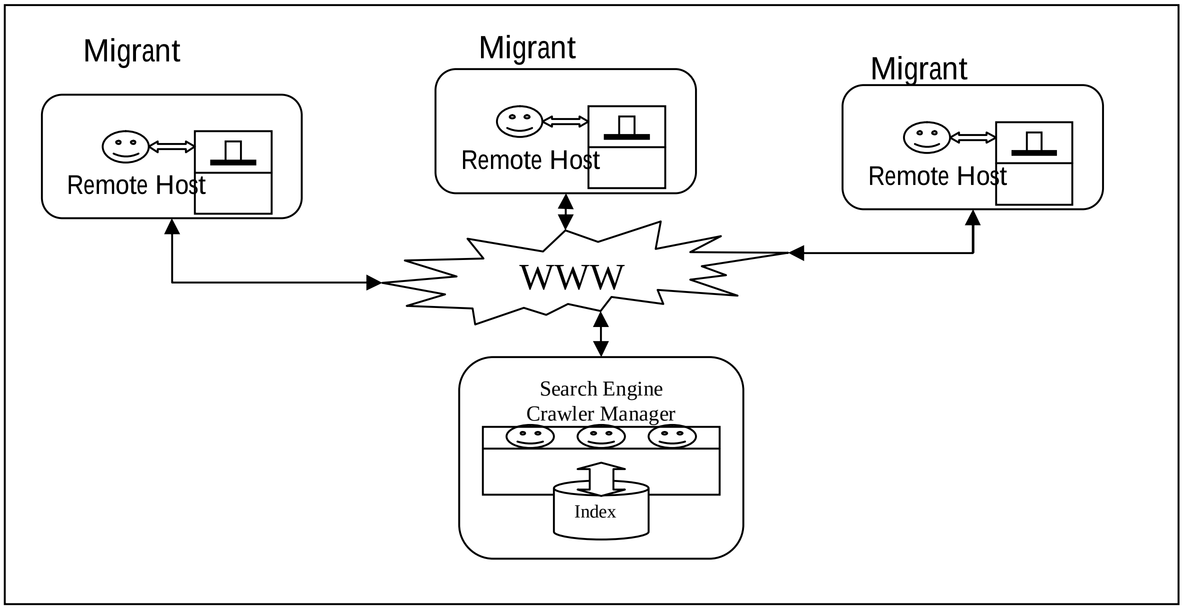


Figure 7: Architecture of Migrating Crawler

The migrating crawler creates its migrants and with the help of these migrants the crawling process takes place. These migrants help in achieving benefits of migrating crawler like maximum web coverage, better network resource utilization etc. Many modules of migrating crawler are proposed like Structure Matcher, URL Ordering, Capturing User browsing behaviour etc **(Punj et al., 2014, Punj & Dixit, 2015a, Punj & Dixit, 2015b).**

Based on their working model, revisit, and many other characteristics, a brief comparison between the discussed types of crawler is given below in Table 1:

S.No	Characteristics	Parallel	Focussed	Migrating	Incremental	Distributed	Hidden Web
1.	Working Model	Crawling done by crawler instances in parallel	Crawling is done by crawler in a specific field	Crawling is done by multiple migrants	Crawling is done only on revisit	Crawling done in parallel but at far places	High quality Search forms
2.	Revisit Policy	Revisit on	-	Revisit	Revisit of	Revisit on	-

		restart crawling		based on change frequency	high-rank pages first	restart crawling	
3.	Crawling Strategy	Breadth First Search	Depth First Search	Breadth First Search	Breadth First Search	Breadth First Search	Depth First Search
4.	Speed	Fast	-	Fast	-	Fast	-
5.	Initial URL	Seed URL	Topic specific	Seed URL	Given by Priority Queue	Seed URL	Search Forms
6.	Scalable	Yes	No	Yes	No	Yes	No
7.	Web Crawler Example	PARACHYD	[Chakrabarti et al]	[Papapetrou et al]	[Cho et al]	IglooG [Liu et al]	HIWE [Raghavan & Gracia]

Table 1: Comparison of Different Crawlers

CONCLUSION

There are several of ways of doing crawling but basically all crawlers are responsible for maintain the search engine database rich and fresh. Their crawling ways affect the quality of information stored in database. Some has revisit policy while others have not considered this factor. Similarly some considers the scalability factor but others may not. Depending upon their crawling strategies, different crawlers can be used in different area to get more and more important and valuable information.

BIBLIOGRAPHY/REFERENCES

Agre, G. H. & Mahajan, N. V. (2015, February), Keyword focused web crawler. In *Electronics and Communication Systems (ICECS), 2015 2nd International Conference on* (pp. 1089-1092). IEEE.

Arasu, A., Cho, J., Garcia-Molina, H., Paepcke, A. & Raghavan, S. (2001), Searching the web, *ACM Transactions on Internet Technology (TOIT)*, *1*(1), pp.2-43.

Brooks, T. A. (2003), Web search: how the Web has changed information retrieval, *Information Research*, *8*(3), 8-3.

Chakrabarti, S., Van den Berg, M., & Dom, B. (1999), Focused crawling: a new approach to topic-specific Web resource discovery, *Computer networks*, *31*(11), pp.1623-1640.

Cho J. & Garcia-Molina H. (2000a), The evolution of the web and implications for an incremental crawler. In Proceedings of the 26th International Conference on Very Large Databases 2000a.

Dixit, A. & Singhal N. (2009), Retrieving Information from the Web and Search Engine Application. National conference on Emerging trends in Software and Networking Technologies (ETSNT09), Amity University, Noida, India, April 17- 18, 2009.

Dixit, A., Seth, J. K. & Sharma, A. K. (2010), A migrating parallel exponential crawling approach to search engine, *International Journal of Computer Science & Emerging Technologies (IJCSET)*, *1*(2).

Fetzer,C., Felber, P., Riviere, E., Schiavoni, V., & Sutra, P. (2015, June). Unicrawl: A practical geographically distributed web crawler. In *Cloud Computing (CLOUD), 2015 IEEE 8th International Conference on* (pp. 389-396). IEEE.

Garcia-Molina, H., & Raghavan, S. (2001), Crawling the Hidden Web. In *27th International Conference on Very Large Data Bases.*

Grossan, B. (1997), Search Engines: What they are, how they work, and practical suggestions for getting the most out of them. *February1997. http://www. webreference. com.*

Kale, P., & Dahiwale, P. (2015), Design and Implementation of Focused Web Crawler Using Genetic Algorithm. *International Journal of Advanced Engineering and Global Technology*, *3*(11), 1392-1398.

Kumar, M. & Bhatia, R. (2016, March). Design of a mobile Web crawler for hidden Web. In *Recent Advances in Information Technology (RAIT), 2016 3rd International Conference on* (pp. 186-190). IEEE.

Papapetrou, O., Papastavrou, S., & Samaras, G. (2003, September), Ucymicra: Distributed indexing of the web using migrating crawlers. In *East European Conference on Advances in Databases and Information Systems* (pp. 133-147). Springer Berlin Heidelberg.

Punj, D. & Dixit, A.(2012), Web Crawler Design Issues: A Review. *International Journal of Management, IT and Engineering*, *2*(8), pp. 394-404.

Punj. D., Dixit A, Chawra R. (2014), A Novel Approach for Document Structure based Filtering in Migrating Crawler, published in International Journal of YMCA UST Faridabad in 2014.

Punj. D, Dixit, A. (2015), Design of an Efficient Migrating Crawler based on Sitemaps. *International Journal of Advanced Science and Technology*, *83*, pp.1-12.

Punj. D.,Dixit, A. (2015a), URL ordering policies for distributed crawlers: a review. *Journal of Network Communications and Emerging Technologies*, *5*, pp. 192-198.

Punj. D. and Dixit A.(2015b), Capturing User Browsing Behaviour Indicators, Electrical & Computer Engineering: An International Journal, vol. 4, no. 2, pp. 22–30.

Pu, Q. (2016). The Design and Implementation of a High-Efficiency Distributed Web Crawler. In *Dependable, Autonomic and Secure Computing, 14th Intl Conf on Pervasive Intelligence and Computing, 2nd Intl Conf on Big Data Intelligence and Computing and Cyber Science and Technology Congress (DASC/PiCom/DataCom/CyberSciTech), 2016 IEEE 14th Intl C* (pp. 100-104). IEEE.

Punj, D., & Dixit, A. (2017), Design of a Migrating Crawler Based on a Novel URL Scheduling Mechanism using AHP. *International Journal of Rough Sets and Data Analysis (IJRSDA)*, *4*(1), pp. 95-110.

Sharma, A. K., & Dixit, A. (2008), Self adjusting refresh time based architecture for incremental web crawler, *International Journal of Computer Science and Network Security*, *8*(12), pp. 349-354.

Sharma, D. K., & Sharma, A. K. (2011), A Novel architecture for deep web crawler. *International Journal of Information Technology and Web Engineering (IJITWE)*, *6*(1), pp.25-48.

Takano, Y., & Miura, R. (2016, September). FARIS: Fast and Memory-Efficient URL Filter by Domain Specific Machine. In *IT Convergence and Security (ICITCS), 2016 6th International Conference on* (pp. 1-7). IEEE.

Zhang, Y., Tanaka, K., Yu, J. X., Wang, S., & Li, M. (Eds.). (2005), *Web Technologies Research and Development- AP Web 2005: 7th Asia-Pacific Web Conference, Shanghai, China, March 29-April 1, 2005, Proceedings* (Vol. 3399), Springer.

RELEVANCE OF PHONETICS IN LEARNING FOREIGN LANGUAGE

Harpreet Kaur Kalra

Assistant Professor

DAV College of Education, Abohar

Punjab

hpkaurkalra@gmail.com

ABSTRACT

Speech is the most important means or medium of human communication. The knowledge of the sounds of a language is significant in human linguistic communication and that of English is not different. Consequently, with imperfect learning and other linguistic factors, people find it difficult to articulate some English words correctly, thereby impending communication in the language. English is most commonly spoken after Hindi in India. The article exposes what phonetics is, what its barriers are and how one can learn phonetics easily.

Keywords: *Phonetics, Phonology, Sound, Communication*

INTRODUCTION

To stand apart from the crowd and emerge as winner in today's fierce competitive world, an individual must possess excellent communication skills. Communication is not mere interacting with others but effectively conveying the message to the recipients and also gets the appropriate feedback. Communication is just not using complicated words or terminologies but is also to correctly pronounce them. It is commonly observed that our communication suffers due to our incorrect pronunciations. The alphabets and the words must sound correct to make the communication impressive. But here arises one question that how one will come to know if his pronunciation is correct or not? How will one find out whether one is sounding correct or not? Here comes the importance of learning Phonetics.

Phonetics is a part of the English language which makes us understand sounds of various alphabets. How an alphabet should sound is taught to us with the help of Phonetics. How a word should sound depends on our tongue movements, vocal cords, lip movements and even our breath i.e. air stream mechanism. For example to pronounce the alphabet “t” our teeth Ridge and tip of tongue must touch each other, to pronounce the alphabet “b”, our upper lip and lower lip come in contact with each other . For the correct sound of “O” both our lips should make a complete circle.

Phonetics is one of the important branches of linguistics. As the name indicates it is a science of sounds that deals with the production of different sounds (vowel sounds, consonant sounds and semi vowel sounds), transmission of sounds and reception of the sounds of human speech. Phonetics is often mentioned in relation to phonology which is a connected branch of linguistics. The difference between the two is in the approach to the sounds. Phonetics is mostly interested in phonemes or abstract cognitive units, while phonology studies the concrete realizations of sounds of a language and is focused on the way sounds are created, perceived and transmitted. Phonetics deals with patterns of sounds, stress and intonation in a particular language and phonology examines the sounds that are not tied to a particular language only. One of the most famous phoneticians was Henry Sweet who made a number of important discoveries in the field of English phonetics. In his Book **“The Practical Study of Language “(1899) Sweet says that: “without phonetics we can neither observe nor record the simplest phenomena of language.”** His research has contributed to the science of phonetics in general and he is considered to be the father of what we know today as Received Pronunciation. It is important to understand properly what phonetics and homophones are for an effective and impressive verbal as well as non verbal communication.

Hence phonetics plays an integral role in improving our communication. All the alphabets and the words must sound correctly; else the content as well as our communication will lack efficacy and sound unimpressive. Similarly, homophones also have a relevant role in communication.

Homophones are the words which have different meanings but are pronounced in same way **So** and **Sow** are Homophones, where so is the conjunction and sow is the present form of verb. This homonymic pronunciation creates ambiguity. Different meaning but exactly the same sound.

Sun and **son** are again examples of Homophones. The sound is exactly the same but there is an enormous difference in their meanings. It is essential to understand Homophones for an effective written communication.

"I want a bread peace"

"My head is aching terribly and there is no piece here"

The wrong words have changed the meaning of the sentence completely and they fail to make any sense, however during verbal communication, the words hardly make any difference. Since the sounds of language are such a complex notion, phonetics encompasses three areas of study Foremost of the three is

Articulatory Phonetics - it is inclusive of the movement of our sensory organs like tongue, lips as well as our vocal cords (pharynx) to pronounce a particular alphabet. It is further connected with the frequency and wavelength of our speech.

Next is **Acoustic phonetics** that studies transmission of sounds between speaker and the listener. Next to Acoustic phonetics is auditory phonetics.

Auditory phonetics depends on how our brain and ears perceive the sound. The phonetic approach to reading has advantages and disadvantages but still plays a key role in early literacy training in most classrooms.

SIGNIFICANCE OF PHONETICS

Better Understanding of Language: Phonetics is important not only for the scientists, but also for anyone who either teaches or learns a foreign language. One of the most important applications of phonetics is in the teaching foreign languages. It allows teachers to examine the differences between the sounds of source and target languages and explain this difference to learners. It also enables learners to better understand and speak the language they are learning.

Boosts Confidence: In phonics instruction, children study the shapes and sounds of alphabet letters so they can identify them on the page when reading. This skill helps children decode, or break down, new words into shorter sounds, which can be blended together to form words. The phonetic strategy gives beginning readers a tool to use when facing difficult and unfamiliar words, therefore building their confidence.

Assists Student's learning of Spellings: The phonetic approach is especially helpful when a child faces a text that is slightly more advanced than his actual reading level. Longer, more complicated words do not seem as scary when they can be methodically separated into individual letters or letter clusters.

Improvise Spellings: Phonics instruction can help children spell new words when writing. Just as they would use the phonetic approach to break down a word while reading, they can use the approach to break down a word in their minds as they prepare to write it. They can say the word aloud or silently, break it into smaller parts, listen for the sounds and then visualize the associated letters. This method is often referred to as "invented spelling." While it may not lead students to the correct spelling of a word, it provides a starting point. Students have a strong chance of spelling the word accurately.

LIMITATIONS

Fails With Non-phonetic Words: Not all words are spelled phonetically. Many English words are not spelled the way they sound, which can be frustrating for new readers who depend on the phonetic approach while reading. Using the phonetic approach can lead students in the wrong direction when faced with words such as "said," "ocean," "sugar" or "Wednesday." Using the phonetic approach, "said" would be read as "sayed." Instead of reading letter by letter, children must learn to memorize these types of words so they can immediately recognize them.

Fails to Promote Comprehension: The phonetic approach may help children read words on a page, but the method does not focus on comprehension of those words. Using only the phonetic approach, a student may read an entire sentence without understanding it. The whole-language approach to reading is an example of a different method that emphasizes meaning in language rather than just decoding skills. If students learn that words ending in "ing" show action, for example, they have a better chance of understanding "ing" words while reading them. They may even have a better chance of decoding quickly if they understand the context in which they appear.

BARRIERS TO LEARN PHONETICS

Less Stress on Communicative Work : The activities that for speaking and listening are not at all being practiced during the class and the teachers are also reluctant and trained enough to get the students practice activities in front of other students where there is the scope for better perception and student are unable to get the knowledge of place and manner of the articulation of each sound and the knowledge of speech organs and production of the sounds and the syllabus is heavy filled with reading and writing exercises. By the end of the year student is not getting sufficient listening and oral activities. This makes student passive in his communication skill and is not competing with the native speakers of English wherever he goes.

Irrelevant methods for teaching: Unsuitable methods for teaching English language skill based teaching are very much popular in professional courses. It is really an uphill based task for the language teachers to teach the phonetics for a professional student without proper orientation. They hasten to complete the syllabus under the pretext of syllabus completion adopting all conservative methods. Language teachers who are teaching phonetics should be well trained with some orientation programs, workshops, symposiums by language exports and not be overburdened by the teaching English pronunciation is still abandoned in the syllabuses in tertiary education in India.

Intervention of mother tongue: Student's own mother tongue intervenes in learning because the previously learnt language and its alphabets interferes with the learning of new language. Although the course writers spoil the speaking and listening activities for the learners in India especially in southern state where mother tong dominates, they are not concentrating the importance of phonetics in the curriculum to include it as one of the main components. Till intermediate, the students in most of the states in India do not have the phonetics in their syllabus. It is necessary to incorporate the phonetics from school studies so that the learners may habituate to articulate words in a correct way as phonetics is not in the syllabus of high school standard in southern places the learners do not realize their mistakes in their pronunciation.

Multi linguistic class rooms: In India, the teacher has to face the problem of multi legalism. Students are coming from diverse linguistic backgrounds. The languages in India such as Hindi, Telugu, Tamil, Kannada and Malayalam dialects interfere in learning pronunciation. Practical Strategies for the Teachers to Teach Phonetics

More Stress on Practical Work: The teacher should design communicative Activities to improve the learners' pronunciation as well as speaking skills. The dialogues and different role plays using the variety of different daily situations for both young and adult EFL learners according to their linguistic level to practice particular sounds especially those which are not available in their mother tongue. Pronunciation while participating in different role plays mock debates group discussion rehearsal strategies and cover strategies will help the learners to develop their pronunciation and to know how the different sounds are pronounced by other individuals to attain standard frequency and pitch in pronunciation and give the impression that their pronunciation is better than it really is

Look into Dictionary: Make a habit to confirm the correct pronunciation from good dictionary. An authentic dictionary provides the meaning as well as phonetic transcription of every word using the standard 44 sounds in phonetics so that learners by looking at different words in the dictionary will be in the position to distinguish difference among the all sounds. Dictionary enables the learner phonetic transcription including syllable division (dividing words in to different syllables i.e. syllabification) and stress mark (Primary stress and secondary stress). As they see the phonetic transcription they easily find out the correct pronunciation and easily understand the one to one correspondence of phonemes.

Repetition of Sounds: In order to attain standard pronunciation learners should repeatedly practice the activities relating speaking and listening. By using and repeating the sounds, one can easily remember the correct articulation.

Call (Computer Assisted Language Learning): Programmes play an important role in language learning. It provides the students to find their mistakes through using computer.

CONCLUSION

Since, the rise of traditional approaches to language teaching pronunciation has gained momentum. However, with the increased focus on the learner in learner- centered approaches and with the continuing emphasis on the communicative aspect of language teaching, teachers have sought new ways of incorporating pronunciation with other language skills. This has resulted in pronunciation being linked mainly to speaking and listening. Nevertheless, one should not deny the role of phonetics and phonology in the teaching of pronunciation since the more students are aware of the precepts and underpinnings of these branches of study, the more they will become aware of the idiosyncrasies of the target language pronunciation.

REFERENCES/BIBLIOGRAPHY

A.S., (2007), *Horn*, Oxford University Press.

Majian A.K. et. al (2007), *Linguistics*, An Introduction to Language and Communication Cambridge**,** MIT Press.

Grant, N.J.H; Namonu, S & Jowitt , D (2008), *Senior English Project*, Books 1>3 London

Omachonu, G.S (2010), *Fundamentals of English Phonetics and Phonology*, Enuge, Ressen Publishing Limited.

Roach, P (2000), *English Phonetics and Phonology*, Cambridge Group.

www.oufu.f/>Phonetics>node

saindz.com, what-is-phonetics-and-why

Call for Papers

Dear Sir/ Madam

DAV Institute of Management, Faridabad, one of the leading Business School of India and a part of the largest educational trust of the country has been working persistently to impart quality management education, research, consultancy and training. In pursuit to strive for excellence, DAV Institute of Management has been continuously conducting seminars at national and international level to achieve its mission - ***"To empower the young minds, to optimize their potential effortlessly by imbibing the best of values and beliefs of east and west rooted in the philosophy of Dayanand Anglo- Vedic Culture."*** DAVIM, Faridabad has always recognized and acknowledged the contribution made by faculty members imparting management education and their need to enhance the knowledge in various functional areas of management. The institute released the First Issue of its Bi-annual journal **"VIRTUE",** with **ISSN No. 2230-7117** in 2010. This Journal has generated the interests of various researchers, academicians, practicing managers; as it presents a panorama of research papers, case studies, and book reviews on various aspects of business. In 2016, the journal has also marked its position in the UGC list of Approved journals. It has reputed experts on its advisory board who have been a constant source of guidance and motivation.

Scholars are invited to submit research papers, articles, abstracts of doctoral dissertations, major research project reports, case studies, comprehensive bibliography, and book reviews related to their interest areas for publication to the next issue of this Journal.

We are also open for **Exchange Agreement** of our respective journal for your journal.

The Guidelines are attached herewith for your reference.

You can send your paper on E mail Id. editorvirtue.davim@rediffmail.com. You can also contact us on: 9811553527, 9811871631.

With warm regards.

Dr. Ritu Gandhi Arora/Ms. Ashima Tandon

(Editor-in-Chief)

Guidelines for Contributors

VIRTUE - A Bi-annual Refereed Journal invites academicians and professionals to contribute research papers, articles, abstracts of doctoral dissertations, major research project reports, case studies, comprehensive bibliography, and book reviews. The following are the guidelines for contributors/authors:

The contribution must be original, neither published nor under consideration for publication anywhere else.

Cover Page: Paper should have a cover page providing the title of the paper, the name(s), designation, official address, phone/fax number, email address of all the author(s). The next page should contain an abstract of not more than 150 words, along with five key words. The main text should not contain the author's name. The main text of the paper should start from the next page.

Manuscripts of the Papers: The text of the paper must be typed in 12 size font, Times New Roman) in 1.5 lines space (on one side of A4 paper in case of hard copy) with left and right margins of 1.5" and 1" respectively. Ideally the length of the paper should not exceed 10,000 words, including tables, references, etc.

Papers can be both conceptual and empirical but would be tested on relevance to the main theme and subthemes and must contribute to the theory.

References: Complete references should be given at the end of the paper and before annexure. These references should be cited in the style as prescribed. At the end of the text, references should be listed in the alphabetical order of the last names of the authors.

Examples of how the references are to be listed at the end are given below:

If it is a book written by single author: Chakraborty, S. K. (1993), *Managerial Transformation by Values: A Corporate Pilgrimage, 4th ed. (*New Delhi: Sage Publications), pp. 41.

If it is book written by more than one author: Kotlar, Phillip, Gary Armstrong, Prafulla Y.Agnihotri, and Ehsan ul Haque (2010), *Principles of Marketing: South Asian Perspective*, 13th ed. (New Delhi: Dorling Kindersley (India) private Limited), pp. 41

If it is an article in a journal: Hannan, M.T. and Freeman, J. (1977), The Population Ecology of Organizations, *American Journal of Sociology, 82* (5), pp. 21-24

If it is an article in an edited book: Kanter, R.M. (1988), When a Thousand Flowers Bloom in B. Staw and L. Cummings (eds), *Research in Organizational Behavior,* (Greenwich, CT: JAI Press), pp.169-211

For thesis and M Phil Dissertations: Sharma, Deepa, *Corporate and Public Redressal Systems for Consumer Grievances*, unpublished Ph.D. thesis, Delhi University, Department of Commerce, Delhi, 2008, pp. 42-49

All other sources other than 'references' (as indicated above) must be included under the heading of 'Bibliography'. Websites that may have been referred should be included under a separate heading).

Footnotes, figures, tables and **graphs**: These should be in standard format. They should be numbered serially and should appear at desirable place in the text itself, with proper reference made in the text. Wherever necessary, the source should be indicated at the bottom.

The contribution should be sent as an e-mail attachment to editorvirtue.davim@rediffmail.com

The contribution received for publication shall be referred to subject experts, for review and evaluation, after a preliminary review in the editorial office.

Correspondence and proofs for correction, if required, will be sent to the first author, unless otherwise indicated.

The forwarding letter must include a certificate from the authors to the effect that the article is original and an exclusive contribution to VIRTUE, and shall not be released for publication elsewhere unless the Editor's decision not to publish it, has been communicated to authors.

The final decision on the acceptance or otherwise of the paper rests with the Editor or Editorial Board, and it depends entirely on the standard and relevance of the paper.

The final draft may be subjected to editorial amendments to suit the journal's requirements.

The author will be supplied one copy of the journal free of charge, soon after its publication.

The copy right of the articles and other material, published in the journal, shall lie with the publisher.

Papers should be strictly according to the above given guidelines otherwise they will not be considered for publication.

Dates to remember:

Last Date for submission of Paper:

For Jan.- June Issue : **30^{th} Nov. of every year**

For July - Dec. Issue : **31^{st} May of every year**

Subscription Form

I wish to subscribe /renew my subscription to "VIRTUE" for 1/2/3 years. A bank draft /cheque bearing no. ______________dated ____________for Rs. __________drawn in the favour of DAV Institute of Management, Faridabad towards subscription for __________years is enclosed.

Name

Address

Phone No. : Fax

Email. Id.

Category	1 Year	2 Years	3 Years
Indian (In Rs.)			
Institutions	1000	1500	2500
Individuals	800	1200	2000
Alumni	500	750	1000
Students	300	400	600

Signature with date

Please send the amount by DD/Crossed account payee cheque favoring "DAV Institute of Management, Faridabad" for timely receipt of the Journal. For outstation cheque, please add Rs 50 towards bank charges.

***We also believe in exchange policy. You can exchange your institute's journal with us.**