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IMPACT OF THE URBAN INFORMAL SECTOR IN THE URBAN RESIDENTIAL PROPERTY MARKET**MOHAMMED YAHAYA UBALE****STUDENT****DEPARTMENT OF REAL ESTATE MANAGEMENT****FACULTY OF TECHNOLOGY MANAGEMENT & BUSINESS****UNIVERSITY TUN HUSSEIN ONN MALAYSIA****MALAYSIA****DAVID MARTIN****DEAN****FACULTY OF TECHNOLOGY MANAGEMENT****UNIVERSITY TUN HUSSEIN ONN MALAYSIA****MALAYSIA****DR. SEOW TA WEE****DY. DEAN****DEPARTMENT OF REAL ESTATE MANAGEMENT****FACULTY OF TECHNOLOGY MANAGEMENT & BUSINESS****UNIVERSITY TUN HUSSEIN ONN MALAYSIA****MALAYSIA****ABSTRACT**

Informal producers use low-grade technology for their constructions, but while the formal sector producers have access to higher technology, they failed to use such superior technology for effective demand (Azuma, 2008). The informal sector grows in terms of output and employment even when the formal sector diminishes (Chaudhuri, 2009). This study aimed to identify the impact of the urban informal sector in urban residential property market. Descriptive Qualitative method has been used where secondary data were studied and relevant information was deduced on contemporary issues. Findings of this study: Encumbrance of levies, bribes, administrative stresses, especially in poor countries, pushes many manufacturers into the informal sector (Azuma, 2008); also, irregular houses seem to outnumber the planned houses in the property markets and their validity is no longer in question (Chirisa, 2008); residential units constructed informally collapses repeatedly, claim lives, destroy wealth, cause real health hazard for the urban community mainly the urban poor (Gerber, 2007; Nwaka, 2005). The resident is the basic requirement to a better health delivery system not the clinic (WHO, 1999). This study delves a tracking zone to prevent and block direct entry of the illegal properties into the residential property market (Chirisa, 2008; Gerber, 2007).

KEYWORDS

Influence of the urban informal sector, urban developments, urban property market and threat of the informal sector.

INTRODUCTION

The urban informal sector accounts for about 45% to 60% of the urban labor force (Zille, 2008; Nwaka, 2005; Azzan et al 2005). In contrast to the urban informal sector, the formal sector functions well for those who are able to participate in it, but the poorer people are excluded from participating because affordability is a critical requirement and hence denotes a barrier (Holmgren et al 2003). Many people cannot afford to buy a residential property in the formal housing market (Holmgren et al 2003). Recent trends in the formal housing market displays a narrowing gap prior to the global economic crisis, and if this trend continues, it shall represent a significant opportunity for the state to influence the market towards poor housing outcomes (Zille, 2008). The framework of the market, its institutions, drivers, rules of the game and players, represents a powerful mechanism which governs formal sector property transactions in urban residential areas (Holmgren et al 2003). Significant restrictions exist in the market's ability to discourse the extremely embedded income, contact and spatial distortions in urban residential property market (Alejandro and William 2005; Smith 2000). Predominantly, the formal urban residential property market cannot function efficiently without the basic requirement of affordability. Where affordability is below the ability of the market players to supply accommodation options for a modest return at satisfactory threat, the market will cease to operate (Holmgren et al 2003). The threat and return mechanisms of the market, which is the plain rule of the game, cannot work at this end, and so lead to the demise of the urban formal residential property market. At this juncture, the urban informal sector sets in. The urban formal residential property market excludes large number of people from participating and benefiting from it (Zille, 2008). This exclusion prompts the inevitable development of the urban informal sector to absorb the repelled populace from the formal sector.

LITERATURE REVIEW**CONCEPT OF THE FORMAL URBAN RESIDENTIAL PROPERTY MARKET**

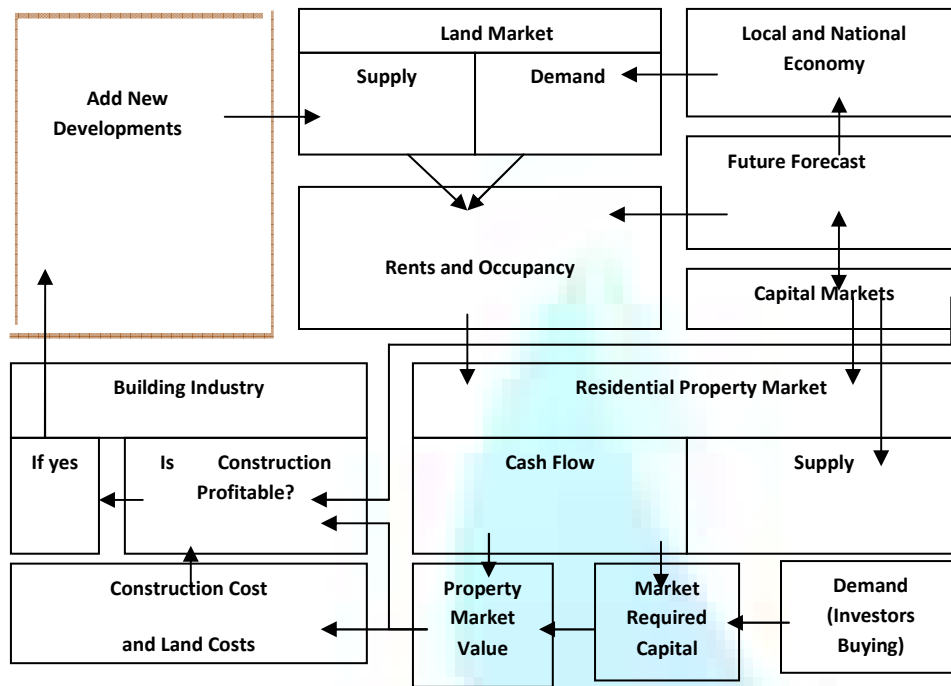
Residential area is a land use component in which housing predominates (Ojetunde, Popoola and Kemiki 2011). In certain residential areas, large tracts of land may have no services whatsoever; residents seeking services must use a motor vehicle or other transport, so the need for transport has resulted in land development (Bunyi 2010).

THE MODERN PROCEDURES OF THE FORMAL RESIDENTIAL PROPERTY MARKET

Residential property market presents a peculiar complexity as it comprises three independent but connected markets linked to the economy. Figure 1.1 provides for a simple residential property model. The model shows interaction between three important components; space, asset and development markets which on their own represent market arenas where trading take place and prices are determined through the interplay of demand and supply (Keogh 1994; and Geltner et al., 2007). The space market involves the interaction of the demand by residential property users with the current stock of space which made available by the landlords. It is this result of demand and supply interaction that predicts the pattern of rents and the level of occupancy with vacancy clearing the market. Within the space market, the demand for residential space is appropriately affected by the national and local economies. A growth in tangible wages may encourage new households' formation and hence an increase in demand for residential physical space. For instance, property rights can be packaged in the short run in form of use rights to property users in return for residential rents (use values). In the asset market, Viezer, (1999) concludes that the rent determined in

the space market is central in determining the demand for real estate assets because this cash flow in form of rents interacts with the capital rates required by investors, with the end product being the property market and values.

FIGURE 1.1: RESIDENTIAL PROPERTY MARKET MODEL



SOURCE: OJETUNDE (2011)

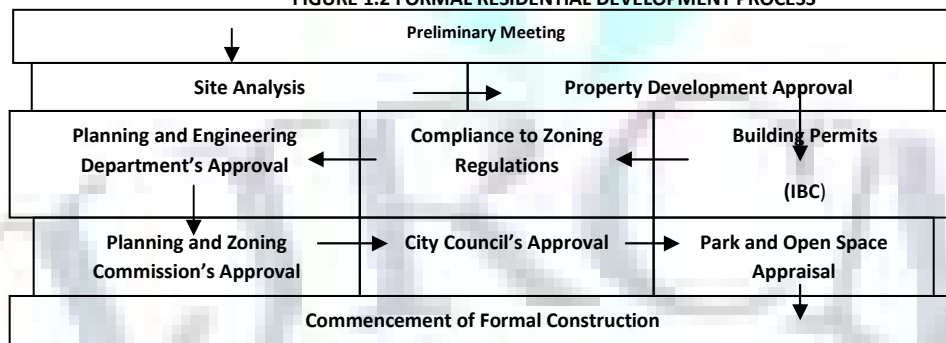
MODERN FORMAL RESIDENTIAL PROPERTY DEVELOPMENT PROCESS

In acute contrast to the urban informal sector, in the urban formal sector, prior to the takeoff of any formal residential development, there are set out processes that must be fulfilled and followed. These processes are spelt out accordingly.

- Preliminary application meeting(s)
- Site analysis to determine development feasibility
- Establish timeline for development approval process
- Building Permits Detailed plans must be submitted and approved for the construction. The structures must be constructed under the International Building Code Series (IBC).
- Platting, Zoning and Annexation
- Preliminary subdivision plat, zoning request, and annexation documents should be submitted to the Planning Department.
- Reviewed by Planning and Engineering Departments.
- Planning and Zoning Commission takes preliminary action and City Council takes preliminary action.
- Park and Open Space Dedication Committee address the requirement.

These processes apply to all new residential development. However, Utility Master Planning department determine how the new development fit with the infrastructure management standards and procedures (Adeyinka and Sani, 2003; Cole, 2000). Refer to figure 1.2 below.

FIGURE 1.2 FORMAL RESIDENTIAL DEVELOPMENT PROCESS

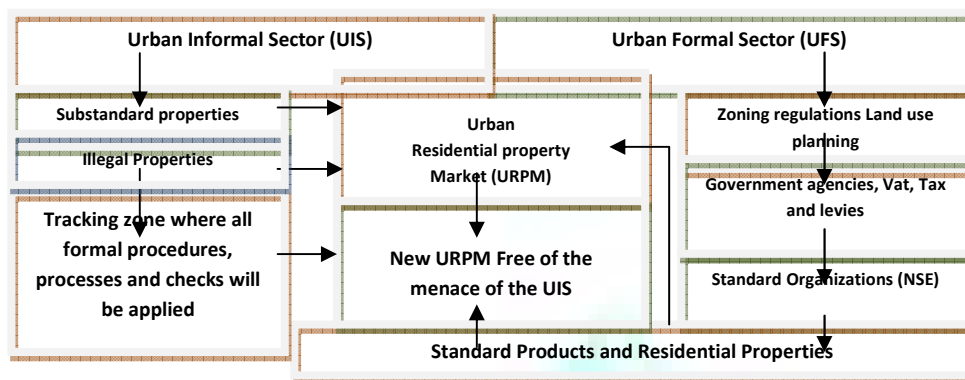


Source: (Adeyinka and Sani, 2003; Cole, 2000)

THEORETICAL FRAMEWORK

The activities of the urban informal sector have overshadowed that of the formal sector in residential property (Azzan et al 2005; Holmgren et al 2003). The formal sector performs its activities in accordance with zoning regulations, planning standards, government approval and standard organizations. But unfortunately, properties so developed are beyond the reach of the common man. In contrast, the urban informal sector performs its activities in violation of all the formal processes mentioned (Nwaka, 2005). Its ultimate goal is to satisfy the need of the common man. Properties so developed were directly put to the market for the common man. This study shall delve and suggests a tracking zone that will prevent and block direct entry of the illegal properties into the residential property market. This zone will consist some mediocre that will vehemently purify and accordingly scrutinize the informal residential properties considering the real life situations (Chirisa, 2008; Gerber, 2007). The term of reference shall be to out rightly reject all life threatening properties. No substantial consideration on aesthetics from the initials, but as the actors deem conversant with the system, other important scale and yard sticks will be appropriately imposed. Figure 1.3 shows the theoretical framework for this study.

FIGURE 1.3 THEORETICAL FRAMEWORK

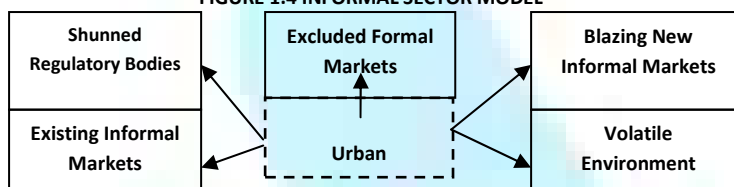


Source: Adopted from Borgatti, (1999)

CONCEPT OF THE URBAN INFORMAL SECTOR

A substantial encumbrance of levies, bribes, and administrative stresses, especially in poor countries, pushes many manufacturers into the informal sector (Figure 1.4 depicts the informal sector model). Accordingly, constructive talents contain important unobservable mechanisms which the state cannot adjust and increase the amount of such output it extracts from producers in the formal sector according to each producers endowment (Azuma, 2008). Informal sector is that part of an economy that shuns tax and not checked by any form of government. Urban informal sector is not included in any gross national product (GNP), unlike the formal sector (Azuma & Grossman, 2008). Rapid increases in population and urbanization and changing socio-economic patterns in developing countries over the last few decades have resulted in a rapid increase in the demand for housing (Alejandro and William, 2005; Smith, 2000).

FIGURE 1.4 INFORMAL SECTOR MODEL



Source: Adopted from Holmgren et al (2003); Smith (2000)

CLASSICAL THEORY OF THE INFORMAL SECTOR

“The classical theory of the urban informal sector allows the informal sector producers to mature into its formal counterpart so long as the distance between the formal and informal processes is not too great and the wage rate is sufficiently low” (Azuma, 2008). Informal producers use inferior technology for their constructions, but while the formal sector producers have access to superior technology, they cannot use such superior technology for effective demand (Azuma, 2008). The informal sector expands in terms of output and employment even when the formal sector contracts (Chaudhuri, 2009).

MACRO THEORY OF THE URBAN INFORMAL SECTOR

The macro theories explained the operational articulation of formal and informal sector developments accordingly as follows.

- The first theory of modernization, advocates that informal sector developments are a short-term by-product of migratory flows of unskilled labor that have been set in motion by prompt urban development (Azuma, 2008).
- The other two theories, both the Marxist and the neo-Marxist, however, consider informal sector developments to be primarily the result of economizing production strategies. Accordingly, one of these theories advocates that, firms in the formal sector seek to reduce wages by retaining a reserve of surplus labor and, therefore, they force into the informal sector a large numbers of unemployed or underemployed workers (Azuma, 2008).

In the alternative view, firms in the formal sector seek to lower costs or free up capital by contracting out to the informal sector high risk or marginal processes. While one or more of these macro theories may assume some degree of general validity in reference to the organization of global or national economies, none of them proved to be particularly illuminating (Azuma, 2008).

SIGNIFICANCE OF THE STUDY

This study assessed and prefers remedy on how to curtail and limit the adverse effects of the activities of the informal sector of providing sub-standard properties. These substandard properties collapse frequently and claim millions of lives and pose jeopardy to people and wreck their wealth. This study also developed a framework model to refine the urban residential property market by scrutinizing properties developed by the urban informal sector without disrupting livelihoods, and causing social distress before letting the products into the urban residential property market (Ojetunde, Popoola and Kemiki 2011).

PROBLEM STATEMENT

Residential units constructed informally collapses regularly and claim innocent lives (Chirisa, 2008; Azzan et al 2005). Informal residential units have outnumbered the formal residential properties in the urban residential property market (Chirisa, 2008). Urban informal sector developments, especially those for residential purposes pose real health hazards for the urban community; particularly for the urban poor who can least afford the high cost of health care (Nwaka, 2005). These are the foremost fissures that this study accomplishes. Validity of the informal residential units appears to be no longer in question (Chirisa, 2008; ILO, 2002). Unfortunately, the terrible environmental conditions related to informal sector activities and settlements create a major hazard to the health and well-being of urban life. The informal sector has been the dominant provider of urban land and housing, as only about 20% to 40% of the physical developments in developing cities is carried out with formal government approval (Gerber, 2007). The weaknesses of government planning controls, and the disorganized developments connected with the informal sector have created confused and unhealthy urban environments.

OBJECTIVES OF THE STUDY

The aim of this study was achieved through the attainment of the following designed objectives:

- To inspect the modern practices of the urban residential property market
- To observe the activities of the urban informal sector in the urban residential property market
- To evaluate the impact of the activities of the urban informal sector in the urban residential property market
- To propose a framework model for a sieved formal residential property market

HYPOTHESIS

General hypothesis of the study (H_1):

The urban informal sector has engulfed the urban residential property market.

Null hypothesis (H_0):

The urban informal sector has not engulfed the urban residential property market.

RESEARCH METHODOLOGY

Methodology of a study is a strategy, plan of action, process or design for the choice and use of a particular method in order to achieve the mandated or stipulated objectives for the desired outcomes of the whole study (Gray, 2004).

RESEARCH METHOD

Research is a scientific study which includes gathering, presentation, analysis and interpretation of data. The universal research methods are literature searches, telephone surveys, mail surveys, and email and internet surveys. Descriptive Qualitative method is used for this study; relevant secondary data were perused accordingly.

FINDINGS ON THE ACTIVITIES OF THE URBAN INFORMAL SECTOR

Frequent collapsing of residential buildings is prominent in countries with large informal sectors, business activities go unrecorded, taxes are not paid, opportunities for corruption are rampant and severe, and many citizens are not able to participate in public policy making. Informality is a symptom of underlying institutional problems. Informality rejuvenates where property rights are not clearly defined, strongly enforced, and accessible to all citizens (Habib, 2009). Activities of the urban informal sector include the following:

- The informal sector formalizes informal jobs, many different types of informality activities exist. It would be extremely difficult to create solutions to meet these diverse circumstances (Habib, 2009).
- The informal sector creates programs that lead to a disconnection between the labor market and protections, which may not actually improve formal employment;
- The informal sector creates other methods of generating income when access to the formal sector is limited.
- The informal sector formalizes informal housing which include any form of shelter or settlement that is illegal, falls outside of government control or regulation, or is not afforded protection by the state.
- Informal housing status is to exist in a state of deregulation, where the ownership, use, and purpose of land cannot be fixed and mapped according to any prescribed set of regulations or law.
- There is no global unified law of property ownership, the informal occupant lack security of tenure, no reliable access to civic amenities like potable water, electricity and gas supply, sanitation and waste collection.
- In the informal arena, business activities go unrecorded, taxes are not paid, and opportunities for corruption are rampant.
- Informal housing captures informal populations other than those living slum settlements or shanty towns, which are defined more narrowly by the UN Habitat as 'contiguous settlement'
- Informal housing is often on hazardous prone areas and not recognized or addressed by the public authorities as an integral or equal part of the city.
- Activities of the informal categories rejuvenate the development of informal housing like slums, blighted settlements, squalor and ghettos (Portes, 2005).

Homelessness and insecurity of tenure are issues faced by populations around the world. However there are particularly pernicious circumstances in developing countries that lead to a large proportion of the population resorting to informal housing. For example, in Mumbai, India, this fast-paced economic growth, coupled with inadequate infrastructure, endemic corruption and the legacy of the restrictive tenancy laws have left the city unable to house the estimated 54% who now live informally (Habib, 2009). Many cities in the developing world are currently experiencing a rapid increase in informal housing, driven by mass migration to cities in search of employment, or fleeing from war or environmental disaster.

CONSEQUENCES OF THE ACTIVITIES OF THE URBAN INFORMAL SECTOR

Development of the urban informal residential areas has been the main cause for many problems. Environmental degradation leading the poor people to greater risks of disasters and vulnerabilities. Poor sanitation is a prominent feature of the informal activities as most of those involved are poor people (Nwaka, 2005).

• WATER POLLUTION

The urban informal sector used the crude method of excavation and earth works in their construction activities as they do not have the town plan to ascertain where the utility lines were laid. These leads to breaking of gas pipes, water mains, electric cables, telephone cables, etc. Water pressure pipes absorb the sewage and leaked gas into the treated water and causes havoc when used for domestic purposes (Nwaka, 2005). Random construction of houses has obstructed many natural water ways which led to recurrent floods during the rainy seasons. Flooding results in the overspill of pit latrines and septic tanks which pollute water sources and marine environments. Absence of drainages generates big ponds that become breeding places for mosquitoes that cause malaria (Adeyinka and Sani, 2003; Chirisa, 2008). Refer to figure 2.1 below.

REFER TO FIGURE 2.1



SOURCE: ADEYINKA AND SANI, 2003

In most towns and cities water supply and sanitation are grossly inadequate for domestic and personal hygiene. In many informal settlements water-borne and filth-related diseases, especially diarrhea and cholera are common. Less than half of urban households in most Nigerian cities have piped water and flush toilets (Nwaka, 2005). The rest depend on crowded and sometimes distant communal water taps, or draw water from wells, streams, or from itinerant water vendors (Nwaka, 2005). Pit latrines and buckets are still in use, often shared by many families. People commonly defecate and urinate in the open or in nearby bushes, so that food and water can be easily contaminated from exposure to human waste (Adeyinka and Sani, 2003; Chirisa, 2008). More waste is generated from domestic activities in the informal settlements than can be properly managed with the rudimentary system available for collecting, transporting, and disposing of the wide variety of solid wastes (Nwaka, 2005; WHO, 1999). The primary source of pollution in most informal settlements is exposure to toxic fumes from cooking fires and stoves inside poorly ventilated homes. This is sometimes responsible for a wide variety of respiratory infections and even more serious diseases of the lungs among women and children (Nwaka, 2005; WHO, 1999). Noise pollution is also a major problem. Loudspeakers from churches and mosques, bells rung incessantly by peddlers, hawkers, and other salesmen to advertise their wares, highly amplified music from record shops, and noise from private electricity-generating plants and grinding machines, all help to cause irritation, and can in extreme cases even impair hearing (Nwaka, 2005; WHO, 1999). As industrialization and the volume of automobile traffic increases, the problems of industrial emissions and exhaust fumes will add to land, water, and air pollution, with adverse implications for public health and quality of life (Adeyinka and Sani, 2003; Chirisa, 2008).

- **SOIL EROSION**

Soil erosion and landslides are strongly related to flooding which destroy houses as well as footpaths and unpaved roads (Ameyibor et al 2003). Informal residential and other properties are being eroded compelling residents to vacate the areas. Most of the informal houses are characterized by high housing density that causes natural discharge of storm water more difficult (Nwaka, 2005).

- **COLLAPSE OF BUILDINGS**

Informal residential and or other properties are prone to successive collapses that claim lives of millions of its inhabitants and wrecks huge wealth. Buildings collapsed usually break already buried utility lines water pipes, gas pipes and electric cables. The recent of Bangladesh eight storeys factory building housing many firms for making clothes in Dhaka claimed about 160 lives in April, 2013 (VOA, 2013); the recent collapse of three-storey building in Lagos, Nigeria where six die including a couples, a baby was among the dead (Nwaka, 2005; NAN, News July 11, 2013). Figure 2.2 below show the image of the six storey residential building that suddenly collapsed in the city of Lagos, the former state capital of Nigeria.

FIGURE 2.2 IMAGE OF A SIX STOREY BUILDING THAT COLLAPSED IN LAGOS, NIGERIA.



SOURCE: NEWS AGENCY OF NIGERIA (NAN, 2013).

- **FREQUENT OUTBREAKS OF WATER BORN DISEASES**

Loss of vegetation around water sources reduces water flow while poor disposal of liquid and solid wastes causes water pollution (Nwaka, 2005; Cole 2000). In the informal settlements, there have been frequent outbreaks of water borne diseases like cholera and dysentery, particularly during high rainfall seasons, due to contamination of the drinking water.

- **POLLUTION FROM SOLID AND LIQUID WASTES**

Lack of a proper system for waste management due to the lack of established collection points, piles of garbage are scattered in and around residential areas which leads to environmental and health problems. Few residents opt to bury or burn their wastes close to their residences (Ameyibor et al 2003). In the informal settlements, large volumes of rubbish (See figure 2.3 below) are left to litter the streets, or to accumulate in open dumps where flies and rats and other disease-carrying insects and rodents proliferate (Nwaka, 2005). For drainage, most cities have open drains and narrow shallow trenches which are often clogged with discarded household or industrial appliances, sand, and refuse transported by flooding. When the drains are not cleaned, they are unsightly and exude unpleasant odors (Nwaka, 2005). Potholes in the streets, pools of stagnant water, and waste gushing from bathrooms and kitchens provide breeding sites for malarial mosquitoes and other spreaders of disease.

FIGURE 2.3 SOLID AND LIQUID WASTES



SOURCE: WHO, 1999

In most informal settlements, food contamination and food-borne diseases are major factors in the high incidence of diarrhea and dysentery which kill many children. Unhygienic food handling and storage practices, especially with limited water and refrigeration facilities, appear to be the main problem (Nwaka, 2005). Food poisoning often occurs in open market places, slaughter houses, and in the extensive ready-to-eat street food industry, widely patronized by workers, school children, and others. The adulteration of foods and medicines is also rampant (WHO, 1999).

- **ENCROACHMENT OF AGRICULTURAL LANDS**

The uncontrolled development of human settlements has led to the irreparable conversion of the best fertile agricultural land into settlements (Cole, 1995), (See figure 2.4 below).

FIGURE 2.4 ILLEGAL HOUSING ON AGRICULTURAL LANDS



SOURCE: COLE, 1995

- **PROBLEM OF ACCESSIBILITY AND ROAD NETWORK**

Informal houses encroach upon right of ways (ROW) and hinder future road expansion especially on estates that such roads were not yet developed (Nwaka, 2005). Lack of access is one of the most common problems caused by and experienced by residents in the informal settlements. Because there are neither the layout plans nor the regulatory machinery, residents tend to build to almost 100 per cent of their plot size. It has become impossible to provide access roads to these areas as there is no space for this. (Gerber, 2007).

- **INFORMAL RESIDENTIAL AREAS ON LAND ASSIGNED FOR NON-RESIDENTIAL USE**

The uncontrolled expansion of informal settlements has led to conversion of non-residential lands into settlements. These may include open spaces, areas reserved for recreational activities, areas prone to the jeopardy of land slide and the like, setbacks for high tension lines, highways, rail lines, airports, and mining setbacks. Figure 2.5 shows informal houses constructed on waterlogged areas in Owode Ajegunle community along Ikorodu road in Lagos, Nigeria.

FIGURE 2.5 SPRAWLING WATERLOGGED INFORMAL SETTLEMENT, IKORODU ROAD IN LAGOS, NIGERIA



SOURCE: NAN, (2013).

- **SOCIAL PROBLEMS**

The informal sector develops conflicting land uses where non-compatible components are mixed up. Thefts, conflicts, terrorist activities, accidental fire outbreaks, noise pollution, outbreak of epidemics, overstretch of the use of facilities, utilities and services. Massive populations of megacities exert a high rate of consumption of natural resources especially land thereby converting disaster prone areas for new settlements, water and energy, resulting in ecological strain of the environment with serious pollution of the air, water and soil. For instance in Quito (Ecuador), informally and or poorly-built slum houses located on hill-slopes were highly vulnerable to landslides caused by earthquakes or volcanic eruptions. In Bombay (India), the risk is that of tropical storms, and for Sao Paulo (Brazil), it is frequent floods that ruin huge sums and sometimes claim lives. Mexico City experience earthquakes, those woefully involved were the informal residential units developed on the prone zones despite repeated warnings (Prof. Chan, 2013).

- **SUBSTANDARD RESIDENTIAL PROPERTY MARKET**

The urban informal sector performs its activities in violation of all the formal processes mentioned, and the repercussion of which claim lives whenever building collapses. Properties so developed were directly put to the market for the common man. A residential formation built without legal permits to utilize the land or located outside of an urban development scheme is known as an informal settlement, according to the United Nations Economic Commission for Europe. In most cases, housing has been improvised and lacks basic infrastructure such as sanitation. Approximately one billion people or one in six people live in informal settlements or slums worldwide, according to UN Habitat (1996). Numerous socio-economic factors underlie the growth of informal settlements globally. In the takeoff of any informal residential property development, the processes that are accordingly carried out prior to formal residential property development are all shunned (Adeyinka and Sani, 2003; Cole, 2000).

RECOMMENDATIONS

Repercussions of the activities of the urban informal sector identified can be address using the following remedies to achieve a new formal residential property market free from the threat of the informal sector. This should reduce the acute loss of lives and properties.

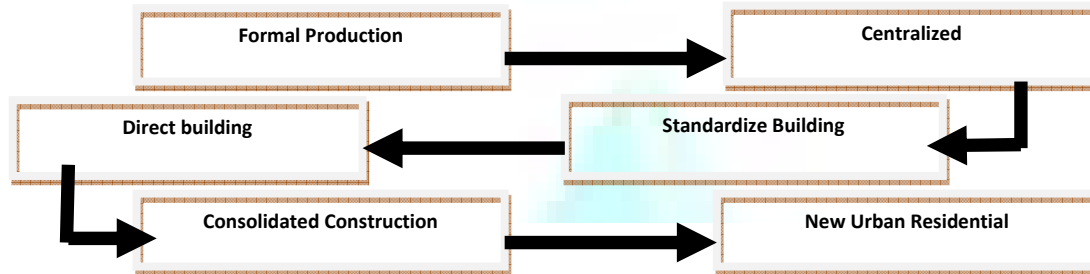
- **PROPOSED TRACKING ZONE**

Control measures to ensure limited access to the hazardous prone areas will be ascertained (Imura, 2013). User charge and property right shall also help in restricting the use of the dangerous zones (Imura, 2013). These zone will consist some mediocre that will vehemently purify and accordingly scrutinize the informal residential properties considering the real life situations. The term of reference shall be; to out rightly reject all life threatening properties. No substantial consideration on aesthetics from the initials, but as the actors deem conversant with the system, other important scale and yard sticks will be appropriately imposed (Adeyinka and Sani, 2003).

• **PROPOSED URBAN RESIDENTIAL PROPERTY MARKET MODEL FREE FROM THE THREAT OF THE URBAN INFORMAL SECTOR**

Upon scrutiny, new urban residential property market free from the threat of the urban informal sector is accordingly achieved, where only purified residential properties are taken to the market (Refer to figure 2.6 below). Public consultants and private developers should take charge of the production of houses for onward discharge into the residential property market (Hamdi, 1995). The problem of the urban informal sector can therefore be addressed by providing a large quantity of residential houses, by speeding up the production in a consolidated and joint construction industry. This is based on presetting, mass construction, standardization and prefabricated formal residential houses. This system of production should encourage local investors to wholly participate as their presence is appreciated. Furthermore, the actors of the informal properties will welcome the idea because it did not stop them but rather augment their properties for viable consumption and fuel the economy, create more employment opportunities, generate profit and generally improve their standards of living. Most of them has experienced one kind of building collapse or the other and were eventually shun prosecution; this model will ease their grievances (Hamdi, 1995).

FIGURE 2.6 PROPOSED FORMAL RESIDENTIAL PROPERTY MARKET MODEL



SOURCE: ADEYINKA AND SANI (2003); COLE (2000).

CONCLUSION

In an attempt to suppress the menace of the consequences of the urban informal sector, a tracking zone will be established where all formal procedures, processes and checks will be applied to particularly residential properties illegitimately developed before permitting same the property market. The propelled idea of the formal provider model was adopted which entails that the authorities should provide homes for the poor sector of the population (Hamdi, 1995). On the other hand, the informal sector model suggests an enabling strategy, which implies that the authorities should identify, formalize and support the informal sector's efforts of building homes at cheaper rates for the poor (Nwaka, 2005). This study has proposed a formal urban residential property market model free from the threat of the urban informal sector.

SCOPE & LIMITATIONS

Vehement emphasis was on the activities of the urban informal sector and assesses how it engulfed the urban residential property market.

SCOPE FOR FURTHER STUDY

Further study can be conducted on the following topics:

- Assessing the irreparable jeopardies of the urban informal sector in urban residential property market.
- Exploring the extent to which the urban informal sector smeared the urban residential property market.
- Contemporary remedy to the urban residential property market and the menace of the urban informal sector.

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COMPARISON OF PCA AND LDA BASED FACE RECOGNITION TECHNIQUE IN NOISY ENVIRONMENT**MEETA DUBEY****STUDENT****DEPARTMENT OF ELECTRONICS & TELECOMMUNICATIONS****JABALPUR ENGINEERING COLLEGE****JABALPUR****PRASHANT JAIN****HEAD****DEPARTMENT OF IT****JABALPUR ENGINEERING COLLEGE****JABALPUR****ABSTRACT**

In the face recognition technique there are various types of noises present. In this paper I am going to detect the noise in the given faces in the face recognition using feature extractions in the two different and well know technique known as PCA and LDA technique. In this paper I am going to concentrate on only the salt and pepper type of noise in comparison. Salt and pepper noise is also known as the impulsive noise. After extracting the features of the given images by using both the PCA and LDA technique I am going to compare both the features and analyse the result.

KEYWORDS

linear discriminate analysis (LDA), Principal component analysis (PCA).

I. INTRODUCTION

From the beginning of the civilization, humans have used faces to identify known and unknown individuals. Hence, the oldest and basic characteristics used for recognition by humans are the face. The Face Recognition technique of Biometric-based authentication applications include National ID cards, airport security, workstation, network, and domain access, application logon, data protection, and remote access to resources, transaction security and Web security. Face recognition is a fairly young technology compared to other biometrics recognition techniques. The facial recognition system automatically identifies a person from a digital image. It does that by comparing selected test face image with the facial database. Aging, [1] Occlusions and makeup or cosmetics can also degrade the accuracy of a real time face recognition system. In dynamic environment many problems may arise during the development of a face recognition system. Faces are highly dynamic and can vary considerably in their orientation, lighting, scale and facial expression; therefore face recognition is considered a difficult problem to solve.

Automatic face recognition by computer can be divided into two approaches, which are as follows:-

1. Constituent-based and
2. Face-based.

In constituent-based approach, recognition is based on the Relationship between human facial features such as eyes, mouth, nose, profile silhouettes and face boundary. The success of this approach relies highly on the accuracy of the

Facial feature detection schemes. However, extracting facial features accurately is difficult. Every human face has similar facial features; a small derivation in the extraction may introduce a large classification error. Face-based approach attempts to capture and define the face as a whole. The face is treated as a two-dimensional pattern of intensity variation. Under this approach, face is matched through identifying its underlying statistical regularities.

It has already been stated that face recognition techniques have always been a very challenging task for researches because of all difficulties and limitations [2]. Human faces are not an invariant characteristic; in fact, a person's face can change very much during short periods of time (from one day to another) and because of long periods of time (a difference of months or years). One problem of face recognition is the fact that different faces could seem very similar; therefore, a discrimination task is needed. On the other hand, when we analyse the same face, many characteristics may have changed. Ones of the most important problems are changes in illumination, variability in facial expressions, the presence of accessories (glasses, beards, etc); finally, the rotation of a face may change many facial characteristics.

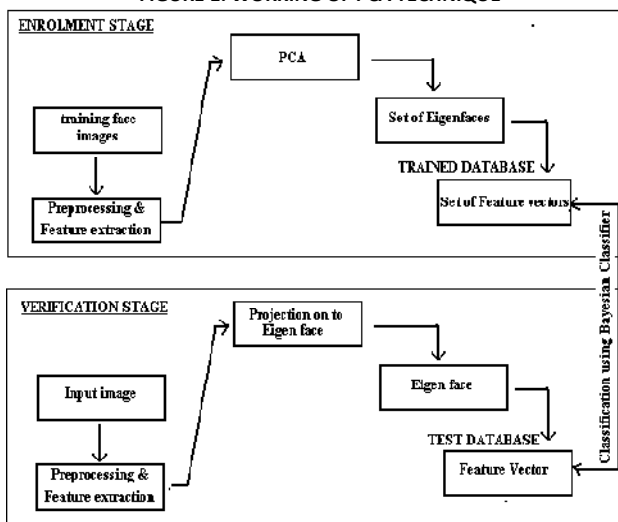
II. SPATIAL FACE RECOGNITION TECHNIQUES

Pattern recognition and matching consists of classifying, processing the input and matching it with a known pattern. Face recognition is a very complex form of pattern recognition. It consists of classifying highly ambiguous input signals, with multiple dimensions and matching them with the know 'signals'. These signals can be analysed by different techniques known as spatial face recognition techniques. In this paper we will discuss three different methods namely principal component analysis (PCA), Elastic bunch graph matching (EBGM), Independent components analysis (ICA). These techniques are explained as follows:-

A. PRINCIPAL COMPONENT ANALYSIS--PCA

Principal component analysis is a well known method used to approximate a set of data with lower dimensional feature vectors. In the case of Face Recognition the data considered is an 8-bit gray scale image which is converted into a vector in a column-wise fashion [3]. The first stage of the PCA system is the training stage. A set of facial images which is made up of classes of images of subjects that should be recognized by the system is used as a training set. The training set is used to create a covariance matrix of the training data whose strongest Eigen values will form the basis of the vector space spanned by all the training faces which is called the Face Space.

FIGURE 1: WORKING OF PCA TECHNIQUE



In the biometrics techniques, enrolment and verification are the two very important faeces in which PCA technique works. As shown in the above block diagram –First is the enrolment stage in which the face which has to be identified is taken known as training face image [5]. The features of the testing image is then considered or all the features are taken into account. Now the PCA technique is applied into the processed testing image. In the PCA technique all the features which are taken into account are break into the matrices form known as set of Eigen faces, then this all collected data is stored into the memory. Now the system is ready for the verification.

Secondly, the verification stage is applied; any random face is taken for the testing purpose. This testing image is fed to the pre-processor in which all the features of the input image are extracted. These features are then fed to the testing of the set of Eigen faces. If the features are matched or if both the data are same then the output is positive. If both the data are not matched then the system rejects the data in the negative manner. This is the basic working of the PCA technique.

B. FEATURE-BASED

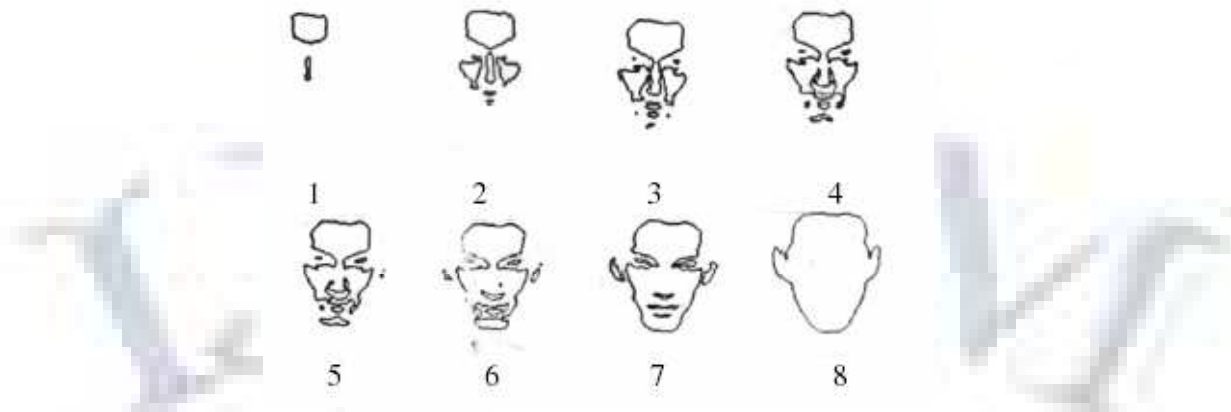
Feature-based approaches first process the input image to identify and extract (and measure) distinctive face features such as the eyes, mouth, nose, etc. as well as other fiducially marks, and then compute the geometric relationships among those facial points, thus reducing the input facial image to a vector of geometric features. Standard statistical pattern recognition techniques are then employed to match faces using these measurements.

To detect the features more reliably, recent approaches have used structural matching methods, for example, the Active Shape Model [4]. Compared to earlier methods, these recent statistical methods are much more robust in terms of handling variations in image intensity and feature shape. An even more Challenging situation for feature Extraction is feature “Restoration,” which tries to recover Features that are invisible due to large variations in head poses. The best solution here might be to hallucinate the Missing features by either using the bilateral symmetry of the face or using learned information. For example [5], a View-based statistical method claims to be able to handle even profile views in which many local features are Invisible.

C. ELASTIC BUNCH GRAPH MATCHING--EBGM

Elastic bunch is a graph matching method proposed by Wiskott et al. This technique is based on Dynamic Link Structures. A graph for an individual face is generated as follows: a set of fiducially points on the face are chosen. Each fiducially point is a node of a full connected graph, and is labelled with the Gabor filters’ responses applied to a window around the fiducially point. Each arch is labelled with the distance between the correspondent fiducially points. A representative set of such graphs is combined into a stack-like structure, called a face bunch graph. Once the system has a face bunch graph, graphs for new face images can then be generated automatically by Elastic Bunch Graph Matching. Recognition of a new face image is performed by comparing its image graph to those of all the known face images and picking the one with the highest similarity value.

FIGURE 1: EXAMPLE OF AN EBGM LOW-RESOLUTION IMAGE



D. INDEPENDENT COMPONENT ANALYSIS—ICA

ICA is a method that can perform blind source separation. Since both the source signals and how these signals are mixed are unknown, separation is named as blind. ICA algorithm finds a linear coordinate system such that resulting signals will be statistically independent. ICA not only makes signals uncorrelated like PCA does, but also reduces higher order dependencies between the signals [6]. Compared with the classical methods, ICA is a powerful method for finding the factors that are mutually independent with the non-Gaussian distributions. In the ICA model, linear or nonlinear mixtures of the hidden factors or independent components constitute the observed data.

It is intimately related to the blind source separation (BSS) problem, where the goal is to decompose an observed signal into a linear combination of unknown independent signals. Let *s* be the vector of unknown source signals and *x* is the vector of observed mixtures. If *A* is the unknown mixing matrix, then the mixing model is written as

$$x = As$$

It is assumed that the source signals are independent of each other and the mixing matrix *A* is invertible. Based on these assumptions and the observed mixtures, ICA algorithms try to find the mixing matrix *A* or the separating matrix *W* such that is an estimation of the independent source signals.

$$u = Wx = Was$$

ICA can be viewed as a generalization of PCA. As previously discussed, PCA decor relates the training data so that the sample covariance of the training data is zero. Whiteness is a stronger constraint that requires both decor relation and unit variance. The whitening transform can be determined as $D^{-1/2}RT$ where D is the diagonal matrix of the Eigen values and R is the matrix of orthogonal eigenvectors of the sample covariance matrix. Applying whitening to observed mixtures, however, results in the source signal only up to an orthogonal transformation. ICA goes one step further so that it transforms the whitened data into a set of statistically independent signals.

E. LDA FACE RECOGNITION TECHNIQUE

The LDA face recognition technique is the most popular method used in the image processing techniques. In this paper we are analysing the detailed LDA technique to get the result in the various feature parameters. Firstly the whole process of LDA is explained and then the description of the features are taken into account. After all the analysis a new algorithm is proposed to calculate those features.

6. LINEAR DISCRIMINANT ANALYSIS—LDA

Linear discriminate analysis (LDA) method which is also known as fisher faces method is another example of appearance-based techniques which encodes discriminatory information in a linear separable space of which bases are not necessarily orthogonal. Linear discriminate analysis has been one of the technical techniques employed in the face recognition. The basic idea of the linear discriminate analysis is to calculate the optimal discriminator vector so that the ratio of within the class and between the class scatter matrices is maximised. The primary purpose of the Linear Discriminated Analysis is to separate samples of distinct groups by maximising their between-class reparability while minimising their within-class variability [7]. Although LDA does not assume that the populations of the distinct groups are normally distributed, it assumes implicitly that the true covariance matrices of each class are equal because the same within-class scatter matrix is used for all the classes considered.

Let the between-class scatter matrix S_b be defined as-

$$S_b = \sum_{i=1}^g N_i (\bar{X}_i - \bar{X})(\bar{X}_i - \bar{X})^T \quad (1)$$

And the within-class scatter matrix S_w be defined as

$$S_w = \sum_{i=1}^g (N_i - 1) S_i = \sum_{i=1}^g \sum_{j=1}^{N_i} (X_{ij} - \bar{X})(X_{ij} - \bar{X})^T \quad (2)$$

Where j is the n -dimensional pattern j from class i , N_i is the number of training patterns from class i , and g is the total number of classes or groups. The vector x_i and matrix S_i are respectively the unbiased sample mean and sample covariance matrix of class i . The grand mean vector \bar{x} is given by-

$$\bar{X} = \frac{1}{N} \sum_{i=1}^g N_i \bar{X}_i = \frac{1}{N} \sum_{i=1}^g \sum_{j=1}^{N_i} X_{ij} \quad (3)$$

Where N is the total number of samples, that is,

$N = N_1 + N_2 + \dots + N_g$. It is important to note that the within-class scatter matrix S_w defined in equation (2) is essentially the standard pooled covariance matrix multiplied by the scalar $(N - g)$, that is p

$$S_w = \sum_{i=1}^g (N_i - 1) S_i = (N - g) S_p \quad (4)$$

The main objective of LDA is to find a projection matrix P_{lda} that maximizes the ratio of the determinant of the between-class scatter matrix to the determinant of the Within-class scatter matrix (Fisher's criterion), that is

$$P_{lda} = \underset{P}{\operatorname{argmax}} \left| \frac{P^T S_b P}{P^T S_w P} \right| \quad (5)$$

Devijver and Kittler [5] have shown that P_{lda} is in fact the solution of the following Eigen system problem:

$$S_b P - S_w P L = 0 \quad (6)$$

Multiplying both sides by S_w^{-1} , equation (6) can be rewritten as-

$$\begin{aligned} S_w^{-1} S_b P - S_w^{-1} S_w P L &= 0 \\ S_w^{-1} S_b P - P L &= 0 \\ (S_w^{-1} S_b) P &= P L \end{aligned} \quad (7)$$

Where P and L are respectively the eigenvectors and Eigen values of $s_w^{-1} s_b$. In other words, equation (7) states That if S_w is a non-singular matrix then the Fisher's criterion Described in equation (5) is maximised when the projection matrix P_{lda} is composed of the eigenvectors of $S_w^{-1} S_b$ - with at most $(g - 1)$ nonzero corresponding Eigen values. This is the standard LDA procedure[7].

The within class scatter matrix signifies how face images are disseminated closely within classes and between class scatter matrix depicts how classes are alienated from each other. When face images are projected into the discriminated vectors W , face images ought to be distributed closely within classes and should be separated between classes, as much as probable [9]. In other words, these discriminated vectors diminish the denominator and maximize the numerator in Equation (3). W can therefore be constructed by the eigenvectors of $S_w^{-1} S_b$. These eigenvectors are also referred to as the fisher faces. There are various methods to solve the problem of LDA such as the pseudo inverse method, the subspace method, or the null space method.

III NOISY IMAGES

The noise in the image can be defined as the undesirable product in the captured image which result to the false or unauthentic and not essential information.

The noise as we use technically stands for "unwanted signals", similarly in the face recognition the noise is unwanted things came in the image. The image become noise or sometimes due to the brightness.

When noisy images come then, it's a new task for the recognizer to recognise the correct image with accuracy. For the further studies of the noise first we have to see the basic and the very very important noises.

There are following three main types of noise:-

1. Salt and pepper noise
2. Gaussian noise
3. Poisson noise.

Now we are going to explore the salt and pepper noise in detail.

SALT AND PEPPER NOISE

The alternative name of the salt and pepper noise is impulsive noise as the name says is caused due to the sudden and sharp disturbance in the image signal.

The appearance of this typical noise is, as the randomly occurrence of white and black pixels into the image. The random white pixel over the image is called as the salt noise and the random black pixels over the image are known as pepper noise. On combining these two when both (white and black) pixels occurs over the image then it is known as salt and pepper noise.

IV PROPOSED METHODOLOGY

The approach to face recognition involves the following operations

- Acquire an initial set of N face images (training images).
- Calculate the Eigen face from the training set keeping only the M images that correspond to the highest Eigen values. These M images define the "face space". As new faces are encountered, the "Eigen faces" can be updated or recalculated accordingly.
- Calculate the corresponding distribution in M dimensional weight space for each known individual by projecting their face images onto the "face space".

- Calculate a set of weights projecting the input image to the M "Eigen faces".
- Determine whether the image is a face or not by checking the closeness of the image to the "face space".
- If it is close enough, classify, the weight pattern as either a known person or as an unknown based on the Euclidean distance measured.
- If it is close enough then cite the recognition successful and provide relevant information about the recognized face from the database which contains information about the faces.
- Repeat the above classification with noisy images.

V EXPERIMENTAL SETUP

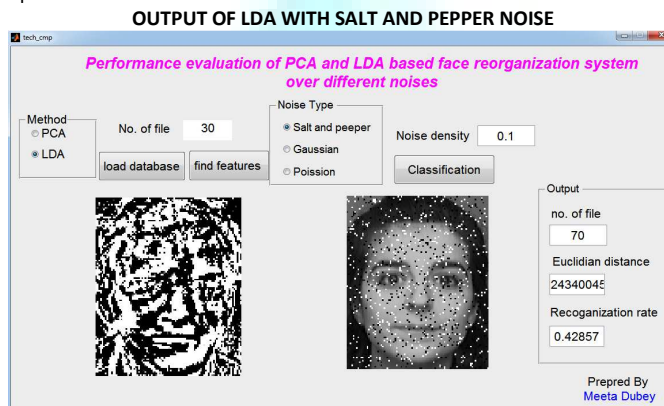
The experimental results are shown below for face recognition with PCA and LDA technique over noisy channel Salt Pepper. The results are analyzed in the MATLAB according to the methodology written above.

These two above images contains 50 files through which the tested image has been recognized on the bases of the minimum possible Euclidean distance or the Eigen distance.

VI RESULT

Now the graphs has been drawn between the training samples and the Eigen distance for the PCA and LDA technique by considering various values. On the basis of the graph below the result is analyzed as:-

In the salt and pepper noise as explained earlier in this paper shows the random occurrence of the white and black pixels in the images. The following output of the salt and pepper noise using LDA technique is:-



The Euclidean distance and the recognition rate has been calculated using LDA technique. Each face has some features on the bases of which is has been recognized. The above figure also shows the feature extraction of the tested images.

Similarly, the output of the salt and pepper noise using PCA technique has been shown below:-

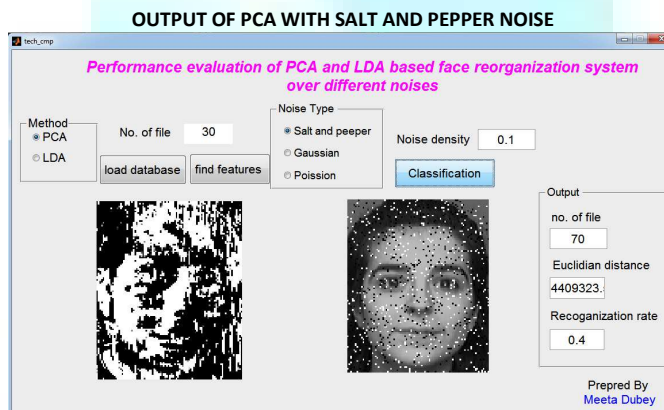
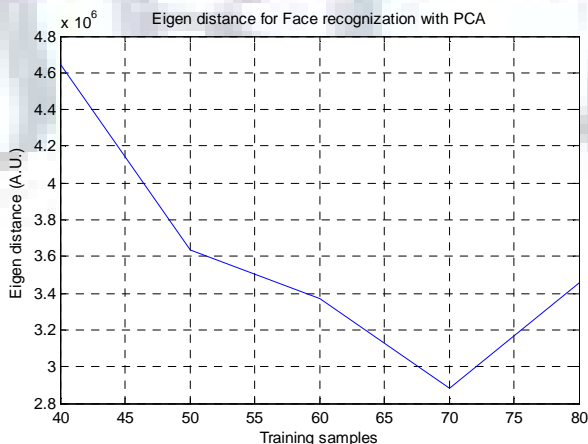
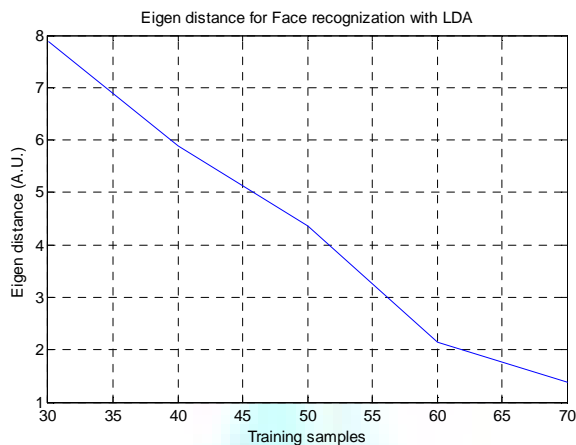


FIGURE 3: EIGEN DISTANCE FOR PCA BASED FACE RECOGNITION



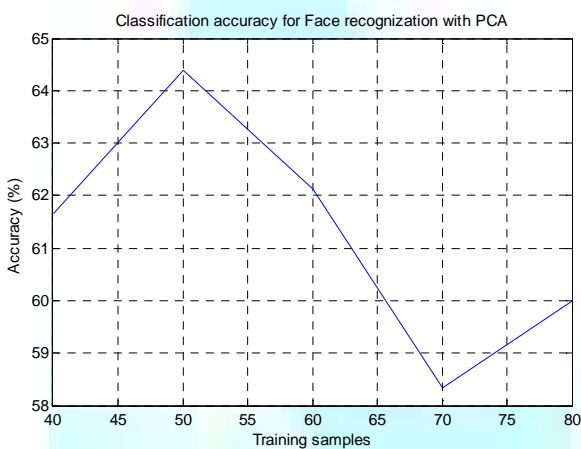
From the graph it is clear that for the PCA base feature, as the training samples increases the Eigen distance is decreases.

FIGURE 4: EIGEN DISTANCE FOR LDA BASED FACE RECOGNITION

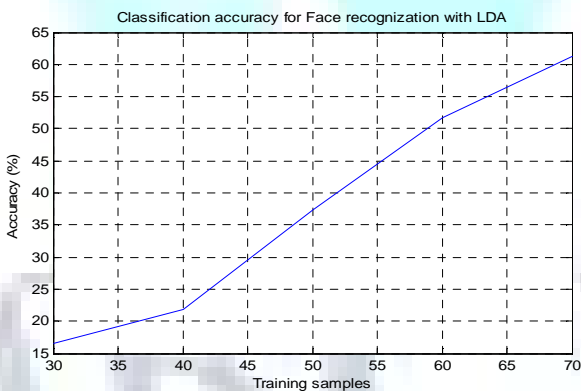


From the graph it is clear that for the LDA base feature, as the training samples increases the Eigen distance is decreases. The accuracy of the experiments is now analysed. The graph is drawn between the training samples and the accuracy for the face recognition for the PCA and LDA technique respectively:-

FIGURE 5: CLASSIFICATION ACCURACY OF PCA BASED FACE RECOGNITION



From the graph it is clear that for the PCA base feature, as the training samples increases the Accuracy is increases till 50 samples, when training sample increases over 50 accuracy get reduces in the salt & pepper noise.



From the graph it is clear that for the LDA base feature, as the training samples increases the Accuracy is increases in the case of salt & pepper noise.

VII CONCLUSION

From all the above results we can conclude that performance of PCA is better than LDA in presence of salt & pepper noise because PCA technique provide greater accuracy as compare to the LDA technique at same sample rate.

We can also conclude that if an image having salt and pepper noise and if the number of samples are less then we can use the LDA technique with the good accuracy, but if the number of samples are in ample then LDA will not work we have to use PCA technique for getting greater accuracy and efficiency.

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A STUDY ON WORKER'S EMOTIONAL INTELLIGENCE IN SIPCOT INDUSTRIAL ESTATE, RANIPET

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ABSTRACT

Emotions are an intrinsic part of our biological makeup, and every morning they march into the office with us and influence our behavior. On some level, we've always known that the ability to understand, monitor, manage and capitalize on our emotions that can help us make better decisions, cope with setbacks and interact with others more effectively.. This research study intends to explore the self-reported awareness and need for emotional intelligence of workers having responsibility to ensure the code of conduct.

KEYWORDS

Intrinsic, Skills, Specific Knowledge, General Intelligence, Technical Skills, Workers.

1.1 INTRODUCTION

Identifying factors that are important for success in life has been a challenge to researchers since long. Even a decade before it was believed that traditional intelligence, which could be measured as Intelligence Quotient (IQ) was responsible for success in life. Based on this assumption a number of intelligence scales have been developed (for instance, Stanford-Binet test, Binet- Simon test, Wechsler Adult Intelligence test). Emotions are an intrinsic part of our biological makeup, and every morning they march into the office with us and influence our behavior. On some level, we've always known that the ability to understand, monitor, manage and capitalize on our emotions can help us make better decisions, cope with setbacks and interact with others more effectively. The concept of emotional intelligence is an umbrella term that captures a broad collection of individual skills and dispositions, usually referred to as soft skills or inter and intra-personal skills, that are outside the traditional areas of specific knowledge, general intelligence, and technical or professional skills. Most of the authors on the topic note that in order to be a well adjusted, fully functioning member of society (or family member, spouse, employee, etc.), and one must possess both traditional intelligence (IQ) and emotional intelligence (dubbed EQ). Emotional intelligence involves being aware of emotions and how they can affect and interact with traditional intelligence (e.g., impair or enhance judgment, etc.). This view fits well with the commonly held notion that it takes more than just brains to succeed in life - one must also be able to develop and maintain healthy interpersonal relationships. Taken from this perspective, emotional intelligence is nothing new.

1.2 OBJECTIVES OF THE STUDY**1.2.1 PRIMARY OBJECTIVES**

- To find out if there are differences across demographics and Emotional Intelligence of workers in SIPCOT Industrial Estate, Ranipet

1.2.2 SECONDARY OBJECTIVES

- To find out Emotional Intelligence of workers in SIPCOT Industrial Estate, Ranipet
- To study the different variables of emotion intelligence with regard to gender.
- To find the levels of Emotional Intelligence in Personal goals

1.3 SCOPE & PURPOSE OF THE STUDY

The purpose of this research study is to investigate the self-reported importance of emotional intelligence of workers SIPCOT Industrial Estate, Ranipet. This research study intends to explore the self-reported awareness and need for emotional intelligence of workers having responsibility to ensure the code of conduct. Furthermore, based on the conceptual framework described earlier, such awareness would imply that emotional intelligence used in the daily practice of a labour that would be important for success in handling disciplinary situations involving students. The results of this research will contribute to the literature of emotional intelligence and education, as well as support the need for labours to recognize and enhance their own ratings of emotional intelligence to perform their duties in a developmental perspective in place.

1.4 MODELS OF EMOTIONAL INTELLIGENCE

Two types of emotional intelligence models are available in the existing literature:

1. Ability model, which focuses on the mental abilities to define emotional intelligence and
2. Mixed models, which seek to define emotional intelligence as a mixture of abilities and some personality traits and characteristics.

2 LITERATURE REVIEW

Sánchez-Ruiz, Jose, Carlos, Prez-Gonzlez and Petride (2010) investigated the trait emotional intelligence (trait EI or trait emotional self-efficacy) profiles of 512 students from five university faculties: technical studies, natural sciences, social sciences, arts, and humanities. Using the Trait Emotional Intelligence Questionnaire, it was hypothesized that (a) social sciences would score higher than technical studies in Emotionality, (b) arts would score higher than technical studies in Emotionality, (c) arts would score lower than technical studies in Self-control, and (d) there would be an interaction between gender and faculty, whereby female students would score higher than male students within the social sciences only. Several other exploratory comparisons were also performed. Results supported hypotheses (a), (b), and (d), but not hypothesis (c), although the differences were in the predicted direction.

According to **Nelis, Quoidbach, Mikolajczak and Hansenne (2009)** the construct of emotional intelligence (EI) refers to the individual differences in the perception, processing, regulation, and utilization of emotional information. As these differences have been shown to have a significant impact on important life outcomes (e.g., mental and physical health, work performance and social relationships), this study investigated, using a controlled experimental design, whether it is possible to increase EI. Participants of the experimental group received a brief empirically derived EI training (four group training sessions of two hours and a half) while control participants continued to live normally. Results showed a significant increase in emotion identification and emotion management abilities in the training group. Follow-up measures after 6 months revealed that these changes were persistent. No significant change was observed in the control group. These findings suggest that EI can be improved and open new treatment avenues.

Hopkins & Bilimoria (2008) explored the relation between emotional and social intelligence competencies and organizational success. The study showed not much of differences between male and female leaders in their demonstration of emotional and social intelligence competencies. It was also found that when it comes to competency demonstration most successful men and women were more the same than different. However gender did play a reasonable role in the relationship between the demonstration of these competencies and success.

Further male leaders were considered to be more successful, even though male and female leaders demonstrated the same level of competencies. The four competencies that divide the most successful male and female leaders from their typical counterparts were Self Confidence, Achievement Orientation, Inspirational Leadership and Change Catalyst.

Koman, E. S., & Wolff, S. B. (2008) examined the relationships among team leader EI competencies and team performance. The study was conducted on 349 aircrew and maintenance military team members participated representing 81 aircrew and maintenance teams. Results show that team leader EI is significantly related to the presence of emotionally competent group norms (ECGN) on the teams they lead, and that ECGN are related to team performance. These finding provides three suggestions. Firstly, Employee leaders with better EI competencies not only increase their own personal performance but also of the teams they lead. Secondly, by developing or hiring emotionally competent managers. Finally by developing emotionally competent first line leaders, organizations should develop emotionally competent executive leaders because each individual on the executive management team which influences the development of ECGNs on the teams he or she leads.

Carmeli and Josman (2006) research suggests possible connections between emotional intelligence and positive performance in the workplace, methodologically sound studies do not agree so. They say that even though research suggests that there is a connection between emotional intelligence and positive performance in the workplace, it is typically based on self reported assessment and it overlooks that work performance is actually multidimensional (task performance and organizational citizenship). Research suggests possible connections between emotional intelligence and positive performance in the workplace; methodologically sound studies do not agree so. Carmeli and Josman noted that task performance may not reveal the completeness of a leader's work role. Other behaviors like maintaining civil relationships and

helping subordinates with issues would also influence the work performance. Researchers explored two essentials of the leader: altruism (e.g., helping with a heavy workload) and general compliance (e.g., being punctual) could be the reasons that maintain the leader's respect from subordinates and could, therefore, impact subordinates' willingness to conscientiously perform work for the leader. Carmeli and Josman conducted a study on 215 employees in different organizations in Israel to see if there was a connection between emotional intelligence with both altruistic behavior and compliant behavior. Data was collected from subordinates and supervisors, as well as the participants themselves. Findings suggest that both altruism and compliance were related to task performance. Researchers also found that three elements of EI (appraisal and expression of emotions, regulation of emotions, and utilization of emotions) were related to task performance and to altruistic behaviors, but only partially to compliance behaviors.

Brown, Bryant, and Reilly (2005) in their study predicted a connection between transformational leadership (TL) and desirable outcomes. They also went on to say that they would find transformational leadership predicts desirable outcomes. Further they predicted that there would be a positive relation between EI and desirable outcomes, but were not sure if this relation would be a simple relationship or would only emerge after factoring out the effects of transformational leadership. The same authors also predicted that there would be a positive relation with transformational leadership and EQ (Bar-On, 1996) and a negative relation with contingent reward and with laissez-faire leadership styles. Further they went on to propose by adding EI as well as transformational leadership to a predictive model of desirable outcomes and predicted an interaction effect between EI and TL.

Mumford, Zaccaro, Harding, Jacobs, & Fleishman (2000) Note that, extensive research in the area of emotional intelligence has focused on leadership and fundamental workplace quality. Way before research in the area of EI had started, the Ohio State Leadership Studies reported that leaders who were able to establish mutual trust, respect, and certain warmth and rapport with members of their group were more effective. (Fleishman and Harris, 1962). However the result is not surprising given that many researchers have argued that effective leadership fundamentally depends upon the leader's capability to solve the complicated social problems which can take place in organizations.

3 RESEARCH DESIGN

TITLE OF THE STUDY

- Workers Emotional Intelligence in SIPCOT Industrial Estate ,Ranipet

FIELD OF THE STUDY

- The study has been conducted in SIPCOT Industrial Estate, Ranipet

3.1 SAMPLING DESIGN

- Sampling design used for the survey is Non Probability Sampling.

Sample Size: 150 employees

3.2 SOURCE AND DATA COLLECTION OF THE STUDY

The study has been undertaken by the use of both the primary data and secondary data.

❖ **PRIMARY DATA**

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character. For this study, well-structured questionnaire was prepared for the collection of primary data from the respondents.

❖ **SECONDARY DATA**

Secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. For this study, secondary data have been collected from books, journals, internet, reports and publications of the industry etc.

4. FINDINGS**A. RESPONDENTS VIEW ON SELF AWARENESS FACTORS UNDER PERCENTAGE METHOD**

Majority (48%) of the respondents accepted the concept that they understand the feedback that others among self awareness factors given to them. Only 2% of the respondents are said that never things that happen in employee life make sense to them.

B. RESPONDENTS VIEW ON MOTIVATION FACTORS UNDER PERCENTAGE METHOD

Majority (49%) of the respondents are clear about their goals and their future among the motivational factors. Just 4% of the respondents find it hard to maintain their enthusiasm when they encounter setbacks.

C. RESPONDENTS VIEW ON RELATIONSHIP MANAGEMENT UNDER PERCENTAGE METHOD

Majority (59%) of the respondents are agreeing with the statement that the decisions that employees make are based on facts.

D. RESPONDENTS VIEW ON MOTIVATION FACTORS UNDER WEIGHTED AVERAGE METHOD

Employees are clear about their goals for the future stands first among respondents view on Motivation Factors

5. SUGGESTIONS

- Work related factors interfering with personal life were the highest for the 35 – 45 years age group followed by the 45 – 55 years age group. This group usually involves people in the middle management or the senior management positions. In order to help them improve their work – life balance it is recommended that people at the middle and senior management delegate work to their subordinates with confidence. This will provide more personal time to people at the 35 – 55 years age and also by delegating and distributing the work equally among their subordinates, will help them learn new skills and gain better knowledge regarding the next position in the hierarchy that they will be working in the future. This will help the organizations save training costs that they invest in enhancing the skills of the new managers as they would have already gained the knowledge through practical experience. This will further help budding manager's manage their teams effectively and efficiently contributing to improved employees satisfaction and improved organizational performance.
- Organizations should clearly define the roles and responsibilities for each and every employee so that there is a clear objective laid down by the organization as to who is accountable for what and does no extra work.
- Lack of work - life balance was more for employees who were in the same position for six years and more. It is recommended that organizations change the profile of their employees by providing them lateral movements every four years. This will reduce the monotonous job that employees do by providing change in profile. Employees will find new profile interesting and challenging and this will bring out the best in every employee. Further employees also gain knowledge about different profiles. This strategy will help the employees love their job and experience better work – life balance.
- Organizations can improve the work – life balance of their employees by encouraging the concept of job sharing.
- The level of use of emotions to facilitate performance generally increased with overall experience and was the highest for professionals with twenty years or more experience. Use of emotions to facilitate performance is considered to be the most important dimension of emotional intelligence. It relates to the ability of a person to make use of his or her emotions by directing them toward constructive activities and personal performance. A person who is highly capable in this dimension would be able to encourage him- or herself to do better continuously. He or she would also be able to direct his or her emotions in positive and productive directions. It is recommended that organizations take initiatives to improve the emotional intelligence level of their employees as soon as they become part of the organization, instead of the employees improving their emotional intelligence level through gaining experience which takes a long time. Organizations should invest on improving the emotional intelligence of their employees at the very initial stage. This will help build better and efficient managers and leaders for the future.
- Organizations should take up the initiative of improving and enhancing the emotional intelligence of their employees. This can be done by designing and providing effective training to their employees.
- Appraisal and recognition of emotions in others significantly influenced work related factors interfering with personal life.

6. CONCLUSION

Emotional Life Balance of employees is an issue that has attracted the interest of workers and the leaders of the world. Managing both professional and personal life effectively and efficiently has become a major challenge for the employees. The organizations need to make efforts to develop effective Emotional Intelligence policies and encourage their employees to make use of the available policies. This will help increase organizational commitment, improve productivity, efficiency, retain best talent and motivate the employees to give their best. This study confirms that both emotional intelligence and work – life balance together create organizational success and develop competitive advantage for the organizations. Thus the human resources team and the leadership team of organization should take the initiative of enhancing and improving the emotional intelligence skills of their employees.

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TERRORISM: A BIG THREAT FOR TELECOM AND INTERNET BASED COMMUNICATION

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ABSTRACT

Modern Information Communication Technology has enabled Human beings to connect faster through various ways; via text mails or messages, voice through telephone or mobile and video calling or image via Facebook, YouTube, and Skype, etc. The antisocial bodies like terrorists are able to connect, command and control (C3) [1] easily just like any normal citizen [2] without even being noticed by any security scanner. The attacks like 9/11 on the World Trade Centre, New York, the planning and brazen execution of 26/11 attacks on Mumbai, Ahmedabad, Pune, Bangalore, and Bodhgaya serial blasts in Bihar [4], India, and the Assam riots based on the false YouTube video clips and the provoking Facebook walls or text messages showcase live examples of how the terrorists are using technology for their desired purpose and there is no way they could be checked during the initial phase of their action plan. Terrorists use technology for provisioning, financing, networking, recruitment, information gathering and for final execution purposes [5]. In every of these attacks, they were much ahead in using these technologies than even best brains in Military could think off. Hence, mostly the activities can be classified under the heads of Activism, Hactivism and Cyberterrorism. [3] The present paper discusses on how the terrorism puts a big threat for telecom and internet based communication technologies those are being used against the civil societies all across the world irrespective of all boundaries, barriers and sections of the society. We conclude on how, such threats could be avoided by implementing GOVI [4] as the Global Communication Technology Policy Framework.

KEYWORDS

GOVI, Cyber Terrorism, Terrorists & Information Communication Technology, video communication, text communication, voice communication, international communication policy framework.

INTRODUCTION

Globally the most dangerous terror organizations are now using modern ICT tools and services to better organize and coordinate dispersed activities by operating in more flat and decentralized groups tied with common goals. [1] Without technologies such as the web and mobile phone communication, al-Qaeda would have been faded away long time ago. [5] The militant organizations have been availing cyber assistance in order to achieve extremist missions as a regular practice after 9/11. The Al Qaeda executed a series of cyber-attacks against the US government through the threat messages defecation of govt. websites, disruption of internet communication for government and citizens.

The early evidences of Cyber Terrorism include the anti NATO propoganda, denial of Service DoS attacks on e-commerce portals like eBay & yahoo in 1999, and hacking of NATO websites during Kosovo, 2001 the Internet Black Tiger's attacked on Sri Lankan embassy with 800 emails carrying extremist messages to 'disrupt the communications', Sri Lanka, 1997 [6] and cyber-jihad against Israeli and American websites initiated by Pakistan based or Muslim hackers in support of the Palestinian militant forum "al-Aqsa" Intifadah.

India also has seen an emerging phenomenon of cyber terrorism. The 2008 serial blasts in Ahmedabad, Delhi, Jaipur, and Bangalore have showcased strong evidence of cyber terrorism. [7] The November 2008 Mumbai attacks also popularly known as 26/11 have witnessed the exhaustive use of telephone, mobile, satellite phones, GPS and Internet technology during all phases of its execution right from the planning to execution at various target spot in Mumbai. The Muslim Jihadists like the Indian Mujahiddin, SIMI etc. are commonly highlighted to be behind such acts but the surprising fact appearing from the analysis reports on news [8] shows the sharing and spreading of terror messages and announcements claiming to shoulder responsibility for terror attacks had been done by non-Muslim youths as well. This is what has happened during Assam Riots. [9] But the non-Muslim fundamentalist groups and their movements against governments are still least focused. [10]

INFORMATION AND COMMUNICATION TECHNOLOGY

The new communication and computing technologies allow the establishment of networks in three critical ways. [11] First, the telephone reduced transmission/transition time between locations in large corporations and with decentralized operations dispersed across local branches which communicate and coordinate jobs. Second, the networked design significantly reduces cost of communication through easy sharing of vital information and costly resources across the organization. [1] The benefit of IT and the Internet is in the capacity to store, analyse and communicate information instantly, anywhere, at negligible cost. The IT revolution has increased the capacity and speed of communications networks and lowered down the telecommunication costs as well and so the users worldwide has grown to more than 350 million and may reach 1 billion within four years. [12] And third, increased the scope and complexity of the information could be shared, through the integration of computing with communications. Therefore the new phenomenon is now known and termed as ICT (Information Communication Technology). IT and the Internet amplify brain power in the same way that the technologies of the industrial revolution amplified muscle power [13]

TERRORISM AND MODERN TECHNOLOGY

The latest communication technologies enable terrorists the coordination of their operations in networked groups. Other benefits include increase in communication speed, reduced costs, increases in bandwidth, globally expanded presence, and the integration of communication and computing technologies.

[14] The Terrorists make use of information and communication technology to form the voice or data networked groups for planning, command and control their missions. [15]

The presence of the terrorist groups on the net benefits their organization in eight different ways. These are psychological warfare, publicity and propaganda, data mining, fundraising, recruitment and mobilization, networking, information sharing, and planning and coordination. [16]

INFORMATION PROVISION

It means the secure publicity, propaganda like historical information, profiles of leaders, manifestos, etc. or psychological warfare through disinformation, threat delivery or disseminating horrific images, such as the beheading of American entrepreneur Nick Berg in Iraq and US journalist Terrorist 12 'Use' of the Internet and Fighting Back Daniel Pearl in Pakistan via their Web sites. [16] Earlier else the terrorists had to pass the multistage editorial selection to attract the attention of television, radio, or the print media. But the web is far easier to own by terrorists. Internet provides direct control over the content and extends their ability to shape and manipulate not only their own image, but also the image of their enemies perceived by the different target audiences. The Al-Qaeda 9/11 terrorist team used Internet for various activities such as the flight schedule query, online purchase of tickets, stealing of social security nos. and obtaining fake documents and also gathering information about the flight schools, location maps/ blueprints of targets. [15] The hackers applauded and commended the attacks. They defaced hundreds several web sites and launch Distributed Denial of Service (DoS) attacks against targets.

Islamic Militants have developed various sophisticated ways to spread propaganda via mobile phones and Bluetooth technology to anonymously share provoking and hate information among potential supporters. The information packages usually contain videos, songs, speeches and images etc. [17] The SMS texting has become increasingly popular among the Pro Terrorists just like the non-terrorist audience. In fact certain terror organizations have branded their specific Mobile User Interface like a political party or any other organization has. The following picture showcases a few popular interfaces from Mujahedeens etc.

FIGURE 1: ARMY OF THE MUJAHEDDEEN AND ISLAMIC STATE



INFORMATION GATHERING

The terrorists use the internet to gather information. A lot of dangerous information about fabrication of bomb, explosive and destructive devices etc. is openly available on the internet, bookstores and libraries. [35] [36] There is ready accessibility of the data and technical expertise like CBRN weapons programs documents on the public websites. The hate groups can easily download from the internet. [37] And it is a fact that most of the government and nongovernment web sites around the world contain vital pieces of information openly available for Internet based terrorists.

The information not directly available on the web can be hack attacked from the systems connected to internet. There are kind of open universities teaching hacking techniques via discussion forums, bulletin boards on internet. In 1998, certain classified and unclassified U.S. government software and data from India's BARC (Bhabha Atomic Research Center) was gained by Khalid Ibrahim from hackers over Internet Relay Chat (IRC) [37] using online aliases RahulB and Rama3456. Ibrahim, an Indian citizen and a member of 'Harkat-ul-Ansar', a Kashmiri militant group. [38]

NETWORKING

The Al Qaeda terrorists have been using ICT based technology for communication and coordination purposes of their plans since the very early stage of their existence. The US telecom companies had registered numerous calls in their database between the Ramzi Yousef (1993, World Trade Centre, Bomber) and other terrorists involved in the plan. [18] His computer was found with the data related to flight schedules, future attack plans and various chemical formulae etc. [19] Terrorist websites refer to various existing and some emerging like mobile to web techniques like VoIP, Mobile GPS Mashups and Number Spoofing Techniques etc. for mobile phones. The basic examples cover Pro Terrorist Propaganda Mobile interfaces, Mobile GPS for movements, Ops, Targeting and Exploiting, Mobile Surveillance Tool, Voice Changers for Terrorist Phone Calls, Red Teaming Perspective on the Potential Terrorist Use of Twitter. [20]

Al-Qaeda has alliances with Egypt's Islamic Group, the National Front in the Sudan, the government of Iran, and Hizbollah. There are reports also about its ties with other far-flung Islamic armed groups, such as Abu Sayyaf in the Philippines, as well as with counterparts in Somalia, Chechnya, and Central Asia. [1]

INFORMATION SHARING

The terrorists use the websites for fast sharing of the information. A number of 'Hoe To' web pages are making huge proliferation on to explaining the technicalities of making homemade destructive devices and explosives etc. The otherwise innocuous material in lethal combinations may be used to make such homemade bombs. More dangerously there are several versions of information on Bacteriological weapons attack available on number of sites and in the book format. [39]

Such availability and sharing of the evil information has been playing significant a role in facilitating not only the sophisticated terrorist and other hard core criminal but also by disaffected and raged individuals to showcase their particular agenda. An example A right-wing extremist David Copeland in 1999 learnt from The Terrorist's Handbook and How to Make Bombs and planted nail bombs in three different areas of London by killing three and injuring 139 persons in just three week time. A big thousand paged manual by Al Qaeda, "The Encyclopedia of Jihad", containing complete strategy and plan to establish an underground organization and execute terror attacks is hugely distributed over the Web. [15]

They are present all over and through all sorts for quick sharing and influential penetration of information. Ayaf a prolific contributor to the Islamic Renewal Organization (IRO) website announced on an internet forum about his connection with Al Qaeda US wing led by Abu-Azzam al-Amriki. He further shared the future plans to destroy a nuclear reactor.

The young French Muslims in the suburbs of Paris and some 300 other cities across France were actually misled by some false and fabricated information spread over online French blogs and mobile phone text messaging. The false messages were used to organize, mobilize, and incite the mobs of young French Muslims to violence in the suburbs of Paris and some 300 other cities across France.

Similarly the flooding of falsify information, pictures and morphed videos over the social networking websites like facebook and text SMS spreading through the mobile networks created panic among the people from the northeast India and triggered the uncontrolled migration of Muslims from different corners of the nation to their homeland during the riots in Assam, India. It was so big flood of misleading information that the Government had to ultimately put a ban on SMS

services. [41] Anees Pasha a mobile shop owner "Fonotech" in Koramangala, Bangalore spread rumours through SMSs and uploaded doctored videos to incite hatred against people from the northeast region.

These events clearly show that how the internet has been used as a valuable tool for distorting the debate and disseminating misleading images of reality, as well as fueling emotions with messages of hatred and promotion of violence. This eases the way the passing of operational information and coordination of activities between terrorist cells operating in different geographical spaces.

FUNDING AND RECRUITMENT

Funding is a must for the operations of terrorist network.[51] The internet has global reach and secrecy necessary for the fundraising activities. Al Qaeda and such others depend on donations in the form of charities. They ask for such financial help through websites, chat rooms, forums and blogs containing misleading information for sake of the false religious achievements. They advertise their account numbers and the religious sympathy anonymously support monetarily. Babar Ahmad a mechanical engineer used to run a network of websites for fundraising for Islamic extremists, including Chechen rebels, the Taliban militia and Al Qaeda affiliates. Terrorists also use the modern software tools to identify sympathies for a cause. The individual emails are then sent requesting for donation to organizations with no direct ties to the terrorist organizations.

The recruitment of terrorists has also become easy through the interest of web users surfing their websites. The interested profiles which are felt suitable for a cause are contacted individually by the recruiters roaming online chat rooms or cybercafés. The vulnerable youth are individually contacted with aggressive with religious propaganda encouraged to join global jihad movement. This all process takes place on various secret online chat rooms and software 'Paltalk' which enables users to communicate openly on the internet without fear of being monitored is used for personal counseling or brainwash. [3]

CHARACTERISTICS OF ICT BASED TERRORISM

The information communication age technology and exchanges increase the range, speed and amount of spread of information among the network in an organization. [21] ICT networked terrorist groups may operate under stealth in any part of the world without any governmental protection [22] The communications between al-Qaeda's members is structured like "hub-and-spoke" structure (each terrorist communicate with bin Laden and advisers in Afghanistan) or a wheel structure (nodes in the network communicate with each other without reference to bin Laden). [23]

The terrorists connect to phone (fixed or mobile) and Internet (websites, emails or chat etc.) over public shared infrastructure just like any normal citizen does. Their phone conversation signals are encrypted. They may also use a SIM programmed with stolen phone numbers the phone cloning is very easily possible. A phone number can be stolen with the help of a special scanner is used to "snatch" legitimate phone information from the airwaves i.e., the Electronic Serial Number (ESN) and Mobile Identification Number (MIN) programmed into a single cell phone just before using it. In absence of a well-defined Global policy framework and technology the terrorists may anonymously bulk purchase prepaid phone cards to look them connect like normal citizens and so hide their communications from scanners. They normally discard the phone after using it. [24]

They may use an inbound devised and defined code language to communicate in between their gang. The 9/11 attackers openly communicated using predefined codes. [25] Their emails contained simple conversation words as between normal citizens so were difficult to understand and analyze their plan. Phone calls between the attackers gang used coded conversation too.

The Bin Laden with the help of Egyptian computer expert established a well-defined operative and kind of secure computer and communications network in mountains of Afghanistan. [26] CD ROMs were used for storing information on recruitments, bomb making, heavy weapons and attack plans. Bin Laden himself used satellite phone terminals to communicate and coordinate. His messages were dictated to an assistant and relayed telephonically from a different location. [27]

Indian perspective also witnesses several incidents of terrorists using the modern Information and communication tools. After 26/11 attack, the Indian Ministry of Home affairs, in their annual report (2010), had released a detailed nexus between digital technology and its misuse by extremists. [9] Terrorists were using the mobile phones just like any personnel communication investigations found that the devices like GPS etc. were used to Map the targets and plan, also during the attack the personal communication via cell or satellite phones was used to motivate for massacre. The six handlers & commanders of the Lashkar-e-Taiba including Sajid Mir, an ISI agent were sitting in a control room (a kind of base camp) set up in the VIP area between the Karachi international airport, the Malir cantonment and Quadiabad. [28] They remote-control the ten attackers in Mumbai in a real time fashion as counter strategy of actions by Indian forces and Police after watching and analyzing the Live TV News. [29] And in fact they were even analyzing the Twitter or Facebook posts by common citizens about current status of situations, and / or information about their dears and nears, public alerts for the sensitive areas, and the information for the medical assistance like blood camps etc. for the wounded were lively accessed by the terrorists to regulate the intensity of attacks along with the general websites providing information about Mumbai target areas were surfed during the planning phase. [30] The 2010 Varanasi blast or July 2011, Jhaveri Bazaar, Mumbai blasts were claimed by Indian Mujahiddin through emails while once again witnessing the use of Internet communication. [9]

SUCCESS FACTORS – ICT BASED TERRORISM

The terrorist organizations use Information and Communication Technology such as cell phones, satellite phones, emails, chat rooms, blogs etc. in a manner that becomes almost impossible to trace in the world population almost 7 billion people. Al Qaeda operatives used the internet in public places and communicated using free web-based email accounts to preserve anonymity. The terrorist groups like Hamas are present in chat rooms to discuss and plan operations and the email communication for operation and coordination across Gaza, the West Bank, Lebanon and Israel. Electronic delivery of instruction is coded dialects and the Western intelligence and security services have few or no trained linguists. [3] The Indian Mujahiddin operatives refrained the personal Internet access to shadow the terrorists during the 2010 Varanasi or July 2011, Jhaveri Bazaar, Mumbai blasts. Their terrorists claimed the ownership of blasts through emails accessed through cybercafés. [9]

The Al Qaeda used CD ROMs for information storage. Bin Laden himself used satellite phone terminals to communicate and coordinate but he was refrained from direct use to safeguard him from all sorts of the scanners. His messages were dictated to an assistant, and who then relays it telephonically from a different location. [27]

The 9/11 attackers had defined code words describing the World Trade Center as "Faculty of Urban Planning", the Pentagon as the "Faculty of Fine Arts." [25] Hence they openly communicated and disseminated information. Their emails were difficult understand to belong to Terrorists. Email from Abu Abdul Rahman to Ramzi bin al-Shibh looked like love text between a boy and his girlfriend in Germany –

"The first semester commences in three weeks (the time left for the attacks). Two high schools (referred to the twin towers) and two universities (Pentagon and the Washington DC). This semester will surely be hot19 (no. of hijackers). Certificates for private exams and four exams (no. of planes). Regards to the Professor (Laden) Goodbye".

Phone calls from Mohammad Atta to fellow attacker were also coded into puzzle like [31] –

"Two sticks, a dash and a cake with a stick down".

All this so well planned and managed that even after attacks, hoax email claimed that the string "Q33" was the flight no. and upon changing it to the windings font present in Microsoft Office it revealed the target as "Q33".

Online money raising as the case of Lashkar-e-Taiba ("Army of the Pure") from Pakistan and its parent organization, Markaz ad-Da'wa Wal Irshad (Center for Islamic Invitation and Guidance), have raised lot of money mostly from sympathetic Wahhabis in Saudi Arabia, that they are reportedly planning to open their own bank. They benefit financially the Mujahiddins and a normal mujahideen earns 15,000 rupees per month -- more than seven times what the average Pakistani makes. [32]

Electronic exchange of messages and communication can increase the range, amount, and velocity of information flow in a network organization and on the brainwashed terrorists this impacts as face-to-face interaction. [21]

Open Sources of information i.e. the systematic collection of foreign media is an important phenomenon among terrorist groups that use the media and the Internet to communicate leadership guidance through web or other means of networking and sharing. [42] The French Anonymous Society (FAS) website publishes a two-volume Sabotage Handbook that contains sections on planning an assassination and anti-surveillance methods amongst others.

Department of Defence (DoD) websites also host DoD plans, programs and activities would provide more than eighty percent of information. Around 700 gigabytes of such unclassified but harmful material was available for ready downloads on DoD websites. [43] Besides, there is information about the location and operation of nuclear reactors and related facilities available openly on the websites of Nuclear Regulatory Commission (NRC). [44]

The arrest of Al-Qaeda computer expert Muhammad Naem Noor Khan in Pakistan in July 2004 found his computer with photographs and floor diagrams of buildings in the U.S. that might be the potential targets of future attacks and planning. [45] A terrorist charged in Australia visited Australian government Web sites to get maps, data, and satellite images of potential targets. The government of New South Wales decided to restrict the information available on their Web sites. [46]

PREVENTION MEASURES

The 9/11 has alerted the intelligence and security agencies around the world. State intelligence reviewed their online presence. After the 9/11 attacks some U.S. Government agencies took off a lot of information from their sites that could be useful to terrorists planning attacks. Nuclear Regulatory Commission closed its website and pages were removed from the websites of Department of Energy, Interior Department's Geological Survey, Federal Energy Regulatory Commission, Environmental Protection Agency, Federal Aviation Administration, Department of Transportation, National Archives and Records Administration, the NASA Glenn Research Centre, International Nuclear Safety Centre, Los Alamos National Laboratory, Geographic Information Service, National Imagery and Mapping Agency. The information might be useful for the terrorists like chemical industry risk management plans; pipeline mapping information, chemical risk profiles, National Transportation Atlas Databases etc. was removed. [16]

The MI5 (the British Security Service) had appealed for information about potential terrorists on Arab websites. A poignant message in Arabic was posted on sites suspected to be accessed by extremists like Islah.org (a Saudi Arabian opposition site) and Qoqaz.com (Chechen jihad site). [33] [34]

Change of methods and modus operandi of security and intelligence agencies. Try and trust every bit of information available from any source and anywhere. Before 9/11, FBI did not use and their intelligence databases did not register internet based or any public shared information. [47] Starting new facets of intelligence organizations and their presence on the public shared ICT networks to monitor sorts of evil activities or establishments. Internet Haganah, self-described as "an internet counterinsurgency", and the Washington DC based Search for International Terrorist Entities (SITE) Institute have clients including the FBI, Office of Homeland Security, and various media organizations. These agencies focus on the Islamic terror groups. And their operative is not to silence rather to feel them free and let them move and change addresses and communicate this way gathers much information after they make mistakes. [48]

Social propaganda in favour of humanity like Cyber Angels (a computer enthusiasts group) promoted and sponsored television advertisements in US urging hackers to help gather information and intelligence on involved in hacktivism. Dispatchers (hackers group) voiced their rage against terror and they also initiated counter cyber-attacks against the web servers and Internet access in Afghanistan and other terrorism supporting nations. They further defaced hundreds of Web sites and launched Distributed Denial of Service (DoS) attacks against Iranian Ministry of the Interior and the Presidential Palace of Afghanistan. [16] Another group, Young Intelligent Hackers against Terror (YIHAT) founder, Kim Schmitz, to breach two Arabic banks having connections with Osama Bin Laden. Chaos Computer Club, German hacker's organization called for global communication to resolve the conflict. [49]

SECURITY HOLES

Technological Fixes play a big role to monitor, analyze and counter the terrorists making open use of information and communication technology (ICT). The National Security Agency (NSA) was very slow in terms of technology upgrade in telecommunications. They have started to upgrade their technology bases only after the 9/11 conspiracy. FBI's DCS-1000 e-mail packet-sniffer system proved to be less effective and hence has not been employed since 2002 instead commercial monitoring applications have been employed to aid their investigations. Honey Pots the classic spy tactic like hosting bogus websites to attract the target persons should also be deployed. The other technical fronts should be heeded with ample funds availability. [50]

The removal of technical information from public Web sites is no guarantee of safeguarding it. These materials can be stored onto other international Web servers that do not comply cannot the U.S. legislation. [37]

Smarter new terrorists can also use the Internet to learn about antiterrorism activities. This job can be done by simply performing the string of word searching through online newspapers and journals. They may get the complete view of the strategies designed, plans to counter attacks or the potential vulnerabilities. [40]

GOVI STOPS ICT USED BY TERROR

A global policy mandated for the Information and Communication Technology around the world would be a potential solution towards the global problem of terrorists getting multifaceted and tremendous benefits from the wide use of modern Communication technology. All the governments of world nations would share a common technology framework for all faces and all uses of ICT.

The suggested technology framework named as GOVI (Global One Voice ID) would have a direct thread attached to the Government Security and Intelligence Agencies. GOVI has proper technology protocols on every use of each face of technology of Information and Communication Technology. GOVI is a global unique identification number that grants every person an access to connect through any of the communication tool from postal letter, telegraph, Phone, Mobile, PTT, Pager, email, Online chat, website, billboard, net-banking etc.

GOVI protocol suit manages each communication/ call initiated routed and terminated through the single GOVI locally, nationally and internationally. All the communication transactions shall be recorded in the Network Access and Equipment Registration Sheet (NARESH) database clustered nationwide zones and the replica views shared with the service providers. The NARESH database would contain the present entities GOVIs and their locations along with the serving companies/ networks for all kinds of services. The Internet connectivity too would be threaded with GOVI ids. No GOVI can be present at more than one location at one point of time. The duplicate GOVIs found in NARESH database would be automatically logged out of the global ICT network. To increase the security all suspected GOVIs could be monitored easily as there will be no other anonymous identity attached to them globally.

The website would have the national signature globally and one GOVI identity directly attached with them. Therefore all the websites will provide direct link to intelligence databases thus any malicious or dubious website could be easily traced and prevented through domains and hosting.

This way the terrorists would be prevented from the activities like using telephone based mobile communication or internet based e-mail, chat communication and networking, web based fund raising, recruitment and information provisioning etc. Even if they try through hacking or anything else the investigation and security agencies may be able to deduce an easy path to them. Also the people from general population can also oppose the terror based false and hating information. Any one from the general public can trace the actual root cause of such anonymous identities.

CONCLUSION

1. GOVI as a unique communication identity for the voice, data and video communication services provided to each person around the world after personal screening and rigorous verification done by the local intelligence units or security agencies to the local citizens. [4]
2. This data is shared across the global telecom authorities for the valid instance. Hence, the foreign citizens need not apply for GOVI, if they travel in other countries. While travelling, the person just has to take permission via log in to the visiting country's networks, within few seconds time. [49]
3. This will prevent the evil use of the communication network around the world as it refrains the access of any type of communication network and thus stopping the terrorism using the ICT as a medium. [51]

FURTHER SCOPE OF STUDY

1. Designing a policy framework for the global communication ICT networks
2. SIM card obsolescence issue and/ or modifications in the mobile, laptop and other devices.
3. Military personnel security issues
4. Standardization of the framework through ITU, IEEE, IETF, cyber-security, etc. bodies around the world.
5. Feasibility and network updating issues around the globe/ and each and every country.

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STUDY OF PERCEPTIONS OF INDIVIDUAL INVESTORS TOWARDS INVESTMENT**DR. KANCHAN NAIDU****PROFESSOR****RAMDEOBABA COLLEGE OF ENGINEERING & MANAGEMENT****NAGPUR****HETAL GAGLANI****ASST. PROFESSOR****DATTA MEGHE INSTITUTE OF MANAGEMENT STUDIES****NAGPUR****ABSTRACT**

There are a lot of investment avenues available today in the financial market for an investor with an investable surplus. He can invest in Bank Deposits, Bonds & Debentures, Equity Shares, Post Office Saving Schemes, Mutual Fund, Insurance. In the present study an attempt has been made to study the perception of the investors towards investment in Nagpur City. The study aims at finding out the attitude of the investors towards various investment options in Nagpur city. The primary data was collected from the investors with help of the questionnaire. The secondary data were collected from the books, records and journals. By adopting convenience sampling, 360 respondents were analyzed to know their perception regarding the various avenues of investment. The Chi – square test at five percent level of significance has been adopted to study the impact of investors profile on their attitude towards investments.

KEYWORDS

Perception ,Chi-Square.

INTRODUCTION

Financial system comprises of financial institutions, services, market and instruments. Financial institutions mobilize resources, purchase and sell instruments and render various services in accordance with the practices and procedures of law. Investing in financial securities is a complex one involving knowledge of various investment tools, terms, concepts, strategies and process. The success of a financial investment activity depends on the knowledge and ability of investors to invest the right amount, in the right type, at the right time. Investor has to use his intellect, which is an art to acquire by learning and experience. Knowledge of financial investment principles and the art of investment management are the basic requirements for a successful investment.

The financial securities include ownership securities (like shares, mutual fund units) and creditorship securities (like debentures, bonds). Ownership securities are more risky than creditorship securities. Investment decisions relating to ownership securities involve planning of investment strategies according to the extent of diversification desired by individuals. In order to identify the perception of investors towards investment, a careful collection of primary data through questionnaire was made. The information collected from investors was studied and then analyzed using Chi square test.

OBJECTIVES

The present study is undertaken with the following specific objectives

1. To study the relation between the profile of investors & their investments.
2. To study the attitude of investors towards various investments.
3. To study the investment objectives of the investors

RESEARCH METHODOLOGY**DATA COLLECTION**

The study is primarily based upon primary data collected from a structured survey through questionnaire. The survey was administered on 360 respondents online as well as in person. The secondary data were collected from the books, records and journals

DATA ANALYSIS

The data collected from primary source is subjected to statistical treatments. Simple statistical tools like Percentages and Chi – Square tests have been used. The Chi – square test at five percent level of significance has been adopted to study the impact of investors profile on their attitude towards investments.

TESTING OF HYPOTHESIS

In order to examine the attitude level of the respondents towards investment in mutual funds, the following null hypothesis has been formulated and tested

1. Investment decisions are not significantly influenced by the profile of investors.
2. The demographic variables of the respondents such as gender, age, educational status, occupation, income and savings will not have any influence on their attitude with the investment.

LITERATURE REVIEW

Rajarajan (2000)¹ has attempted to identify predictors of individual investors' expected rate of return by investigating relationship of demographic variables such as age, income, occupation, employment status and stage in life cycle with investment behavior of an individual in the paper titled, "Predictors of Expected Rate of Return by Individual Investors". The study was conducted by administering questionnaire to a sample size of 405 investors. The investigation was made across 12 variables. Multiple regression analysis was used by the researcher to examine the relationship between expected rate of return on investments by individual investors and their demographics. Some investment related characteristics (including risk bearing capacity of investor) were also studied. The study found that factors like investment size, portfolio choice, and risk bearing capacity are positively related to rate of returns. The variable locus of control was inversely related to rate of return. The paper concluded that the rate of return was not strongly related to any socio economic variable except age. The author has empirically proved the significant relationship between expected rate of return on investments and demographic variables.

SEBI-NCAER survey (2000)² was carried out to estimate the number of households, the population of individual investors, their economic and demographic profile, portfolio size, and investment preference for equity as well as other savings instruments. Data was collected from three lakhs geographically dispersed rural and urban households. Findings of the survey are: the investors' choice of investment instruments matched the risk perceived by them. Bank Deposit was the most preferred investment avenue across all income class; 43% of the non-investor households (estimated around 60 million households) apparently lack awareness about stock markets; and: a relative comparison shows that the higher income group has a greater share of investments in mutual funds compared

with low income groups, suggesting that mutual funds have not truly become investment vehicle for small investors'. Nevertheless, the study predicts that in the next two years (i.e., 2000 hence) the investment of households in mutual funds is likely to increase.

Securities and Exchange Board of India (SEBI) and NCAER (2000) 'Survey of Indian Investors' has reported that safety and liquidity were the primary considerations which determined the choice of an asset. Ranked by an ascending order of risk perception fixed deposit accounts in bank were considered very safe, followed by gold, units of UTI-US64, fixed deposits of non-government companies, mutual funds, equity shares, and debentures. Households' preference for instruments in which they commonly invested matched the risk perception. Bank deposits, which had an appeal across all income classes, and tax-saving schemes were preferred by middle-income and higher-income groups. There was a correlation between the income levels and investments of households in market-related securities.

Sunil Gupta (2008) the investment pattern among different groups in Shimla had revealed a clear as well as a complex picture. The complex picture means that the people are not aware about the different investment avenues and they did not respond positively, probably it was difficult for them to understand the different avenues. The study showed that the more investors in the city prefer to deposit their surplus in banks, post offices, fixed deposits, saving accounts and different UTI schemes, etc. The attitude of the investors towards the securities in general was bleak, though service and professional class is going in for investment in shares, debentures and in different mutual fund schemes. As far as the investments are concerned, people put their surplus in banks, post offices and other government agencies

LIMITATIONS OF THE STUDY

The study has the following limitations.

1. Due to paucity of time and the resources available, the study was restricted to 360 respondents only.

FINDINGS AND RESULTS

PROFILE OF INVESTORS

The differences in the personal characteristics of individual investors influence the choice and preference for investments. Hence, to understand the nature and characteristics of respondents covered under the study, an analysis of the information regarding their socio-economic background is carried out in this part of the research work.

TABLE 1: PROFILE OF SAMPLE INVESTORS

Profile of Investors	Number of Investors	Percentage	
Age	Below 30 Years	60	16.67
	31-45 Years	148	41.11
	46-60 Years	112	31.11
	Above 60 Years	40	11.11
Sex	Male	312	86.67
	Female	48	13.33
Occupation	Business	107	29.72
	Agriculture	24	6.67
	Professional	27	7.50
	Employed	136	37.78
	Others (Retired)	66	18.33
Educational Qualification	upto Higher Secondary Level	82	22.78
	Undergraduate	181	50.28
	Postgraduate	97	26.94
Marital Status	Married	318	88.33
	Unmarried	42	11.67
Monthly Income (in Rupees)	Below 10,000	181	50.28
	10001-20,000	114	31.67
	Above 20,000	65	18.05
Monthly Savings (in Rupees)	Below 2,000	187	51.94
	2001-4,000	63	17.50
	Above 4,000	110	30.56

Table 1 reveals that, 41.11 percent of respondents were in the age group of 31-45 years, 86.67 percent of respondents were male investors, 37.78 percent of investors represented employed category, 50.28 percent of investors were undergraduates, 88.33 percent of investors were married, 50.28 percent of investors were earning less than Rs.10,000 per month and 51.94 percent of investors were saving less than Rs.2,000 per month.

ATTITUDE OF INVESTORS TOWARDS INVESTMENTS

The investors' attitude towards investment is analyzed with respect to their financial needs, investment objective, and time horizon of investment, willingness to take risk, fluctuations in the value of investment, investment experience, preference and degree of safety for financial assets.

TABLE 2: FINANCIAL DEPENDENCE OF INVESTORS

Factors of Financial Dependence	Number of Investors	Percentage
Depend totally on investments	42	11.67
Depend on investments for income and emergency needs.	96	26.67
Depend somewhat on investments for income & emergency needs	66	18.33
Depend on investments to serve only on an emergency	63	17.50
Devote investments to long – term savings	76	21.11
Don't Depend on investments.	17	4.72
Total	360	100.00

The above Table reveals that, 26.67 percent of investors covered (Factor 2) depend on their investments for income and emergency needs and 21.11 percent (Factor 5) devote their investments to long-term savings.

INVESTMENT OBJECTIVES OF INVESTORS

TABLE 3: INVESTMENT OBJECTIVE OF INVESTORS

OPTIONS FOR INVESTMENT OBJECTIVE	NUMBER OF INVESTORS	PERCENTAGE
Capital preservation and satisfactory current income	54	15.00
First priority for Income and second priority for Growth.	84	23.33
Balanced preference for income and growth.	93	25.83
Basically growth oriented but intends to play it somewhat safe	69	19.17
Maximize growth, as income is not critical	60	16.67
Total	360	100.00

Table 3 reveals that, 25.83 percent desired to (Option 3) balance their income and growth objectives while 23.33 percent had (Option 2) top priority for income objective and second priority for growth objective.

INVESTMENT TIME HORIZON OF INVESTORS

TABLE 4: INVESTMENT TIME HORIZON OF INVESTORS

INVESTMENT TIME HORIZON	NUMBER OF INVESTORS	PERCENTAGE
Upto 5 Years	225	62.50
6-10 Years	98	27.22
11-15 Years	27	7.50
Above 15 Years	10	2.78
Total	360	100.00

Table 4 reveals that, 62.50 percent of investors had an investment time horizon upto five years, 27.22 percent of investors had an investment time horizon between 6-10 years and a minimum of 2.78 percent had more than 15 years of investment time horizon.

INVESTORS' WILLINGNESS TO TAKE RISK

TABLE 5: INVESTORS' WILLINGNESS TO TAKE RISK

Willingness to take Risk	Number of Investors	Percentage
Willing to take as much risk as possible.	90	25.00
Willing to take modest risk.	210	58.33
Avoid taking risk.	60	16.67
Total	360	100.00

Table 5 reveals that, 58.33 percent of investors were (Category 2) willing to take modest risk, 25 percent were (Category 1) ready to take as much risk as possible and the rest 16.67 percent were avoiding risk.

INVESTORS ATTITUDE TOWARDS FLUCTUATIONS IN THE VALUE OF INVESTMENTS

TABLE 6: INVESTORS' ATTITUDE TOWARDS VOLATILITY IN INVESTMENT VALUE

Attitude Towards Volatility In Investment Value	Number of Investors	Percentage
Accept lower long run returns with maximum stability	81	22.50
Accept little volatility for higher returns	88	24.44
Take average amount of volatility for average returns	109	30.28
Accept higher volatility as growth is the goal.	49	13.61
Accept substantial volatility, as maximum appreciation is the goal.	33	9.17
Total	360	100.00

Table 6 shows that, 30.28 percent of investors were ready to take average amount of volatility for average returns (Choice 3) while 24.44 percent accepted (Choice 2) little volatility for higher returns and only 9.17 percent accepted substantial volatility, as maximum appreciation was their goal.

INVESTORS PROFILE AND ATTITUDE TOWARDS INVESTMENTS

Personal profile of each investor differs from each other. Personal profile brings out the differences in their financial needs, investment objective, and willingness to take risk and attitude towards fluctuations in the value of investments.

Hence, there is a need to study the impact of investors profile on their attitude towards investments. Chi-square test is used to study the impact at five percent level of significance using the following hypothesis:

Hypothesis : Investment decisions are not significantly influenced by the profile of investors.

TABLE 7: INVESTORS PROFILE AND ATTITUDE TOWARDS INVESTMENT

Investors Profile	Financial Need	Investment Objective	Willingness To Take Risk	Volatility In Investment Value
Age	44.14*	65.35*	23.25*	24.44*
Sex	22.48*	32.81*	28.92*	13.75*
Occupation	71.56*	73.68*	16.96*	52.63*
Educational Qualification	25.09*	35.03*	6.38	7.03
Marital Status	6.60	12.48*	8.18*	10.93*
Monthly Income	122.56*	89.10*	8.43	30.07*
Monthly Savings	76.56*	55.07*	2.30	19.75*

*Significant at 5 percent level.

Table 7 reveals that, age, sex, occupation have a significant impact on the investors' financial dependence, investment objective, willingness to take risk and the extent of volatility in investment value accepted.

Educational qualification of investors had a significant impact on the financial needs and investment objective.

Marital status had a significant impact on investment objective, willingness to take risk and volatility in investment value.

Monthly income and monthly savings significantly influence financial needs, investment objective and volatility in investment value.

INVESTMENT EXPERIENCE OF INVESTORS

The experience of investors in the field of investment brings out changes in investment attitude, preference towards investment avenues and the extent of diversification in investment.

TABLE 8: INVESTMENT EXPERIENCE OF INVESTORS

Investment Experience	Number of Investors	Percentage
Less than 5 Years	189	52.50
6-10 Years	84	23.33
11-15 Years	52	14.45
16-20 Years	18	5.00
Above 20 Years	17	4.72
Total	360	100.00

Table 8 reveals that, 52.50 percent of investors had less than five years of investment experience while 23.33 percent had 6 to 10 years of experience in the field of investment and only 4.72 percent had more than 20 years of investment experience.

PROPORTION OF HOLDINGS IN FINANCIAL ASSETS

Investors do not put all their holdings in one type of financial asset. To fulfill the objectives and varied needs, investors diversify their savings among various financial assets. The proportion of investments in varied financial assets determines the amount of risk taken and the return that could be earned by the investors.

TABLE 9: INVESTMENT IN FINANCIAL ASSETS BY INVESTORS

Financial Assets	Proportion of Investment in Financial Assets				
	Below 25	26-50	51-75	Above75	Total
Bank Deposits	155 (43.05)	145 (40.28)	36 (10.00)	24 (6.67)	360 (100.00)
Post Office Saving Scheme	149 (42.57)	117 (33.43)	39 (11.14)	24 (6.86)	329 (91.39)
Bonds & Debentures	104 (57.14)	30 (16.48)	24 (13.19)	24 (13.19)	182 (50.56)
Equity Shares	193 (56.93)	70 (20.65)	43 (12.68)	33 (9.74)	339 (94.17)
Mutual Funds	227 (63.06)	70 (19.44)	33 (9.17)	30 (8.33)	360 (100.00)
Insurance	133 (58.86)	45 (19.91)	24 (10.62)	24 (10.62)	226 (62.78)

Figures in brackets represent percentages

Table 9 shows that, 100 percent of sample investors had invested in bank deposits and mutual funds followed by equity shares (94.17 percent) and post office savings schemes (91.39 percent). 63.06 percent had invested upto25 percent of their savings in mutual funds. Majority of the investors had invested upto25 percent of their savings in each type of financial asset.

TABLE 10: INVESTORS PREFERENCE FOR FINANCIAL ASSETS

FINANCIAL ASSETS	ORDER OF PREFERENCE						TOTAL SCORE	AVERAGE SCORE	RANK
	RANK I	RANK II	RANK III	RANK IV	RANK V	RANK VI			
Bank Deposits	165	93	36	37	23	6	1762	4.9	I
Post Office Savings Schemes	94	135	57	31	28	15	1631	4.5	II
Bonds and Debentures	27	39	64	73	51	106	1040	2.9	VI
Equity Shares	76	46	124	45	36	33	1422	4.0	III
Mutual Funds	43	55	67	114	57	24	1281	3.6	IV
Insurance Policies	24	61	63	57	75	80	1102	3.1	V

Table 10 shows the frequencies obtained and the weights assigned to each financial asset along with the total score and rank. Investors preferred bank deposit in the first instance, with the highest average score of 4.9. The second preference was towards post office savings scheme as the average score was 4.5. The third place was for equity shares with an average score of 4.0. Mutual funds were the fourth preferred financial asset with an average score of 3.6.

TABLE 11: INVESTORS' OPINION ON DEGREE OF SAFETY OF FINANCIAL ASSETS

FINANCIAL ASSETS	DEGREE OF SAFETY						
	ABSOLUTELY SAFE	REASONABLY SAFE	SOMEWHAT SAFE	NOT SAFE	DON'T KNOW	TOTAL SCORE	AVERAGE SCORE
Bank Deposits	276	81	0	3	0	1710	4.8
Post Office Savings Schemes	309	42	6	0	3	1734	4.8
Bonds and Debentures	18	139	166	16	21	1197	3.3
Equity Shares	6	79	163	109	3	1056	2.9
Mutual Funds	15	121	160	55	9	1158	3.2
Insurance Policies	193	139	25	3	0	1602	4.5

Table 11 reveals the opinion of investors relating to the degree of safety of investment in financial assets and the scores assigned. Investors were of the opinion that bank deposits and post office savings schemes had the highest degree of safety, with an average score of 4.8 each. Insurance policies were second preferred from the point of view of safety with an average score of 4.5. Bonds and debentures occupied the third position, with an average score of 3.3. Fourth position was assigned for mutual funds; the average score being 3.2 and the last preference was for equity shares scoring 2.9. Post office savings schemes, bank deposits and insurance policies were regarded as absolutely safe for 309 (85.83 percent), 276 (76.67 percent) and 193 (53.61 percent) investors respectively as shown in the Table 11.. Bonds and debentures, equity shares and mutual funds were somewhat safe for 166, 163 and 160 investors respectively.

FINDINGS

The conclusions drawn from the opinion survey of investors revealed the following findings:

1. The profile of investors covered showed that, 41.11 percent were in the age group of 31-45 years, 86.67 percent were male investors, 37.78 percent represented employed category, 50.28 percent were undergraduates, 88.33 percent were married, 50.28 percent were earning less than Rs.10,000 per month and 51.94 percent were saving less than Rs.2,000 per month.
2. Investors depend on their investments for income and emergency needs (26.67 percent) followed by devotion of savings for long term savings (21.11 percent).
3. Investors want to balance their income and growth objectives with top priority for income objective and second priority for growth objective.
4. More than half of the investors covered under the study had an investment time horizon upto five years.
5. More than half of the investors were willing to take modest risk while one-fourth was ready to take as much risk as possible.
6. One-third of investors were ready to take average amount of volatility for average returns while one-fourth accepted little volatility for higher returns.
7. Age, sex, occupation had significant impact on the investors financial dependence, investment objectives, willingness to take risk and on the extent of acceptability for investment volatility.
8. Educational qualification affected financial needs and investment objectives of investors.
9. Marital status had a significant impact on investment objective, willingness to take risk and volatility in investment value. Monthly income and monthly savings had a significant impact on financial needs and investment objectives.
10. More than half of the investors covered had less than five years of investment experience while less than one-fourth had 6 to 10 years of investment experience.
11. All the investors covered under the study had invested in bank deposits and mutual funds followed by equity shares and post office savings schemes.
12. Majority of investors had invested less than 25 percent of their savings in mutual funds.
13. Majority of the investors had invested less than 25 percent in each type of financial assets.
14. Investors preferred bank deposit in the first instance, with the highest average score of 4.9 followed by post office savings scheme, equity shares. Investors assigned fourth preference for mutual funds.
15. Investors were of the opinion that bank deposits and post office savings schemes had the highest degree of safety followed by insurance policies, bonds, debentures and mutual funds.

CONCLUSION

The survey of investors' perception revealed that, profile of investors has a significant impact on the investor's decisions relating to investments. Majority of the investors depend on investment for income & emergency needs. Investors preferred bank deposit in the first instance followed by post office savings scheme, equity shares, mutual funds, Insurance policies. Investors least preferred bond & debentures because they were of the opinion that bank deposits and post office savings schemes had the highest degree of safety.

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A STUDY ON TRAINING NEEDS FOR EXECUTIVES IN SMALL AND MEDIUM ENTERPRISES AT SALEM DISTRICT**S. SUSENDIRAN****ASST. PROFESSOR****DEPARTMENT OF MBA****K. S. RANGASAMY COLLEGE OF TECHNOLOGY
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TIRUCHENGODE****ABSTRACT**

The study is about the training needs for executives in small and medium enterprises at Salem district. This study covered the level of fulfillment of the executives training program those are nominated by their concern department superiors and top management and also based on their self-interest. This study helps to know about various trainings provided by the company and also the reasons, because of why the executives could not attend the training program. Training is a learning experience in that it seeks a relatively permanent change in an individual that will improve the activity to perform the job. It involves changing of skills, knowledge, attitudes or behaviour. This study provides a platform to identify the interest level of executives to attend the training program and also about the motivation level of superiors to attend the training programs in small and medium enterprises at Salem district. A survey has been conducted to collect the opinion of the executives regarding the training need analysis. Data has been collected through interviewing the respondents. Percentage analysis has been used for interpretation of the data. It describes details about the different training needs which are expected by the executives like technical, behavioural and knowledge sharing. This study will also be helpful to the company to assess the training which executives need and also to provide correct training to the correct person. So finally this study provides an opportunity to understand about the training programs which was given to executives.

KEYWORDS

Attitudes, Knowledge Sharing, Motivation, SMEs and Training.

INTRODUCTION

Training Analysis is most often used as part of the system development process. Due to the close tie between the design of the system and the training required, in most cases it runs alongside the development to capture the training requirements. Training is an organized process for increasing knowledge and skills of people for a definite purpose. The purpose of training is to improve the employee's current job performance.

REVIEW OF LITERATURE

Singara (2001): This paper is a guide to companies when executing the training of a new work force. The researcher shows how job training is crucial for the workers as well as for the corporations. He indicates that companies are paying more attention to the training and development than to recruiting. There are many changes that are being made to the process of training and developing a new work force mainly towards developing existing skills and acquiring new ones. The paper examines several factors that affect this process such as: government intervention, wages, diversity, globalization...and much more

Veerabathra (2002): This paper looks at employee training as a means of improving an organization and making it more cost-effective. It defines the different types of training, including technical, literal, video, and other types of training used to fulfill the needs of both employer and employee.

Akshara (2003): An effective training system would integrate several different processes in order to achieve the objective of a proper training. The first step in any sort of training would be identifying the desired level of knowledge in a measurable form. The next step would be listing out the various qualifications or competencies necessary for taking part in any training system to produce the desired results. After this the trainee would have to undertake the necessary research steps by sourcing materials and other requirements for the training method to function at its best.

Chamy (2004): This paper reports on a study to verify whether training can help organizations and uses a questionnaire to collect empirical data. The author points out that the survey will help identify specific benefits and trends because organizations, like people, have their own individuality and style, and no blue print can be considered a universal fit for all organizations. The paper relates that replacing a skilled and trained employee can be very expensive for an organization in terms of time and money; therefore, organizations are increasingly using training and higher education options in their benefits packages to obtain and retain talent in the organization.

Gulathi (2005): This paper is about employee training and development. It uses a five-step process to develop the appropriate training program that includes training needs assessment; creation of training materials; the training medium (internal, external); the implementation, and an evaluation plan to determine the effectiveness of the training.

Ashwanthi (2006): This paper looks at the methods of and motivation for employee training in the service industries, such as hotels and restaurants. The paper begins with an exhaustive overview of the term training, including a detailed recitation of Carter McNamara's six-point rationale for training in "Employee Training and Development: Reasons and Benefits." The author also provides background information about the importance of good trainers and training techniques.

STATEMENT OF THE PROBLEM

The management of SMEs has been identifying the impact of the training program on the performance and productivity as well as in identifying the best method of training, which enhances the job efficiency, and skills of employees. The management was dubious about the satisfaction level of employees towards the training program.

OBJECTIVES OF THE STUDY

- To analyse the training need of the executives
- To provide them the best Training needs.
- To analyse the changes of executives technical, skill and knowledge.

SCOPE OF THE STUDY

- The training will be done to improve the knowledge, skills and attitude of every individual.
- Training is a learning experience that seeks a relatively permanent change in individuals that improve their ability to perform the job.

RESEARCH METHODOLOGY

The Research Design used here in this project is descriptive research design. This research has definite set of universe and the sampling design used in the study is Random sampling. The sample size is 50. The primary data are those which are collected freshly and for the first time and thus happen to be original in character. The secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. Simple percentage analysis is used for data analysis of the study.

DATA ANALYSIS AND INTERPRETATION**TABLE NO. 1: INTEREST TO ATTEND TRAINING**

Opinion	No. of respondents	Percentage
Agree	30	60
Disagree	20	40
Total	50	100

Source: Primary Data

The above table shows that most of the respondents (60%) are interesting to attend the training programmes in their companies and remaining 40% of the respondents are not interesting to attend the training programmes in their companies.

TABLE NO. 2: TRAINING IMPROVES SELF-CONFIDENCE

Opinion	No. of respondents	Percentage
Agree	35	70
Disagree	15	30
Total	50	100

Source: Primary Data

The above table shows that majority of the respondents (70%) are agreed that the training programmes are improving their self-confidence, and only 30% of the respondents are disagreed that the training programmes are improving their self-confidence.

TABLE NO. 3: TRAINING DEVELOPS KNOWLEDGE, SKILLS AND ATTITUDE

Opinion	No. of respondents	Percentage
Agree	30	60
Disagree	20	40
Total	50	100

Source: Primary Data

The above table shows that most of the respondents (60%) agreed that their knowledge, skills and attitude are improving through training programmes, and only 40% of the respondents disagreed that knowledge, skills and attitude are improving through training programmes.

TABLE NO. 4: SUPERIOR'S MOTIVATION

Opinion	No. of respondents	Percentage
Agree	25	50
Disagree	25	50
Total	50	100

Source: Primary Data

Out of 50 respondents, 50% of respondents agreed and disagreed that the superiors are motivating the subordinates to attend the training programmes.

TABLE NO. 5: SUPERIORS NOMINATE TO ATTEND WHAT THE SUBORDINATES NEED

Opinion	No. of respondents	Percentage
Agree	20	40
Disagree	25	50
Neutral	5	10
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, majority of respondents (50%) disagreed that the superiors nominate to attend the training what subordinates need, 40% of the respondents agreed that the superiors nominate to attend the training what subordinates need, and remaining 10% of the respondents neutral i.e., neither agreed not disagreed that the superiors nominate to attend the training what subordinates need.

TABLE NO. 6: TRAINING HELPS TO DO JOB BETTER

Opinion	No. of respondents	Percentage
Agree	30	60
Disagree	20	40
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, 60% of respondents agreed that training helps subordinates to do the job better, and 40% of respondents disagreed that training helps subordinates to do the job better.

TABLE NO. 7: EXECUTIVES ARE ATTENDING ALL TRAINING PROGRAMMES

Opinion	No. of respondents	Percentage
Strongly Agree	15	30
Agree	25	50
Neutral	3	6
Disagree	2	4
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, majority of the respondents (50%) agreed that the executives are permitting to attend all kinds of training programmes in the company, 30% of the respondents strongly agreed that the executives are permitting to attend all kinds of training programmes in the company, 10% of the respondents agreed that the executives are permitting to attend all kinds of training programmes in the company, 6% of the respondents neutral i.e., neither agreed nor disagreed that the executives are permitting to attend all kinds of training programmes in the company, 4% of the respondents disagreed that the executives are permitting to attend all kinds of training programmes in the company

TABLE NO. 8: COMPANY PROVIDES WHAT SUBORDINATES EXPECT

Opinion	No. of respondents	Percentage
Strongly Agree	15	30
Agree	30	60
Neutral	5	10
Total	50	100

Source: Primary Data

The above table shows that most of the respondents (60%) agreed that their company provides what the subordinates expect, 30% of the respondents strongly agreed that their company provides what the subordinates expect, and remaining 10% of the respondents neutral i.e., neither agreed nor disagreed that their company provides what the subordinates expect.

TABLE NO. 9: TRAINING WHICH SUBORDINATES PREFER

Opinion	No. of respondents	Percentage
Technical skills	35	70
Behavioral skills	10	20
Knowledge sharing	5	10
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, 70% of the respondents prefer technical skills, 20% of the respondents prefer behavioral skills, and only 10% of the respondents prefer knowledge sharing.

TABLE NO. 10: RATING FOR TRAINING PROGRAMME

Opinion	No. of respondents	Percentage
Very high	15	30
High	30	60
Average	5	10
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, majority of the respondents (60%) are given high rating to the training programmes, and 30% of the respondents are given very high rating to the training programmes and only 10% of the respondents are given average rating to the training programmes which is offered by their companies.

TABLE NO. 11: EFFECTIVENESS OF TRAINING ANALYSIS

Opinion	No. of respondents	Percentage
3 Months	30	60
6 Months	15	30
1 Year	5	10
Total	50	100

Source: Primary Data

The above table shows that out of 50 respondents, most of the respondents (60%) prefer that training effectiveness of training program should be analyzed once in 3 months, 30% of the respondents prefer that training effectiveness of training program should be analyzed once in 6 months, and only 10% of the respondents prefer that training effectiveness of training program should be analyzed once in 1 year.

FINDINGS

This study shows positive response towards training needs for executives in small and medium enterprises at Salem district. Because most of respondents are interesting to attend the training, they believe that their self-confidence, knowledge, skill, and attitude are improving and developing through these training programmes. But most of the superiors do not nominate their subordinates to attend these training programmes. Most of the respondents are requiring technical skills oriented training programmes in the company and also these training programmes should be effectively analyze once in 3 months.

SUGGESTIONS

- Executive can be nominated for the training program only from the need identified list.
- Training programs can be organised with a focus of future needs and challenging commitments.
- Training has to be provided whenever there is change in technology.
- Executives can be guided to select the training program what they need.
- Executives are finding difficult to attend the training program because of their work schedule so, Company can allot timings for training programs separately.
- Executives can be communicated well in advance.

CONCLUSION

From this study, it can be concluded that there is a very good analysis team regularly carrying out the need whenever there is a change in technological advancements. Many of the executives are given their opinion that training need analysis helps in identifying their needs and it also helps in improving the soft skills. This study shows that the training need analysis carried out by the SMEs seemed to be good and they should continue their analysis with some changes, so that it helps the SMEs to achieve the mission.

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NONFINANCIAL REWARD SYSTEM IN NIGERIAN PUBLIC AND PRIVATE ORGANISATIONS

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ABSTRACT

Budgetary constraints and government policy led organisations to introduce nonfinancial rewards in order to boost productivity and retain employees. This paper surveys nonfinancial rewards from related literature and identified those nonfinancial rewards in common use in Nigerian organisations. The organisations surveyed included banks, educational and health institutions as well as local government secretariats around Zaria. The paper found that flexitime, life assurance, and Friday drinks were not in use in the organisations surveyed. The study observed that monetisation exercise in public sector had adversely affected the morale of public servants who felt that they were buying and maintaining official vehicles for their organisations. The paper recommends regular review of nonfinancial rewards to avoid the current situation where employees consider them as their rights rather than incentives to boost productivity.

KEYWORDS

nonfinancial rewards, incentives, motivation, organisations.

1. INTRODUCTION

rganisations consist of different people with different socio-economic backgrounds. The more their backgrounds differ, the greater the complexity of their innate desires and what influences their behaviours and performance in organisations. For instance, there are some individuals who are self-motivated in organisations because of the personal interest they have in the work they do. Such people derive pride in being able to do their work well and in the minimum amount of time. Unfortunately, a typical organisation rarely finds such individuals constituting any significant proportion of its workforce. This means that the bulk of the employees need some push to perform the task assigned to them. That is, they need incentives to make them work hard and be efficient. They also need rewards not only to sustain the level of performance they have attained but also to improve on it. It follows therefore that the bulk of the organisations' employees must be induced before they can minimize avoidable delays, adhere to prescribed methods of work, and maintain a satisfactory level of performance. This set of circumstances creates a certain kind of environment in most organisations. The environment is such that unless the managements motivate the employees the labour productivity will fall below expected level even when concerted efforts are made to recruit personnel with requisite skills for the jobs.

1.1. METHODOLOGY

This paper compiled various nonfinancial rewards from related literature and carried out surveys on existing nonfinancial rewards in public and private sector organisations in Zaria. The survey covered banks, educational and health institutions as well as Local Government Secretariats around Zaria. The survey was carried out to enable the investigator to obtain some data on the different types of nonfinancial rewards in vogue in the various organisations.

1.2 OBJECTIVE

The main objective of the paper is to ascertain the degree of use of nonfinancial incentives in selected public and private sector organisations in Zaria. Other objectives include attempts to establish the efficacy or otherwise of nonfinancial reward system in boosting and sustaining productivity in sampled organisations.

2. EMPLOYEE MOTIVATION

The desire for recognition and the improved status it brings appears universal regardless of age, position, education, tribe, and race. Recognition must be sincere and based on above-average performance, or it will not be appreciated by the recipient and will be resented by others. The degree to which recognition serves as a motivational stimulant varies considerably among individuals. A verbal praise of subordinates after successful completion of a task can motivate him for continuous successful completion of tasks. This positive reinforcement is a straightforward way of increasing desired behaviour and is widely used by managers. Therefore, unlike monetary rewards which are limited to salary increases, profit sharing, and paid time-off, nonfinancial rewards are numerous and evolving according to changes in societal values. Also monetary benefits are generally tied to productivity whereas non-monetary incentives may only involve change in working tools, such as replacing typewriter with computer, which could make the worker perform better and generate more revenue and profit for the organisation without direct benefit to the employee.

Mayo (1933) and Roethlisberger (1939) asserted that workers' dissatisfaction with financial incentive schemes reached its peak in the 1930s. It was therefore suggested that workers, rather than managers, should take responsibility for quality, take control over the speed of work, interact and cooperate while tasks are varied to avoid monotony.

Job enrichment, job enlargement, team work and employee empowerment by allowing workers to control their time and decide the priority task that need to be done are a few examples of non-monetary rewards. Mossbarger and Eddington (2003) consider nonfinancial rewards to be those rewards that motivate employees for their creative and intellectual ability. They then opine that "goal setting, communication, autonomy, responsibility, and flexibility" which are basic ingredients for productivity improvement are nonfinancial rewards. Riley (2010) considers attachment of staff to other organisations as nonfinancial incentives. Other researchers (Worman 2010, Throckmorton n.d, GNE 2011, Woods 1997, Muir n.d, and Hewlett 2012) have identified several nonfinancial incentives at the disposal of managers. Worman (2010) lists 20 nonfinancial ways available to managers for motivating their subordinates and they include training, one-on-one coaching, applause, career path, job titles, good work environment, leadership roles, on-the-spot praise, team spirit and social gatherings. Others are executive recognition, casual dressing, time-off, outside seminars, additional responsibility, stress management and literary contest, pizza, and gimmicks. Similarly, Throckmorton (n.d) lists 18 different ways of recognition and rewards while GNE (2011) lists 51 different nonfinancial rewards available to managers for motivating their employees. They include a reserved parking spot, use of President's office for a day, a vacation day, buying them ticket to a concert, allow them to be flexible with their hours, give them a new/improved job title, allow them to dress casually on Fridays, a public thank you, etc. Silverman (2004) suggests that employees may be given a chance to enjoy a "present" away from office such as travel vouchers, meals for the employees and partners, theatre tickets, etc. McAdams (1995) posits that honorary and informal recognition can be powerful tools for promoting organisational and team goals and objects. Many workers consider company car, free private medical care, free pension entitlement, bigger budget to control and choice of where to be posted in an organisation as nonfinancial rewards that are very cost-effective.

In the employment cycle, nonfinancial benefits are rewards to a worker other than extra pay. Worman (2010) asserts that it is a costly mistake to get lost in the false theory that more money equals happy employees. Collaborating with Worman, Mossbarger and Eddington (2003) opine that although financial rewards are varied according to the situation and money available to an organization, money is not the best motivator because the motivational effect of most financial

rewards does not last. They conclude that effective motivation is only achieved by using both financial and nonfinancial motivational tools. In this wise, Riley (2010) cites free shares offered to staff and attending fair trade coffee plantation by managers at Starbucks of UK as two examples of nonfinancial incentives. Other available benefits according to Charnock (2011) include tax equalisation, and private expenses.

3. ADVANTAGES OF NONFINANCIAL REWARDS

NGFL (2008) compares monetary and nonfinancial rewards in terms of their impact upon employees by observing that monetary rewards directly involve financial benefits to the workers while nonfinancial rewards provide the workers with psychological benefits. These psychological benefits may be in a form of memorable experiences as asserted by Vecchi (2011). According to Vecchi, "a travel reward brings new memories that can last a lifetime and bring about good feelings connected with the company for years to come." Dewhurst, Guthridge and Mohr (2009) note that nonfinancial ways to motivate employees may require a great deal of time and commitment from senior managers in organisations in order to have meaningful impact. Since their importance cannot be overstressed, it is imperative that non-monetary rewards should form one important part of a complete employee recognition programme along with monetary rewards because each employee may be motivated by different factor or a combination of factors. It follows that non-monetary rewards can be used for either individual or team rewards for obvious advantages.

Akyeampong (1993) explains that in Canada, there is flexible work arrangement which varies within certain limits from the beginning to the end of the workday. He observes that such work arrangements are easier to implement in personal services than in manufacturing although the flexibility hours is outside core working hours that the employee must be present. He also distinguishes between formal and informal flexitime arrangement such that the latter involves detailed formal documentation while the former only requires supervisor's endorsement and in either way they could accumulate extra work hours and use them as their leave later. It can be seen that the main objective of flexitime is to give people choice about their actual working hours outside certain agreed core times regarding their starting time, break periods and closing hours so as to reduce absenteeism.

Sammer (2011) observes that nonfinancial rewards become more visible during difficult times and they are sustained after economic conditions have improved. This implies that although nonfinancial rewards are privileges, they tend to be part of what employees see as their rights. It may therefore be necessary for organisations to make nonfinancial scheme a very dynamic programme by replacing some existing incentives with new ones from time-to-time. This will create a more fair impression to employees and continuously challenge them to work towards enjoying current nonfinancial rewards.

One important challenge facing many managers is the inability to appreciate that nonfinancial rewards have the capacity to motivate employee as much as monetary incentives. Managers tend to skew towards the traditional managerial wisdom that money is what really counts in motivating employees including them. In addition, many managers believe that nonfinancial rewards require more time and commitment from senior managers.

Pointing out some advantages associated with nonfinancial rewards, Ryan (2009) asserts that nonfinancial rewards can be very cost-effective for companies because, in contrast with a pay increase, little or no income tax or national insurance contributions are paid. She however observes that there is no any strong empirical evidence comparing the relative benefits of monetary versus non-monetary rewards. Thus, she only considers non-monetary rewards as part of comprehensive performance improvement strategy rather than a better alternative for motivating employees. Despite the dearth of empirical evidence indicated by Ryan, Scott (2013) asserts that nonfinancial rewards can have more substantial impact on employee satisfaction and motivation than traditional financial rewards. His claim is based on the outcome of a study carried out by the Hay Group. Some findings of the study were that many employees left their jobs because of "work climate, career development, recognition and other nonfinancial issues." However, Comeskey (2010) argues that nonfinancial rewards bring back tangible link by making employees "feeling involved" because financial rewards usually get eroded by mortgage, rent, utilities and other direct and automatic payments from their bank accounts. But he points out that nonfinancial reward may create jealousy and disharmony.

Emphasising the relevance of nonfinancial rewards in organisations, Scarpati (2008) asserts that nonfinancial rewards serve as better indicators of future financial performance of organisations even though there is no common denominator, time, quantities, percentage for measuring what is purported to represent. This means that nonfinancial rewards are arbitrary ways without statistical means of measuring their impact in organisational growth and development.

4. NONFINANCIAL REWARDS IN NIGERIA

Nonfinancial rewards may differ according to organisation, country or even region. It may also differ according to employee cadre and position whereby what motivates an employee in an executive cadre may differ from another employee of the officer cadre even when they are both on the same grade level. This study established that parking space, office size, training, job titles, leadership roles, social gathering, casual dressing day, outside seminars, free-gifts, official vehicle and free medical care are commonly used as motivational factors in both public and private organisations in Nigeria.

Among the nonfinancial rewards used in Nigeria, parking space appears to be the most common nonfinancial motivator. For instance, in higher institutions of learning like the Ahmadu Bello University (ABU) Zaria, professors have designated parking spaces at the Faculty of Education in the same manner that the university principal officers have parking sheds at the Senate Building. Virtually all directors and heads of units in the ministries and parastatals also have reserved parking spaces. There is no doubt that lecturers aspire to become professors and workers look forward to the days they will become at least heads of units in order to enjoy reserved parking spaces. In private organizations like banks, the staff have secluded and fully secured parking sheds that no customers can access let alone park their vehicles.

It is also observed that official staff quarters and cars are used as nonfinancial benefits by both public and private organizations in Nigeria. For example, the size and location of staff quarters are used as status symbols; and they can motivate employees to put in their best for the organizational growth. Organisations that provide housing to their staff go further to designate them as senior and junior staff quarters. Junior employees work harder to earn promotion which will qualify them for senior staff quarters. Similarly, many organisations provide official cars to certain categories of their staff in order to motivate them to perform at their best. The cars are distinguished by brand and/or model to represent seniority with the latest model allocated to top management staff.

Staff training also serves as nonfinancial reward in Nigerian organisations. Most organizations reserve overseas training and seminars for management staff but a few others extend it to all senior staff. Because junior staff and middle level management in some organisations go for local training and seminars, they work hard to get regular promotion in order to rise to management level so that they can qualify to attend overseas training and seminars. Similar privileges are also available in form of Sabbatical leave in the universities where lecturers below the rank of Senior Lecturer in many universities do not qualify to enjoy Sabbatical leave.

Retreat has become very popular in the recent past. Both public and private organizations now include retreats in their annual programmes. Because most retreats take place outside the station of workers, they serve not only as opportunities to review past performance and plan for future activities but also they serve as stress management strategy. Workers feel motivated when they are nominated to attend retreats. In most public sector organisations, junior staff are not entitled to go for retreat. Many of them are disgruntled because they feel neglected. Retreats are differentiated for different categories of management staff by location, contents and organisers. While top management may have their retreats locally or overseas, middle-level management only attend retreats locally.

Casual dress day is another emerging nonfinancial benefit employees hardly miss. In the private sector especially in banks, Fridays are casual dress days. Bankers are happy wearing their traditional dress to come to work. In fact, even those bankers who put on English dresses appear casual with no tie, wearing jeans and without tucking-in their shirts. Visitors to banks could see how natural bankers look when they do not observe corporate dress code.

Although not officially declared, Fridays are regarded as "half-day" in public service of Nigeria. It is the day that many public servants go to work later than the official reporting time without receiving queries from their superiors. Workers may also close earlier than the official closing time.

The official cars which used to serve as motivational tools for senior (middle management) staff before the introduction of monetisation policy are now the exclusive preserve of the management staff. Similarly, the free medical care which was very popular before the introduction of the National Health Insurance Scheme (NHIS) has also ceased.

Free medical care was generally offered to staff in both public and private sector organisations. Workers with their spouses and a maximum of four children or other dependents were entitled to free medical care throughout their working life. Free medical facility had been a source of motivation for workers in many respects. Apart from guaranteed quality medical service, free medical care enables workers to save money they would otherwise spend on medication. The organisations were also deriving some benefit from the scheme since the employees were never spending hours in the queues before getting medical attention. Size of office furniture can also be used as nonfinancial incentives. Many workers can be motivated by the sizes of their offices and the types of furniture put in the offices. This study observed that top management staff of government parastatals are motivated by large offices furnished with glass top tables and leather seats. On the other hand, bankers are motivated by glass offices, cute tables and fancy chairs. Other workers associate sizes of tables with the status of the employees.

A number of organizations use free gifts and social gathering to motivate their staff for superior performance. Many organisations present birthday gifts like sets of tea cups/glasses, branded toiletries, and customized diaries to their staff. Some organisations give meal tickets of standard restaurants to their staff while others set up full-fledged restaurants exclusively for their staff. In both public and private sectors, long-service awards are common for employees that have served for 10 or more years in the organisations. Workers who receive the awards are usually happy to note that their loyalty has been recognised. Other workers feel a great sense of belonging during end of year party, send forth party, staff wedding and similar gatherings where every worker is free to attend.

It is a fact of organizational life that most workers aspire for leadership positions. In order to motivate workers through leadership positions, many organizations create different leadership positions in addition to those existing in the formal structure. This provides opportunities for organizations to assign leadership positions to hard working employees for the purpose of motivating them to work harder. In order to meet the yearning of members with strong disposition towards leadership position, some organisations create ad hoc committees and assigned some non-management staff to chair them. These chairmen may be leaders of project teams, or policy implementation group. Most workers put in their best as leaders in order not to fail. Typical example is a lecturer appointed to lead his colleagues to develop new course programme for consideration by the university senate.

There are other status symbols in common use in both private and public sector organisations. For example, plaques and certificates of honour are usually displayed by their recipients in offices and sitting rooms (parlours) in their houses.

5. CONCLUSIONS

From the interactions with staff and management of some of the organisations visited, it was discovered that some of the popular nonfinancial rewards are not used in any of the organisations studied. For example, "time-off" and "flexitime" do not exist in the organisations that the researcher visited. The study observed that monetisation exercise in public sector has adversely affected the morale of public servants. This is because monetisation of free medical care, official cars and staff quarters makes employees to feel as if they are using their personal income to buy and maintain official cars for the organisations. They also perceive monetisation as a renege on the part of organisations to provide medical care and official quarters for them. It is therefore proving difficult for senior civil servants to sustain their living standards before monetisation. This shows that nonfinancial rewards play a great role in motivating employees in Nigerian organisations.

The paper recommends regular review of nonfinancial rewards to avoid the current situation where employees consider them as their rights rather than incentives to boost productivity. The paper also recommends that the Government should reconsider its monetisation policy on housing which is not favourable to the new entrants into the civil service. The Government should make annual budgetary provisions for the building of new houses to be sold to the young graduates who will be replacing the retiring/outgoing civil servants since the available staff quarters have already been sold to the occupants.

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WORKING CAPITAL EFFICIENCY AND CORPORATE PROFITABILITY: EMPIRICAL EVIDENCE FROM INDIAN AUTOMOBILE INDUSTRY

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ABSTRACT

Working capital and its satisfactory provision can lead not only to material savings in the economical use of capital but can also assist in furthering the ultimate aim of a business that of maximizing financial returns on the minimum amount of capital which need to be employed. Hence, the purpose of the present study is to examine the working capital efficiency of Indian Automobile industry by comparison of holding period of different components of working capital. The empirical evidence revealed that two and three wheeler sector was efficient in utilization of working capital components as compared to commercial vehicles sector and passenger cars and multi utility vehicles sector. Consider all the average periods together, it can be seem that cash conversion cycle is negative in the whole Indian Automobile industry which is explained by short storage times of its inventory and receivables

KEYWORDS

working capital, profitability, cash conversion cycle, inventory holding period, receivable period, receivables holding period, auto mobile industry.

INTRODUCTION

Developing economies are confronted with the problem of inefficient utilization of resources available to them. Capital is the limited productive resources promotes the rate of growth, cuts down the cost of production and above all improves the efficiency of the productive system. Total capital of a country comprises fixed capital and working capital. Fixed capital investment generates production capacity where as working capital makes the utilization of that capacity where as working capital makes the utilization of that capacity possible. Thus, the study of working capital occupies an important place in financial management. Funds are needed in every business for carrying on day-to-day operations. Working capital funds are regarded as the life-blood of business units. A firm can exist and survive without making profit but can't survive without working capital funds. If a firm is not earning profit it may be termed as 'sick', but not having working capital may cause it bankruptcy and closure over a period of time. In addition, working capital has acquired great significance and sound positions for the twin objects of 'profitability and liquidity'. It consumes great deal of time to increase profitability as well as to maintain proper liquidity at minimum risk. **Leslie R.Howard** rightly pointed out that a deeper understanding of the importance of working capital and its satisfactory provision can lead not only to material savings in the economical use of capital but can also assist in furthering the ultimate aim of a business, namely, that of maximizing financial returns on the minimum amount of capital which need to be employed. Viewed in this perspective, the analysis of working capital efficiency may be a very rewarding one.

PROBLEM STATEMENT

Importance of working capital management stems from two reasons viz., a substantial portion of total invested in current assets and level of current assets and current liabilities will change quickly with the variation in sales. Hence, the purpose of the present part of analysis is to examine the issues how large is the investment in working capital and its various components, how the quality of current assets has evolved over time, and whether working capital and its various components have been utilized efficiently by the selected Indian automobile companies during the period under study. The working capital efficiency of an enterprise should be evaluated by comparison of holding period of different components of working capital. The holding period of different components of working capital of the selected three sectors, individual companies and the whole automobile industry during the study period has been computed and presented in Table 1 to Table 4.

SAMPLING SELECTION

Keeping in view the scope of the study, it is decided to include all the companies under automobile industry working before or from the year 1996-97 to 2008-09. There are 26 companies operating in the Indian automobile industry. But, owing to several constraints such as non-availability of financial statements or non-working of a company in a particular year etc., it is compelled to restrict the number of sample companies to 20. Out of 20 selected companies under Indian Automobile Industry, three Multinational Companies (MNC's) namely Hyundai Motors India Ltd, Honda Siel Cars India Ltd and Ford India Private Ltd were omitted because these companies established their operations in India in different accounting years. The companies under automobile industry are classified into three sectors namely; Commercial vehicles, Passenger cars and Multi-utility vehicles and Two and three wheelers. For the purpose of the study all the three sectors have been selected. It accounts for 73.23 per cent of the total companies available in the Indian automobile industry. The selected 20 companies include 5 under commercial vehicles, 3 under passenger cars and multi-utility vehicles and 9 under two and three wheeler sectors. It is inferred that sample company represents 98.74 percentage of market share in commercial vehicles, 79.76 percentage of market share in passenger cars and Multi-utility vehicles and 99.81 percentage of market share in two and three wheelers. Thus, the findings based on the occurrence of such representative sample may be presumed to be true representative of automobile industry in the country.

METHODS OF DATA COLLECTION

The study is mainly based on secondary data. The major source of data analyzed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). Besides prowess database, relevant secondary data have also been collected from BSE Stock Exchange Official Directory, CMIE Publications, Annual Survey of Industry, Business newspapers, Reports on Currency and Finance, Libraries of various Research Institutions, through Internet etc.

DATA ANALYSIS

The financial and statistical analysis approach plays a vital role in the financial environment. To enjoy the benefit of financial and statistical analysis researcher has collected, assembled and correlated the data, classified the data appropriately and condensed them in to a related data series; stated the resultant information in a comprehensive form, text, tables and analyzed and interpreted the reported data. It is well known that management is concerned with assets utilization towards profitability performance. For this purpose it has to study certain specific ratios which are concerned with working capital of the enterprises. For the purpose of this study, ratios namely, Raw material period, work-in-holding period, finished goods holding period, inventory holding period, receivables holding period, payables holding period and cash conversion cycle has been used. The role of statistical tools is important in analyzing the data and drawing inferences there from. In order to derive the open handed results from the information collected through secondary data, various statistical tools like mean, standard deviation, variance, compound annual growth rate, t-test ANOVA, and factor analysis have been used to interpret the sense of mathematical relationship amongst values of different variables so computed in the study.

RAW MATERIALS HOLDING PERIOD

It is evident from the Table 1 that the lowest average raw material holding period was 26 days for two and three wheelers sector, followed by commercial vehicles (34 days) and passenger cars and multiutility vehicles (38 days), as against 53 days for whole automobile industry. Further, this period registered very high fluctuations throughout the study period. Further, all selected sectors and whole automobile industry registered negative growth rate which showed efficient utilization of raw materials by the selected companies. It varies from 26 days to 83 days for commercial vehicles sector companies, 18 days to 75 days for passenger cars and multiutility vehicles sector companies and 18 days to 141 days for two and three wheelers sectors. All the selected companies except LML Ltd, Maharashtra Scooters Ltd, TVS Motor Company Ltd, Kinetic Motor Company Ltd and Kinetic Engineering Ltd under two and three wheelers sector showed improved performance in this regard (Table 2 to Table 4).

The results of analysis of variance presented in Table 5 showed that differences in the mean raw materials holding period were significant between the companies and between the years in commercial vehicle sector as the calculated value of F were more than the table value of F at 5 per cent level of significance. Hence, the null hypothesis was rejected. However, no such significant difference was observed between the years in the case of passenger cars and multiutility vehicles sector and two and three wheelers sector.

WORKING-IN-PROGRESS HOLDING PERIOD

Table 1 demonstrated that the average work-in-progress holding period was lowest in two and three wheelers sector and passenger cars and multiutility vehicles sector (4 days) followed by commercial vehicles sector (10 days), as against 30 days for whole Indian automobile industry. WIP holding period registered very high fluctuations and negative compound annual growth rate in all the three sectors of Indian automobile industry. Among the commercial vehicles sector companies, it ranged between 3 days to 16 days, 1 day to 11 days for passenger cars and multiutility vehicles sector and 2 days to 17 days for two and three wheelers sector companies during the study period. Majority of the selected companies WIP holding period were significantly differ from sector mean and industry mean. All the selected companies except Bajaj Tempo Ltd, Eicher Motors Ltd and Swaraj Mazda Ltd under commercial vehicles, Ford India Private Ltd under passenger cars and multiutility vehicles sector and LML Ltd, Maharashtra Scooters Ltd, Kinetic Motors Company Ltd, Kinetic Engineering Ltd, Majestic Auto Ltd and Scooters India Ltd under two and three wheelers sector registered improved performance with regard to WIP holding period.

Table 5 represents that the differences in the WIP holding period were significant in between the sectors and the years during the study period. It is also evident from the table that WIP holding period were significant in between the companies and the years in commercial vehicles and two and three wheelers sector. However, in case of passenger cars and multiutility vehicles sector, these holding period were insignificant between the years.

FINISHED GOODS HOLDING PERIOD

This indicates how quickly a company is turning over its finished goods. When deciding the appropriate level of finished goods, a company should strike a balance between the cost of tying up capital and the demands from the customers. Generally, short finished goods holding period is preferred. An unreasonably long inventory holding period may indicate an economic recession, obsolete inventory, poor sales and marketing, a change of customer taste or bad inventory management. It is evident from the Table 42 that two and three wheeler sector had shorter mean finished goods holding period (8 days), followed by passenger cars and multiutility vehicles sector (11 days), commercial vehicles sector (19 days), as against 14 days for whole Indian automobile industry. It ranged between 11 days to 30 days for commercial vehicles sector, 5 days to 29 days for passenger cars and multiutility vehicles sector and 3 days to 33 days for two and three wheelers sector during the study period. The finished goods holding period of all the selected companies registered very high fluctuations during the study period. Majority of the selected passenger cars and multiutility vehicles companies and two and three wheeler sector companies showed better performance in this regard when compared to commercial vehicle sector companies.

The results of analysis of variance presented in Table 5 showed that the differences between finished goods holding period were significant in between the companies and the years in case of commercial vehicles and two and three wheelers sector as the calculated value of F exceeds the table value of F at 5 per cent level of significance. However, such a significant differences was not observed in between the years in passenger cars and multiutility vehicles sector during the study period.

RECEIVABLES HOLDING PERIOD

This ratio measures a company's ability to collect cash from its credit customers. Most companies offer their customers credit in order to boost their sales. However, there are opportunity costs in holding cash for financing receivables and there is also the risk of bad debts. A long receivables collection period may be an indication of worsening credit control. Receivables holding period of all three selected sectors, individual companies and the whole automobile industry were computed and presented in Table 1 to Table 4. Table 1 indicated that the mean receivables collection period was the lowest in two and three wheelers sector (16 days), when compared to 22 days for passenger cars and multiutility vehicles sector and 45 days for commercial vehicles sector as against 35 days for whole Indian automobile industry. It ranged between 28 days to 74 days for commercial vehicles sector companies (Table 2), 8 days to 35 days for passenger cars and multiutility vehicles sector companies (Table 3) and 7 days to 107 days for two and three wheelers sector companies (Table 4) during the study period. All the selected companies registered very high fluctuations in this ratio during the study period. This was due to the differences among the credit and collection policy adopted by the respective companies.

Table 5 refers that the differences in the receivables holding period was significant in between the companies and insignificant between the years in commercial vehicles and two and three wheelers sector as per the calculated value of F. However, in case of passenger cars and multiutility vehicles sector, these ratio were significant both between the companies and between the years as the calculated value of F exceeds the table value of F at 5 per cent level of significance.

PAYABLES PAYMENT PERIOD

This ratio links the value of accounts payables with the amount of goods and services that a company is purchasing on credit. If the payables payment period is short, creditors are being paid relatively early. However, if the payables payment period is too long, the company may have liquidity problems; this can also be harmful to its relationship with suppliers. The payables payment period were computed for all the selected companies, sectors and whole Indian automobile industry and presented in Table 1 to Table 4. Table 1 explaining a fluctuating trend in the payables payment period of the selected sectors and individual companies of the Indian automobile industry. The average payables payment period was the lowest in passenger cars and multiutility vehicles sector (59 days), followed by two and three wheelers (61 days) and commercial vehicles sector (96 days), as against 158 days for whole Indian automobile industry. The company wise analysis revealed that the mean payables payment period ranged between 61 days to 104 days in commercial vehicles sector, 21 days to 86 days in passenger cars and multiutility vehicles and 40 days to 210 days in two and three wheelers sector companies during the study period. Majority of the selected companies mean payables payment periods were significantly differ from the sector mean and industry mean.

Table 5 showed that the differences in the payables payment period between the sector, between the companies under commercial vehicles sector and two and three wheelers sector were significant and insignificant between the years. However, the payables holding period between the companies and the year were insignificant in passenger cars and multiutility vehicles sector because the calculated value of F is lower than the table value of F.

CASH CONVERSION CYCLE (CCC)

The cash conversion cycle period of all the selected companies, three sectors and the whole automobile industry were computed and presented in Table 1 to Table 4. It is evident from the Table 1 that the lowest mean value of the CCC is found in the two and three wheelers sector with an average of 7 days, followed by the commercial vehicles sector (13 days) and two and three wheelers sector (17 days), as against 28 days for whole Indian automobile industry. Considering all the average periods together, it can be seen that the cash conversion cycle is negative in two and three wheelers sector and the whole Indian automobile industry. This is explained by the short storage times of its inventory and receivables. Further, cash conversion cycle period ranged between -8 days to 95 days in commercial vehicles sector companies, 13 days to 48 days in passenger cars and multiutility vehicles sector companies and -4 days to 125 days in two and three wheelers sector companies during the study period. Further, tables reveal that there was an erratic fluctuation noticed in cash conversion cycle period in all the selected companies. Further, all the companies mean cash conversion cycle period was significantly differ from the sector mean and industry mean.

It can be seen from the results of analysis of variance presented in Table 5 that the differences in the cash conversion cycle period in between the companies and between the years were significant in commercial vehicles sector and two and three wheelers sector. But such significant differences were not found between the companies and between the years in passenger cars and multiutility vehicles sector during the study period.

On the whole it can be concluded that two and three wheelers sector was efficient in utilization of working capital components as compared to commercial vehicles sector and passenger cars and multiutility vehicles sector. Among the individual companies, Tata Motors Ltd under commercial vehicles sector and LML Ltd, Maharashtra Scooters Ltd, TVS Motor Company Ltd and Hero Honda Motors Ltd under two and three wheelers sector were efficient in managing their working capital during the study period.

WORKING CAPITAL- FACTOR ANALYSIS

Holding period of different components of working capital such as raw materials, work-in-Progress, finished goods, receivables and payables have been considered for the study to analyze the working capital management efficiency to selected Indian automobile companies during the period under study. In order to disclose which among these factors contribute much towards working capital efficiency, factor analysis has been done. Table 6 showed that the principal component analysis and varimax rotation results for whole industry and all the three sectors. In whole industry, raw materials, WIP, finished goods and receivables holding period were cluster together as Factor I and accounts 40.818 per cent of the total variations and payables holding period describes as Factor II which accounts 21.065 per cent of the total variations. Both these factor explain 61.883 per cent of the total variations. WIP holding period and payables holding period are found to have a stronger relationship.

In commercial vehicles sector, two factors are identified by the rotation method and explained 71.175 per cent of total variations. Factor I consists of four variables such as raw materials, WIP, finished goods and receivables holding period and accounted for 49.722 per cent of total variations. The remaining variable such as payables holding period constituted as Factor II which accounts 21.453 per cent of the total variations. Raw materials holding period and finished goods holding period are found to have a stronger relationship. The same picture was reflected in passenger cars and multiutility vehicles sector, where by Factor I account 46.042 per cent and Factor II accounts 25.510 per cent of the total variations. Both these factors explained 71.552 per cent of the total variations. Further, raw materials holding period and WIP holding period are found to have a stronger relationship in passenger cars and multiutility vehicles sector.

In two and three wheelers sector also two factors are identified by the rotation method and accounts 78.844 per cent of the total variations. Raw materials WIP and payables holding period were clustered together as Factor I and accounts 54.329 percent of the total variations. Variables viz., finished goods and receivables holding periods are constituted as Factor II and accounts 24.515 per cent of the total variations. Stronger relationships between variables are noticed with regard to raw materials and payables holding period. Further, the results of KMO test and Bartlett's Test of sphericity (sig.0.000) confirms that factor analysis can be carried out appropriately for the variables selected for the study.

CONCLUSION

The working capital efficiency of the selected companies in the Indian automobile industry should be evaluated by comparison of holding period of different components of working capital. The analysis showed that two and three wheeler sectors were efficient in utilization of working capital components as compared to commercial vehicles sectors and passenger cars and multiutility vehicles sector. Among the individual companies, Tata Motors Ltd under commercial vehicles sector and LML Ltd, Maharashtra Scooters Ltd, TVS Motor Company Ltd and Hero Honda Motors Ltd under two and three wheeler sector were efficient in managing their working capital during the study period. The results of analysis of variance showed that there were significant differences in the different holding period between the companies during the study period. This was due to the differences among the inventory and credit and collection policy adopted by the respective companies. Considering all the average periods together, it can be seen that cash conversion cycle is negative in the whole Indian automobile industry. This is explained by short storage times of its inventory and receivables. Factor analysis demonstrated that all the components of working capital contributed much towards the efficiency of working capital management in all selected companies.

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TABLES

TABLE 1: STATISTICAL VALUES OF RATIOS RELATING TO THE WORKING CAPITAL (For the period 1996-97 to 2008-2009)

Particulars	Statistics	Commercial Vehicles	Passenger Cars and Multiutility Vehicles	Two and Three Wheelers	Industry Average
Raw Materials Holding period (in days)	Mean	34.37	38.19	25.58	52.67
	CV	0.38	0.42	0.36	0.32
	CAGR	-3.35	-10.13	-8.87	-2.63
	t Value	10.61*	5.71*	9.60*	
Work-In-Progress Holding Period (in days)	Mean	9.73	3.98	3.97	29.63
	CV	0.42	0.51	0.42	0.43
	CAGR	-6.93	-10.88	-10.54	-4.72
	t Value	7.30*	8.31*	8.16*	
Finished Goods Holding Period (in days)	Mean	19.00	11.04	8.13	14.04
	CV	0.29	0.10	0.15	0.18
	CAGR	4.07	0.86	-1.17	3.27
	t Value	3.58*	4.02*	9.00*	
Receivables Holding Period (in days)	Mean	45.27	22.34	16.39	34.66
	CV	0.77	0.29	0.34	0.42
	CAGR	-9.61	-0.48	-4.52	-6.61
	t Value	1.82**	3.61*	6.63*	
Payables Payment Period (in days)	Mean	95.59	58.99	60.64	158.34
	CV	0.18	0.13	0.15	0.13
	CAGR	3.80	-0.37	-3.59	2.61
	t Value	12.45*	16.93*	13.75*	
Cash Conversion Cycle (CCC) (in days)	Mean	12.79	16.57	-6.57	-27.34
	CV	4.40	1.19	1.60	1.72
	CAGR	-	-	11.92	-
	t Value	6.00*	4.81*	1.94**	

* - Significant at 5 per cent level

** - Significant at 10 per cent level

Source : Computed from the Annual Reports of the respective units.

TABLE 2: STATISTICAL VALUES OF RATIOS RELATING TO THE WORKING CAPITAL (Commercial vehicles: For the period 1996-97 to 2008-2009)

Particulars	Statistics	ALL	TML	BTL	EML	SML	Sector Average	Industry Average
Raw Materials Holding period (in days)	Mean	51.95	25.80	82.85	27.14	51.43	34.37	52.67
	CV	0.53	0.33	0.37	0.35	0.48	0.38	0.32
	CAGR	-3.74	-3.84	-2.87	-1.58	-2.83	-3.35	-2.63
	t Value ¹	4.33*	6.14*	9.07*	2.82*	4.64*		
	t Value ²	0.20	9.75*	6.88*	7.40*	0.42		
Work-In-Progress Holding Period (in days)	Mean	11.18	8.01	15.54	2.90	5.25	9.73	29.63
	CV	0.34	0.43	0.17	0.44	0.39	0.42	0.43
	CAGR	-4.52	-7.53	2.15	1.09	7.25	-6.93	-4.72
	t Value ¹	4.50*	5.50*	5.34*	6.60*	3.61*		
	t Value ²	6.64*	7.39*	4.56*	7.68*	6.94*		
Finished Goods Holding Period (in days)	Mean	29.54	19.45	27.24	11.02	29.13	19.00	14.04
	CV	0.34	0.40	0.42	0.53	0.43	0.29	0.18
	CAGR	3.77	1.81	3.39	11.07	-3.72	4.07	3.27
	t Value ¹	6.19*	0.48	4.07*	3.40*	2.92*		
	t Value ²	5.98*	2.82*	4.23*	1.71	4.12*		
Receivables Holding Period (in days)	Mean	73.28	37.31	28.20	31.16	74.24	45.27	34.66
	CV	0.69	0.95	0.46	0.26	0.32	0.77	0.42
	CAGR	-10.05	-11.45	15.83	-2.14	6.52	-9.61	-6.61
	t Value ¹	5.58*	11.28*	1.33	1.81**	1.96**		
	t Value ²	3.77*	0.44	0.89	1.44	3.98*		
Payables Payment Period (in days)	Mean	70.92	98.23	94.68	60.82	103.97	95.59	158.34
	CV	0.18	0.18	0.17	0.19	0.11	0.18	0.13
	CAGR	3.48	4.75	2.40	-6.40	-3.26	3.80	2.61
	t Value ¹	4.84*	0.55	0.17	5.01*	1.28		
	t Value ²	15.05*	8.52*	9.05*	12.91*	7.57*		
Cash Conversion Cycle(CCC) (in days)	Mean	95.02	-7.66	59.14	11.41	56.07	12.79	-27.34
	CV	0.94	7.99	0.40	1.84	0.65	4.40	-1.72
	CAGR	-15.93	-	-1.44	10.33	5.53	-	-
	t Value ¹	7.28*	4.66*	3.76*	0.09	2.99*		
	t Value ²	8.94*	2.51*	10.07*	2.77*	5.70*		

* - Significant at 5 per cent level

** - Significant at 10 per cent level

t value¹ - With the sector averaget value² - With the Industry average

ALL- Ashok Leyland Ltd; TML- Tata Motors Ltd; BTL- Bajaj Tempo Ltd; EML- Eicher Motors Ltd; SML- Swaraj Mazda Ltd

Source : Computed from the Annual Reports of the respective units.

TABLE 3: STATISTICAL VALUES OF RATIOS RELATING TO THE WORKING CAPITAL (Passenger cars and multiutility vehicles: For the period 1996-97 to 2008-2009)

Particulars	Statistics	HML	MML	MUL	HYML	HSL	FIL	Sector Average	Industry Average
Raw Materials Holding period (in days)	Mean	74.81	28.70	28.80	23.56	17.89	25.18	38.19	52.67
	CV	0.44	0.29	0.52	0.76	0.86	0.89	0.42	0.32
	CAGR	-6.27	-6.67	-9.82	-6.82	-6.99	-10.31	-10.13	-2.63
	t Value ¹	6.49*	4.10*	6.12*	1.04	2.12**	1.78		
	t Value ²	3.49*	7.23*	7.80*	4.85*	4.73*	1.37		
Work-In-Progress Holding Period (in days)	Mean	11.43	3.28	1.47	2.97	1.13	0.96	3.98	29.63
	CV	0.40	0.43	0.29	0.88	0.86	0.89	0.51	0.43
	CAGR	-3.94	-5.47	-6.40	-6.89	-6.92	14.13	-10.88	-4.72
	t Value ¹	17.23*	2.72*	5.41*	1.37	4.07*	3.36*		
	t Value ²	5.44*	8.16*	8.21*	6.06*	7.21*	7.01*		
Finished Goods Holding Period (in days)	Mean	12.37	28.51	5.47	23.56	17.89	25.18	11.04	14.04
	CV	0.40	0.30	0.45	0.76	0.86	0.89	0.10	0.18
	CAGR	-4.44	-7.85	4.48	-6.82	-6.99	-10.31	0.86	3.27
	t Value ¹	1.98**	7.35*	8.64*	7.80*	8.61*	7.71*		
	t Value ²	0.79	5.61*	9.49*	5.92*	5.86*	5.82*		
Receivables Holding Period (in days)	Mean	35.37	34.74	17.40	8.73	8.21	8.79	22.34	34.66
	CV	0.45	0.37	0.40	1.73	1.47	0.88	0.29	0.42
	CAGR	-7.65	2.60	2.60	-16.25	-36.71	2.87	-0.48	-6.61
	t Value ¹	6.43*	6.25*	3.12*	2.15**	4.43*	4.10*		
	t Value ²	0.71	0.02	3.60*	5.03*	5.07*	6.22*		
Payables Payment Period (in days)	Mean	85.93	79.77	30.09	46.63	21.24	47.01	58.99	158.34
	CV	0.37	0.13	0.40	3.52	0.78	0.88	0.13	0.13
	CAGR	-0.50	1.24	6.76	-47.84	2.48	-4.99	3.80	2.61
	t Value ¹	4.82*	7.04*	6.33*	0.99	6.39*	3.13*		
	t Value ²	8.18*	11.50*	23.03*	0.94	15.24*	10.30*		
Cash Conversion Cycle (CCC) (in days)	Mean	48.06	15.46	23.08	12.19	23.88	13.10	16.57	-27.34
	CV	0.83	1.96	1.14	3.62	1.95	4.74	1.19	-1.72
	CAGR	-24.72	-	-	-14.17	-	10.26	-	-
	t Value ¹	4.54*	3.69*	2.98*	1.01	0.36	5.55*		
	t Value ²	8.68*	3.74*	5.96*	0.98	2.83*	2.74*		

* - Significant at 5 per cent level

** - Significant at 10 per cent level

t value¹ - With the sector averaget value² - With the Industry average

HML - Hindustan Motors Ltd; MML - Mahindra and Mahindra Ltd; MUL - Maruti Udyog Ltd; HYML - Hyundai Motors India Ltd., HSL- Honda Sael Cars India Ltd; FIL- Ford India Private Ltd

Source : Computed from the Annual Reports of the respective units.

TABLE 4: STATISTICAL VALUES OF RATIOS RELATING TO THE WORKING CAPITAL (Two and Three wheelers: For the period 1996-97 to 2008-2009)

Particulars	Statistics	BAL	LML	MSC	TVS	KMC	HHM	KEL	MAL	SIL	Sector Average	Industry Average
Raw Materials Holding period (in days)	Mean	20.81	141.11	25.36	18.79	41.10	18.03	43.15	37.51	73.45	25.58	52.67
	CV	0.57	1.29	1.17	0.26	0.48	0.49	0.56	0.45	0.34	0.36	0.32
	CAGR	-13.67	15.01	11.38	1.19	0.02	-9.69	2.45	-4.06	-4.89	-8.87	-2.63
	t Value ¹	1.75	2.42*	0.02	2.02**	6.06*	11.71*	3.70*	2.84*	9.91*		
	t Value ²	7.78*	1.91**	2.53*	6.34*	1.19	12.58*	0.38	1.81**	5.05*		
Work-In-Progress Holding Period (in days)	Mean	4.81	14.31	10.87	3.98	5.06	1.54	14.02	11.25	16.68	3.97	29.63
	CV	1.02	1.27	0.97	0.36	0.76	0.68	0.68	0.97	0.31	0.42	0.43
	CAGR	-11.13	12.22	21.89	-6.04	10.53	-11.42	8.42	4.28	0.93	-10.54	-4.72
	t Value ¹	0.31	2.15**	2.10**	0.11	1.24	11.47*	4.36*	2.37*	9.06*		
	t Value ²	6.18*	1.69	3.23*	8.13*	5.65*	8.56*	2.49*	3.18*	3.76*		
Finished Goods Holding Period (in days)	Mean	6.80	13.59	15.97	12.31	19.59	2.98	22.51	6.44	32.70	8.13	14.04
	CV	0.62	0.63	0.80	0.31	0.75	0.37	0.75	0.59	0.50	0.15	0.18
	CAGR	2.23	-0.07	20.64	7.65	-0.90	-9.67	-12.51	-6.80	15.49	-1.17	3.27
	t Value ¹	0.89	4.56*	2.19*	3.72*	4.02*	18.93*	4.20*	1.44	5.59*		
	t Value ²	6.43*	1.11	0.51	1.76**	2.70*	14.68*	3.10*	6.30*	4.21*		

Cont.

Particulars	Statistics	BAL	LML	MSC	TVS	KMC	HHM	KEL	MAL	SIL	Sector Average	Industry Average
Receivables Holding Period (in days)	Mean	14.85	17.20	31.31	11.82	39.35	6.67	106.93	59.49	26.92	16.39	34.66
	CV	0.37	0.69	0.68	0.45	0.55	0.36	0.79	0.50	0.46	0.34	0.42
	CAGR	-1.67	2.59	7.15	-0.82	8.12	-4.92	20.93	0.48	15.69	-4.52	-6.61
	t Value ¹	0.30	1.00	2.15*	5.80*	5.25*	6.79*	4.50*	5.90*	2.39*		
	t Value ²	4.68*	2.63*	0.38	7.16*	1.23	7.41*	3.38*	2.98*	1.15		
Payables Payment Period (in days)	Mean	36.99	210.29	141.09	51.30	66.95	40.13	61.99	64.65	59.25	60.64	158.34
	CV	0.40	1.45	0.94	0.08	0.73	0.13	0.80	0.63	0.33	0.15	0.13
	CAGR	2.57	18.14	17.05	-0.58	12.87	-0.28	10.18	0.05	2.28	-3.59	2.61
	t Value ¹	6.43*	1.92**	2.08**	3.60*	1.13	7.09*	0.72	0.83	0.20		
	t Value ²	16.72*	0.99	0.49	18.07*	6.98*	21.94*	6.11*	6.77*	14.00*		
Cash Conversion Cycle (CCC) (in days)	Mean	10.28	-24.08	-57.59	-4.43	38.15	-10.90	124.61	50.07	90.50	-6.57	-27.34
	CV	2.05	4.23	-1.55	1.94	1.05	1.26	0.69	0.63	0.36	1.60	1.72
	CAGR	-	-	25.96	-	-	-	12.04	-3.59	-4.88	11.92	-
	t Value ¹	3.08*	0.72	2.13*	0.76	4.28*	2.13	6.61*	5.92*	13.85*		
	t Value ²	2.55*	0.34	1.48	1.80**	4.38*	1.67	5.22*	4.08*	15.13*		

* - Significant at 5 per cent level

** - Significant at 10 per cent level

t value¹ - With the sector average

t value² - With the Industry average

BAL- Bajaj Auto Ltd LML- LML Ltd MSC- Maharashtra Scooters Ltd TVS- TVS Motor Company Ltd KMC- Kinetic Motor Company Ltd HHM- Hero Honda Motors Ltd KEL- Kinetic Engineering Ltd MAL- Majestic Auto Ltd SIL- Scooters India Ltd

Source : Computed from the Annual Reports of the respective units.

TABLE 5: ANOVA RESULTS- RATIOS RELATING TO WORKING CAPITAL – COMPARISON

S.No	Working capital ratios	Between the sectors		Between the years	
		F ratio	H ₀	F ratio	H ₀
1.	Raw materials Holding Period	19.25	Rejected	16.31	Rejected
2.	WIP Holding period	73.94	Rejected	10.20	Rejected
3.	Finished Goods Holding Period	47.06	Rejected	1.79	Accepted
4.	Receivables Holding Period	9.07	Rejected	1.89	Accepted
5.	Payables Payment Period	39.72	Rejected	1.05	Accepted
6.	Cash Conversion Cycle (CCC)	2.68	Accepted	2.90	Rejected

Critical Value of 'F' at 5 per cent level: 3.40 and 2.18

COMMERCIAL VEHICLES

S.No	Working capital ratios	Between the companies		Between the years	
		F ratio	H ₀	F ratio	H ₀
1.	Raw materials Holding Period	42.20	Rejected	10.65	Rejected
2.	WIP Holding period	64.03	Rejected	3.72	Rejected
3.	Finished Goods Holding Period	11.78	Rejected	2.87	Rejected
4.	Receivables Holding Period	7.46	Rejected	1.05	Accepted
5.	Payables Payment Period	20.22	Rejected	0.40	Accepted
6.	Cash Conversion Cycle (CCC)	13.04	Rejected	4.35	Rejected

Critical Value of 'F' at 5 per cent level: 2.57 and 1.96

PASSENGER CARS AND MULTIUTILITY VEHICLES

S.No.	Working capital ratios	Between the companies		Between the years	
		F ratio	H ₀	F ratio	H ₀
1.	Raw materials Holding Period	25.57	Rejected	1.64	Accepted
2.	WIP Holding period	61.81	Rejected	0.53	Accepted
3.	Finished Goods Holding Period	10.29	Rejected	1.79	Accepted
4.	Receivables Holding Period	21.73	Rejected	2.44	Rejected
5.	Payables Payment Period	0.98	Accepted	0.98	Accepted
6.	Cash Conversion Cycle (CCC)	1.01	Accepted	0.99	Accepted

Critical Value of 'F' at 5 per cent level: 2.37 and 1.92

TWO AND THREE WHEELERS

S.No.	Working capital ratios	Between the companies		Between the years	
		F ratio	H ₀	F ratio	H ₀
1.	Raw materials Holding Period	7.24	Rejected	1.26	Accepted
2.	WIP Holding period	8.17	Rejected	2.93	Rejected
3.	Finished Goods Holding Period	13.38	Rejected	2.23	Rejected
4.	Receivables Holding Period	28.51	Rejected	1.63	Accepted
5.	Payables Payment Period	4.65	Rejected	2.47	Rejected
6.	Cash Conversion Cycle (CCC)	20.12	Rejected	2.32	Rejected

Critical Value 'F' at 5 per cent level: 2.04 and 1.85

Source: Computed

TABLE 6: WORKING CAPITAL-SUMMARY OF FACTOR ANALYSIS RESULTS-ROTATED FACTOR LOADINGS (Whole Industry)

Variables	Factors		Communality
	1	2	
Raw Materials Holding period	0.807	- 0.067	0.656
WIP Holding period	0.923	- 0.075	0.858
Finished Goods Holding Period	0.284	- 0.580	0.417
Receivables Holding period	0.634	- 0.026	0.402
Payables Holding period	0.153	0.859	0.761
Eigen Value	2.041	1.053	2.094
% of Variance	40.818	21.065	61.883
Cum.% variance	40.818	61.883	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy -			0.464
Bartlett's Test of Sphericity			310.688 (Sig.0.000)

COMMERCIAL VEHICLES

Variables (as % of Gross Sales)	Factors		Communality
	1	2	
Raw Materials Holding period	0.895	0.052	0.803
WIP Holding period	0.822	-0.113	0.688
Finished Goods Holding Period	0.823	0.116	0.691
Receivables Holding period	0.439	-0.664	0.633
Payables Holding period	0.373	0.778	0.744
Eigen Value	2.486	1.073	3.559
% of Variance	49.722	21.453	71.175
Cum.% variance	49.722	71.175	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy -			0.669
Bartlett's Test of Sphericity		-	97.738 (Sig.0.000)

PASSENGER CARS AND MULTIUTILITY VEHICLES

Variables (as % of Gross Sales)	Factors		Communality
	1	2	
Raw Materials Holding period	0.914	- 0.250	0.898
WIP Holding period	0.899	- 0.143	0.829
Finished Goods Holding Period	0.102	- 0.603	0.374
Receivables Holding period	0.795	0.339	0.749
Payables Holding period	0.049	0.852	0.728
Eigen Value	2.302	1.276	3.578
% of Variance	46.042	25.510	71.552
Cum.% variance	46.042	71.552	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy -			0.580
Bartlett's Test of Sphericity		-	142.403 (Sig.0.000)

TWO AND THREE WHEELERS SECTOR

Variables(as % of Gross Sales)	Factors		Communality
	1	2	
Raw Materials Holding period	0.952	0.025	0.906
WIP Holding period	0.815	0.460	0.876
Finished Goods Holding Period	0.003	0.752	0.566
Receivables Holding period	0.145	0.806	0.671
Payables Holding period	0.961	- 0.008	0.924
Eigen Value	2.716	1.226	3.942
% of Variance	54.329	24.515	78.844
Cum.% variance	54.329	78.844	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy -			0.646
Bartlett's Test of Sphericity		-	340.412 (Sig.0.000)

Source: Computed from the Annual Reports

EFFECTIVENESS OF RESPONSIBILITY ACCOUNTING SYSTEM OF THE ORGANIZATIONAL STRUCTURE AND MANAGER'S AUTHORITY

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ABSTRACT

This research has provided useful results in paving the way for future research in this area. This research could provide a supportive evidence for the effectiveness of responsibility accounting system. A questionnaire was designed and after pilot study was sent to the sample to fill in the questionnaire. A population has been taken of approximately 240 up to 2013 from Private public companies in Kerala. The results indicated that effectiveness of responsibility accounting system has successfully on the organizational structure and manager's authority as an two critical factors in every organization.

KEYWORDS

Responsibility accounting system, organizational structure, manager's authority.

INTRODUCTION

According to Hungarian (2008) designing of management control systems must identify the responsibilities of each manager in an organization by establishing responsibility centers. A responsibility center is a set of activities and resources assigned to a manager, a group of managers or other employees [1]. Responsibility accounting is a management control system based on the principles of delegating. The authority is delegated to a responsibility center [10]. According to many research notes mentioned that; organizations generally decentralize decision making authority in order to make better use of local knowledge and furthermore such companies tend to be organized into divisions to achieve greater accountability and stronger incentives to increase value or to control the free rider problem [2][7]. Most successful managements are firmly committed to planning and they would plan and control their functional operations and as efficiently as possible, hence responsibility as a tool for controlling and tracing costs to individual planning has a vital role in each organization [6][9]. Corporations seek primarily to maximize their profit, while nonprofit organizations aim to offer free or low cost services for public [3]. Effective implementation requires also the presence of precisely prepared budgets in order to measure the performance of each division on the basis of actual and planned results [5]. The basic idea underlying responsibility accounting is that a manager should be held responsible for those items such as cost, revenue and investment, hence managers can actually control to a significant extent [8].

LITERATURE REVIEW

Casey Roes and others (2008), Responsibility accounting depends on the magnitude, scope and speed of organizational process change hence, the measurability of responsibility center managers financial performance can change and using responsibility accounting to manage responsibility accounting boundaries is an important mechanism for achieving goal congruent behavior and avoiding dysfunctional behavior [12]. Chongwoo Choe (2000), Argued that when the managers make decisions under uncertainty to maximize their own expected compensation, it is shown that managerial contracts fail to provide incentives to managers for expected profit maximization hence necessary and sufficient conditions for the equivalence of the outcomes from maximizing expected compression and expected profit are provided along with some policy implications for further reforms [13]. Rehanaz Fowzia (2011), The satisfaction levels regarding four elements of responsibility accounting system among five types of service organization are same except responsibility center. The overall findings reveal that all the organizations are limited to the three types of responsibility accounting systems, and also some organizations follow more than one type of responsibility accounting system regarding any element of responsibility accounting system .It means organizations follow responsibility accounting in an integrated system, not any unique responsibility accounting system [2].Lars lindkvist and Sue lieuwelyn (2003),have the same opinion regarding the need to incorporate life world notions in firm level analysis, But this is affected in too dichotomous a manner, by separating system world and life world issues too sharply, identifying only two forms of accountability, and forging a necessary link between hierarchical accountabilities and the individual's sense of subjection, that generates an anxious preoccupation with securing the self in relation to accounting standards hence, recognized that an individual's sense of Responsibility Accounting may resonate with that individual's own conscience and values or processes of communal value generation[3].Emam Al Hanini (2013), the study concluded that the organizations commit to the application of the potential responsibility accounting regarding the division of the organizational structure into centers of responsibilities, the authorization the mangers of the responsibility centers with clear powers, the distribution of costs and the revenues to responsibility centers according to the center's ability and validity. The previous linking of the estimated budgets with the responsibility center, using the budgets for control and the

performance evaluation through comparing the actual performance with the planned one for each responsibility center [4]. Moolchand R. (2012), The public sector budgeting process is analyzed, focusing on the need to tackle Beyond Budgeting issues in the 21st century whereby organization's budget without a budget. By literature study, it was found that there were no perfect means of ensuring a successful budgeting process but there was general agreement in many areas of how the process might successfully assist. As with most concepts, there were mixed opinions on some issues such as benefits of participation as opposed to non-participation. What was common is the view that the budgeting process in particular and management control systems in general cannot afford to ignore the impact of behavior on these processes [14]. Z. Jun Lin (2003), Illustrates that management accounting or management oriented accounting measures and procedures can play a positive role in business management. The management has focused particularly upon cost control, integrated with the application of responsibility accounting and incentive programs, to achieve significant cost reduction and profitability improvement. Accounting is business management. In addition, the Han Dan experience may provide an insight into effective diffusion of management accounting practices under varied social and economic systems and promote a globalization of innovative management accounting practices [15].

STATEMENT OF THE PROBLEM

In light of the scarcity of resources and competition faced by organizations in the new economy, there is a need for studying of effectiveness of responsibility accounting system in the integrated way. Responsibility accounting is considered as an important measurement tool which aims to verify the operations and activities regarding to what it is planned for. Hence whether the organizational structure and manager's authority as an two critical effect of responsibility accounting in practice had effectiveness of the organization.

OBJECTIVE OF STUDY

The study conducted to examine the two important factors. The organizational structure and manager's authority are the important factors of the effect of responsibility accounting system .

HYPOTHESIS

Hypothesis 1: Responsibility accounting system has the effectiveness of the organizational structure.

Hypothesis 2: Responsibility accounting system has the effectiveness of the manager's authority.

RESEARCH VARIABLES

Dependent variables of this study are organizational structure and manager's authority as the quality of advantage of responsibility accounting system. Also, responsibility accounting system was independent variable. Hence, effect level of independent variables on dependent variable was included in the question of the questionnaire.

RESEARCH METHODOLOGY

This is a descriptive application research based on field studies. In order to accomplish the research objective and achieved to research problems a standard questionnaire prepared to collect the data from the top managers, middle managers and supervisors in the private sector companies in Kerala. A questionnaire was designed and after pilot study was sent to the sample to fill in the questionnaire. A population has been taken of approximately 240 up to 2013. Our sample has been randomly selected using Morgan sample selection tables. According to Morgan sample size 148 calculated and available as samples in the study for statistical analysis. The questionnaire consisted of seventeen questions, which were carefully designed to collect relevant data. The questions were on the five point Likert-type questions, with a choice of very little to very much.

STATISTICAL ANALYSIS OF DATA

Testing the reliability of the tool for the study was Cronbach alpha to measure the internal reliability of the questionnaire items and the internal consistency among the responses of the respondents which was 0.857 and this value is accepted as it is higher than 0.7 which means the results could be reliable. To test the hypotheses used z statistics at a confidence level of 95% in this study. The research hypotheses were put in the form of statistical hypotheses such as H0 and H1. With regards to the nature of five-point scale questions, therefore, we tested whether the mean value of each question was less than or greater than 3. Number 3 was the average number of the five choices in each question.

$$\mu = \frac{1 + 2 + 3 + 4 + 5}{5} = 3$$

Thus, statistical hypotheses were set up as follows:

H0: $\mu \leq 3$

H1: $\mu > 3$

TESTING HYPOTHESES AND ANALYZING THE RESULTS

To study the research hypotheses were selected through sixty financial managers and eighty nine middle managers, 65% out of 100 % responds had more than 16 years experience and also 75% out of 100% have more than 40 years old. The final sample in this study to answer the questions put forward to them in the questionnaire. The data collected in this way were edited and some questions merged to measure each hypothesis. The average number of 3 was taken as the mean of the five-point questions in the questionnaire. Table 1 shows a descriptive statistically of five hypotheses.

TABLE 1: DESCRIPTIVE STATISTICS

Description	Hypothesis 1	Hypothesis 2
Average	3.227	0.345
Std. Error of men	0.345	0.045
Mean	3.25	3
Mode	3.5	3
Std.	0.324	.0422
Variance	0.104	0.178
Skewness	-1.086	0.565
Std. Error of Skewness	0.258	0.258
Kurtosis	0.092	-0.796
Std. Error of Kurtosis	0.511	0.511
Max	3.5	3.5
Min	2.5	2.5

RESULTS OF THE FIRST HYPOTHESIS

Responsibility accounting system has the effectiveness of the organizational structure. Z statistic concerning the test of first hypothesis is equal to 6.48 (Table 2). By comparing this Value with the critical value of 1.645, we accept H1 and reject H0. Therefore, the first hypothesis are accepted indicating that the Responsibility accounting system had effected in the private sector companies in Kerala. The average of the questions measuring this hypothesis is 3.225 and

with the skewness of -1.086. The kurtosis of 0.092 indicates that the distribution of our data is slightly taller than normal distribution with 0.324 standard deviation. Thus, we could conclude that our respondents on average and slightly above the average believe that Responsibility accounting system in their organization could have strongly effected.

RESULTS OF THE SECOND HYPOTHESIS

Responsibility accounting system has the effectiveness of the manager's authority. (Table 2) Shows the Z value of testing the second hypothesis equal to 5.387. Again, comparing this value with the critical value of 1.645, we accept H1 and reject H0. This indicates that from the respondents' point of view Responsibility accounting system would have a effectiveness of manager's authority in private sector companies in Kerala. Descriptive statistics shown in Table 1 gives the average of 3.242 to the questions measuring the second hypothesis, skeins of 0.565, kurtosis of -0.796 and standard deviation of 0.424. This information indicates that the distribution of our data is slightly shorter than a normal distribution.

TABLE 2: RESULTS OF TESTING THE HYPOTHESES

Hypotheses	Average	Standard Deviation	Z-Value	Conclusions
H1	3.225	0.322	6.480	Accept
H2	3.242	0.422	5.387	Accept

LIMITATIONS

Use of questionnaire data collection method always has its own limitations, since responses could be biased because of the common method used for the collection of all data. Although extensive care has been taken when designing the questionnaire and the pilot study refined the questions, still the criticism of the survey method can never be completely ignored and should be taken into account. From generalization of the results point of view, measuring research questions based on the opinion of the respondents would limit our generalization of the findings.

CONCLUSIONS

This study examined the effectiveness of responsibility accounting system in two different extents: organizational structure and manager's authority. This research has provided useful results in paving the way for future research in this area. This research could provide a supportive evidence for the effectiveness of responsibility accounting system. The results indicated that effectiveness of responsibility accounting system has successfully on the organizational structure and manager's authority as an two critical factors in every organization. The findings of the research indicated that effectiveness of responsibility accounting system could lead to ten factors which are included; clarity in dividing the work in each center, clear job description, better coordination, clear work procedures, specialized manager, separate duty and activities, homogeneity in the work operations, accurate goals, measure specified goals centers and specified in the objective way in each center. And also managers authority has effected to seven factors included ; adequate power, sufficient authority, responsibility of authority in every job, employees' expertise, enough time to do the work, employee accountability and better hierarchy in the organizations.

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A STUDY ON APPLICATION OF DATA AND WEB MINING TECHNIQUES TO ENRICH USER EXPERIENCE IN LIBRARIES AND ONLINE BOOK STORES

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ABSTRACT

Data mining is a new developing research discipline and it is also a subdivision of Business Intelligence. It has attracted a great deal of attention in the Information Technology and in the society as a whole in recent years, due to the availability of a wide range of huge amount of heterogeneous data. To mine this available huge data to make it usable and presentable, and giving right solution to a particular problem with it is a big real challenge. Library and information services in schools, colleges, universities, corporations and communities obtain information about their users, circulation history, resources in the collection, and search patterns. Now-a-days many libraries have taken advantage of these data as a way to improve reader service, managing budgets, and influence strategic decision-making about uses of MIS in their organizations. The Library Management System Software has the ability to display the details of the books available in various departments, the transactions of books and about the book holders. It enables online reservation of books. It also enables a fully automated library service, which makes the library processes easier and systematic. This paper presents an overview of the data mining, web mining concepts and their application in the library data sources and Library Management Systems. The paper also tries to identify the suitable applications of data mining techniques in the library.

KEYWORDS

Data Mining , Web Mining , Library Management System

INTRODUCTION

Library management software is the software which is used to do library housekeeping activities and other work like accessioning, cataloguing, indexing etc. Library management System provides a simple Graphical User Interface for the Library Staff to manage the functions of the library effectively. Usually when a book is returned or issued, it is noted down in register after which data entry is done to update the status of the books in moderate scale. This process takes some time and proper updating cannot be guaranteed. Such anomalies in the updating process can cause loss of books. So a more user friendly interface which could update the database instantly has a great demand in libraries. Its main objective is to provide all the functions of the library along with support of barcode reader. The contemporary system stores the database information on a local computer, which can't be updated and accessed on a remote computer or a computer in the library network.

Many library systems are operated manually by a group of people. In such situations many people are involved in the process of managing the library. The library works are shared among the workers in such a way that different workers will engage in doing different works like keeping records regarding the books and students (borrowers), check the books manually, keep records on issued books etc. All these things have to be carried out manually and if the library is large then content handling becomes a big problem. On the other hand keeping large amount of maintenance workers may not be a cost efficient proposition for the libraries. Manual record keeping is also not a reliable method as people tend to forget things. On the borrower's point of view, in manual system borrower can't find a book exactly at once as they are not ordered well. Sometimes user might be searching for a book that is not available in the library. In such situations people get annoyed or depressed. Therefore there should be a reliable way to manage the library system.

Most LMS performs a prescribed set of functions including the material acquisitions, ordering, receiving, invoicing, and cataloguing classifying and indexing materials, lending materials to patrons and receiving them back, assigning serials for tracking magazines and newspaper holdings etc. Each patron and item has a unique ID in the database that allows the ILS to track its activity. However there are lots of other issues related with library management which is not addressed with the present LMS packages such as Digital preservation and licensing of copyrighted material. This paper deals with how we are overcoming these issues with the help of new information technology applications.

BUSINESS INTELLIGENCE

Business intelligence mainly refers to computer-based techniques used in identifying, extracting and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes. These technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies are reporting, online analytical processing, analytics, data, process mining, complex event processing, business performance management, benchmarking, text mining and predictive analytics. Data mining as a concept of business intelligence has the power to harness the hidden knowledge present in the huge data which is collected at point of sales. Generally Data dictionary is data about data also called Meta data, here this data gives valuable information, required to understand the customers buying patterns, key performance indicators which helps retailers in making decision such as catalog design, cross-marketing and customer shopping behavior analysis.

DATA MINING

Data mining refers to extracting or mining knowledge from large amounts of data. The term is actually a misnomer. Remember that the mining of gold from rocks or sand is referred to as gold mining rather than rock or sand mining. This, data mining should have been more appropriately named knowledge mining from data, which is unfortunately somewhat long. Knowledge mining a shorter term may not reflect the emphasis on mining from large amounts of data. Nevertheless, mining is a vivid term characterizing the process that finds a small set of precious nuggets from a great deal of raw material. Thus, such a misnomer that carries both data and mining became a popular choice. Many other terms carry a similar or slightly different meaning of data mining, such as knowledge mining from data, knowledge extraction, data pattern analysis, data archaeology, and data dredging many people treat data mining as a synonym for another popularly used term, knowledge discovery from data, or KDD. Alternatively, others view data mining as simply an essential step in the process of knowledge discovery.

The following figure presents the structure of the data mining process in a library context.

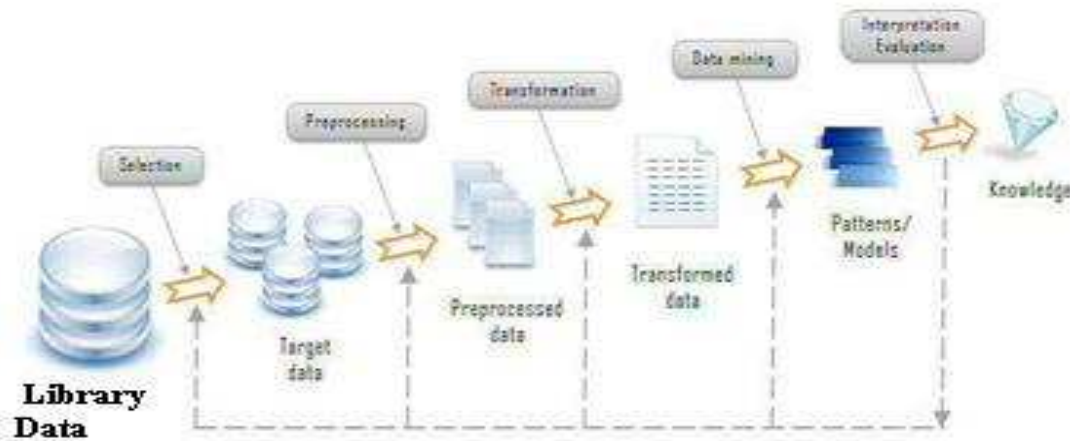


Fig. 1.0

Steps 1 to 4 are different forms of data preprocessing, where the data are prepared for mining. The data mining step may interact with the user or a knowledge base. The interesting patterns are presented to the user and may be stored as new knowledge in the knowledge base. Note that according to this view, data mining is only one step in the entire process, albeit an essential one because it uncovers hidden patterns for evaluation.

Data mining is process of discovering interesting knowledge form large amounts of data stored in databases, data warehouses, or other information repositories.

KNOWLEDGE DISCOVERY PROCESS IN LIBRARY MANAGEMENT SYSTEM

The following steps are involved in the knowledge discovery process in a library data mining application.

1. Data Cleaning

This is the first step in the mining process. The data available should be cleaned to remove the inconsistencies and redundancies using appropriate tools.

2. Data Integration

In this stage, data available in the multi library environment is combined using the data integration tools.

3. Data Selection

In this stage the huge volume of integrated data is screened with preset conditions to select the appropriate data that would be useful for meaningful analysis

4. Data Transformation

It is at this stage that the selected data is transformed or consolidated according to the user preferences into forms appropriate for mining by performing summary or aggregation operations.

5. Data Mining

This is an essential process where intelligent analytical methods are applied in order to extract data patterns from huge volume of Library data.

6. Pattern Evaluation

The objective of this step is to identify the truly interesting patterns representing knowledge based on some interesting measures.

7. Knowledge Presentation

This is the last stage is the mining process where visualization and knowledge representation techniques are used to present the mined knowledge to the user or librarian with help of different reports like Online Member Details Report.

OTHER TECHNIQUES IN DATA MINING WHICH ALSO APPLY IN LIBRARY MANAGEMENT SYSTEM

ASSOCIATION

Identification of frequent patterns is one of the basic requirements of any data mining system. As the name suggests, they are the patterns that occur frequently in the organized data. There are many kinds of frequent patterns, including item sets, subsequences, and sub structures.

A frequent item set typically refers to a set of items that frequently appear together in a transactional data set. In library context this may be the books or articles that are jointly taken for use by different users. A frequently occurring subsequence that can be observed in the library context may be a pattern that users tend to borrow first a book on a particular discipline followed by a book of some other discipline.

A substructure can refer to different structural forms, such as graphs, trees or lattices, which may be combined with item sets or subsequence. If a substructure occurs frequently, it is called a frequent structured pattern.

Mining frequent patterns leads to the discovery of interesting associations and correlations within data. This is what is called in business intelligence as the market basket analysis. This technique can be profitably applied to library on line book selling and purchasing. The association techniques in data mining can be used to identify and track the books by author, publishing date and the relationship among the various attributes. Using the Apriori algorithm in the association rule can effectively tap valuable information lying latent in the voluminous data, and provide efficient decision support for the library services and help libraries to carry out personalized information services and book lending services.

CLASSIFICATION

Classification is a classic data mining technique based on machine learning. Basically classification is used to classify each item in a set of data into one of predefined set of classes or groups. Classification method makes use of mathematical techniques such as decision trees, linear programming, neural network

and statistics. In classification, we make the software that can learn how to classify the data items into groups. For example, user can apply classification in application that gives the past records of all employees who left the institute or library, and predict which current employees are probably to leave in the future. In this case, we divide the employee records into two groups namely left and staying. And then user can use the data mining software to classify the employees into each group. One application of the classification techniques in libraries is Book Cataloging

CLUSTERING

Clustering is a data mining technique that makes meaningful or useful cluster of objects that have similar characteristics using automated techniques. Clustering is different from classification. In Clustering the classes are defined automatically by the data mining application and the objects are assigned to the respective classes whereas in classification objects are assigned into predefined (user defined) classes. To make the concept clearer, sorting of books in a library can be taken as example. In a library, books in a wide range of topics are available. The challenge is how to keep those books arranged in such a way that readers can take several books in a specific topic without hassle. By using clustering technique, user can keep books that have some kind of similarities in one cluster or one shelf and label it with a meaningful name. If readers want to grab books in a topic, he or she would only go to that shelf instead of looking the whole in the whole library. Clustering is the one of the best techniques in data mining to group information of members in the Library.

PREDICTION

The prediction as the name implied is one of a data mining techniques that discovers relationship between independent variables and dependent variables. For instance, prediction analysis technique can be used in sales to predict profit for the future. If sales are an independent variable, profit could be a dependent variable. Then based on the historical sale and profit data, user can draw a fitted regression curve that is used for profit prediction. Prediction analysis in data mining can be used to analyze the readers' usage rate, analysis of their status.

SEQUENTIAL PATTERNS

Sequential patterns analysis in one of data mining technique that seeks to discover similar patterns in data transactions over a business period. The uncovered patterns are used for further business analysis to recognize relationships among data. Sequential patterns analysis can be used in libraries to find an e book and reviews by past readers or to view a current list of the top-rated titles based on the user history if they follow any specific pattern to select the book for reading. How they review of a e-book and share their opinions with other readers here also find the any pattern or relation is appeared in the reviewer.

PATH ANALYSIS

Path analysis is tool in the internet website analytics. It is the process of determining the sequence of pages visited in a visitor session prior to some desired event, such as the lending a book to visitor or the visitor requesting a newsletter. The precise order of pages visited may or may not be important and may or may not be specified. In practice, this analysis is done in aggregate, ranking the paths (sequences of pages) visited prior to the desired event, by descending frequency of visits. The path analysis is very helpful in exploring the library data about user URL information concerning access to electronic sources. It allows the user to identify the distribution of patrons who log in to the library website and from where they login. Also, Path Analysis provides us with a count of the number of times each link has occurred in the dataset and a list of association rules.

OPERATIONS ANALYSIS (how related to library)

By frequently identifying purchased combinations of products, book sellers can help improve their store layout and assortment planning. Basket analysis can drive promotional campaigns and help to measure the effectiveness of marketing initiatives. In addition, better analysis of in-store operations can improve staff planning to maximize efficiency and cut staffing costs.

CUSTOMER MANAGEMENT ANALYSIS

Business intelligence can help **book sellers** or retailers improve customer targeting, revenue management, customer knowledge management, and multichannel integration. By analyzing transactional data during the day, book sellers or retailers can identify differences in customer profiles, while real-time tools help stores adapt prices to match demand patterns and improve profitability. Critically, by understanding how personal priorities affect shopping habits, book sellers or retailers can also anticipate customer or reader needs to provide more appropriate services and products.

EVENT ANALYSIS

In a library any occurrence of theft or internal frauds need to be identified as quickly as possible. Data mining analytics can help control such occurrence by pinpointing exceptional events quickly and help librarian sort any problems out rapidly.

TREND ANALYSIS

With accurate analysis of stock-outs, libraries can make use of the demand forecasting techniques to improve their books availability and manage their stock levels. At the same time, by assessing the impact on readers demand patterns of removing slow-accessing book form the rack, librarian can gain insights to optimize readers' satisfaction and stock turn.

SUPPLY CHAIN ANALYSIS

Real time traceability is essential for book sellers who want to respond quickly to changing demand. Business intelligence can help book sellers attain a clearer view of their supply chain and even re-route global consignments to accelerate deliveries as necessary.

CATEGORY AND EVENT ANALYSIS

Using business intelligence tools in event monitoring, category management, and new book introductions is vital. Book Sellers or Librarian need to be able to share information between the point of sale and publishers so that forecasts can be shared and performance accurately mapped to maximize sales opportunities. In addition, new book releasing and the impact of promotions need to be quickly analyzed so that book shops can maintain a competitive edge.

SUPPLIER RELATIONSHIP ANALYSIS

Successful replenishment often depends on the efficiency of the book publishers, whole sellers and third-party logistics providers. Sharing accurate performance data with suppliers or book sellers can help avert queries over service level agreements and provide a common basis for mutual improvement.

COLLABORATIVE ANALYSIS

Real-time analysis of user demand improves order management and can help streamline production and cut lead times. With the seamless exchange of information between the store and the supplier, everyone in the supply chain has access to the same product data, at the same time, to reduce errors and duplicated effort. A common frame-work for discussion can be established. To keep pace with their competitors, and retailers, book sellers must ensure that their technology infrastructure can support initiatives to understand readers preferences and consequently increase sales.

WEB MINING IN LIBRARY

Web mining is one of the major and important sub divisions of data mining. Some of the tools which are popular in usage for online libraries include web usage analyzers, site maintainers, and pre fetched systems. Most of the data mining techniques are applied on contents, structures and log files of web sites. Web usage analyzers are mainly used to improve the performance of the web pages, personalization of the web pages etc., Web log analysis mainly focuses on the web log files and their structures. It is one the key areas of web log mining system. It is used to record users' browsing information on web servers. When a user visits a webpage for the first time his/her profile information can be stored into separate web log file and a new log record is generated every time the user access the libraries webpage. Each log record will contain users' behavior, user name, access time, information searched are stored in separate log. Using data preprocessing techniques the above log files can be analyzed to identify patterns of user behaviour and user perception over internet library system.

CONCLUSION

This paper introduces the theoretical basics of data mining and web mining. With the information overload, Web log mining is a new and promising research avenue which could help users in gaining valuable insights into overwhelming information available on the Web. Data mining is a relatively new research area, which has a broad development and application. Data mining is an evolving area where many problems are yet to be solved through in-depth research studies. The Librarians should know the latest trends and technology to improve the efficacy of the libraries. At the same time libraries must also continue to protect their users and employees from misuse of personally identifiable data records. In the current setup libraries have to compete against online booksellers,

downloadable audio books, and the vast supply of "free" information of varying quality from the Internet. librarians must begin to take the initiative in using their systems and data for competitive advantage and to justify continued support and funding of libraries. The various data mining tools were explored in the above paper which could be used to mine the potential information from the library data with the objective of boosting the readers' interest, confidence and satisfaction.

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IMPACT OF SIX SIGMA IMPLEMENTATION: A CASE STUDY OF A PHARMACEUTICAL COMPANY**N. VENKATESH****ASST. PROFESSOR****DEPARTMENT OF MECHANICAL ENGINEERING****CANARA COLLEGE OF ENGINEERING****BENJANAPADAVU****DR. C. SUMANGALA****ASST. PROFESSOR****DEPARTMENT OF BUSINESS MANAGEMENT****UNIVERSITY OF MYSORE****MYSORE****ABSTRACT**

Quality is the key for the success of any product or service in the present context. Many concepts have been used to improve the quality on a continuous basis. Six Sigma has been utilized by manufacturing industries to decrease cost and improve quality and productivity by reducing variation and production defects. By and large Six Sigma is seen as a quality improvement concept for mechanical industries. But of late it is gaining importance in other sectors as well. In this paper a pharmaceutical industry has been examined to test the underlying facts about Six Sigma implementation. The opinion of employees who have worked in the Six Sigma projects has been collected, tested and analyzed to check the outcome of Six Sigma implementation. Employees have observed that the implementation of Six Sigma has improved the financial status, productivity, peoples' equity, growth of the company and customer satisfaction.

KEYWORDS

Benefits, Implementation, Pharmaceutical, Six Sigma.

INTRODUCTION

Quality improvement concepts are being tested and used since many decades. It is due to improved quality consciousness among the customers that the companies have become more pragmatic about their products and services. Six Sigma has now spread far and wide, and has been adopted in many service industries as well as in manufacturing. While some of the big manufacturing names, such as General Electric, were early adopters, now service giants like American Express and Starwood Hotels also have major programs. So why does the pharmaceutical industry remain skeptical? (David Johnston, 2003)

REVIEW OF LITERATURE

Few aspects distinguish the pharmaceutical industry from most other manufacturing industries. Firstly, the roles of consumers of pharmaceutical products are often limited in the products that they use as the drugs follow a chemical composition than the taste. Secondly, the pharmaceutical industry the patenting of products is essentially a critical issue especially in developing countries like India. Due to heavy investment for R & D of the drugs the companies the cost of the drugs would be very high till the patent period expires typically in the range of 20 years. However when the patent on drug expires, a generic drug usually gets surfaced and ready to be sold by a competitor. Hence it is very important for the manufacturer of drugs to keep the cost at minimum. Due to this reason Six Sigma is keenly observed by many pharmaceutical industries. More over the aim of sigma is not just to provide tangible benefits but the ultimate goal for Six Sigma is to change the mindset and culture of the entire organization to create an environment where in the quality and perfection are seen as achievable thus ensuring that the work force enjoys the work to achieve best possible performance levels (Maria Jernelid and Steven Roan, 2009).

Six Sigma is seen as a quality improvement concept targeting the process rather the end product. It uses a methodology known as DMAIC model, which begins by defining and identifying a problem like higher scrap rate, higher price of non conformance, etc. and then sets the course of actions in fixing it. Once the problem is resolved controls are put in place to make sure the problem doesn't recur. This procedure is very common for improvement of the processes of manufacturing industries.

This concept is gaining popularity with pharmaceutical industries in recent times. There are many pharmaceutical companies that have implemented Six Sigma and are successful in achieving their corporate strategy. Examples of pharmaceutical companies that have implemented Six Sigma are Baxter, Eli Lilly, Johnson & Johnson and Novartis (Stückrath, 2006).

The implementation problems that companies face and the success factors are not unique to any industry and it is essential to recognize the similarities instead of differences, which would help to gain the knowledge and experience of other industries (Sewing et al. 2008).

When using Six Sigma in the pharmaceutical industry, extra care is required while identifying the customer as the customer definition is wider in this industry compared to many others (Young et al. 2004).

Carleysmith et al. (2009) explains the benefits of the implementation of Six Sigma tools in the R&D Pharmaceutical department of GlaxoSmithKline (GSK) which resulted in increased productivity by eliminating and decreasing time spent on repetitive tasks thereby reducing cycle times and a better knowledge exchange due to increased teamwork and common best practice procedures.

Maria Jernelid and Steven Roan (2009), in their research of pharma companies observed that there is a huge potential for Six Sigma to be implemented in pharma companies to improve their satisfaction in terms of delivery time, reduced price. However they suggest that the process of Six Sigma implementation has to be fine tuned as per the requirement of the company as each company is unique in its nature regarding its administrative practices.

NEED AND IMPORTANCE OF THE STUDY

Literature review suggested for more research of pharmaceutical companies to understand their perception of Six Sigma. In India very rarely we have seen any pharmaceutical company coming forward to implement Six Sigma. There is a huge scope for implementation of Six Sigma particularly in pharmaceutical industry. Hence, in this paper a study of one such pharmaceutical company is done. Outcome of this study decides the status of six sigma implementation in pharmaceutical company. this could be a road map for other pharmaceutical companies. Normally any study comprises of primary data obtained through the company records to highlight the achievements of the company. Here the opinion of the employees is collected to understand to how far the employees are kept in the loop.

THE OBJECTIVES OF THE STUDY

The study has the following objectives:

1. Investigate the benefits of Six Sigma implementation in a pharmaceutical industry

2. Prioritize the benefits as per the opinion of the respondents
3. Examine whether the managers and workers differ in their opinion about Six Sigma implementation.

HYPOTHESES OF THE STUDY

The following hypotheses were declared based on the objectives of the study

H1: The Six Sigma implementation brings about the benefits to the organization in the form of

- a. Financial benefits
- b. Improved growth of the company
- c. Improved Peoples' equity
- d. Higher Productivity and
- e. Increased Customer satisfaction

H2: Managers and workers differ in their opinion about the practices of Six Sigma.

RESEARCH METHODOLOGY

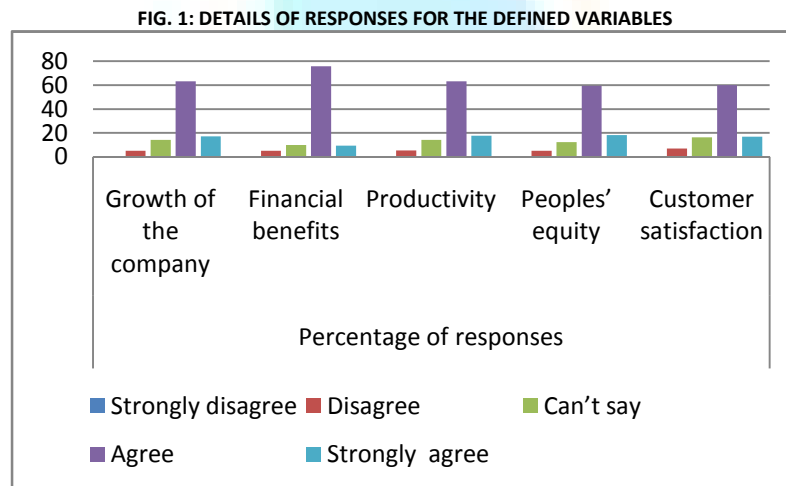
The research is done with the help of a questionnaire which consisted of questions to collect information on benefits of Six Sigma implementation categorized under financial benefits, growth of the company, peoples' equity, productivity and customer satisfaction. The data collected is analyzed with the help of SPSS V16 software.

SAMPLE SIZE

The study consisted of a sample of 20 employees who have gained the knowledge of Six Sigma. The respondents have worked on various Six Sigma projects for six years. Out of these, five belonged to manager level and fifteen belonged to worker level.

RESULTS AND DISCUSSIONS

The data is collected from the respondents on a Likert 5 point scale of 1 to 5 (strongly disagree to strongly agree). The following graph gives the picture of frequency of response for the scale parameters. The graph indicates that the respondents have a positive response towards the benefits of Six Sigma implementation as highest percentage of the respondents (about 80% for growth of the company, 85% for financial benefits, 82% for productivity, 80% for peoples' equity and 78% for customer satisfaction) have consented about the benefits of Six Sigma.



This fact is tested for its statistical significance. To start the tests it is important to test the reliability of the testing instrument. The Cronbach's alpha was observed to be 0.72 and as the Cronbach's alpha value is more than 0.7 the reliability of the testing instrument is established (Nunnally, 1978).

TESTING OF HYPOTHESIS H1a, H1b, H1c, H1d, H1e

Next, to test the hypotheses, we have used one sample t-test. The following table 1 gives the result of one sample t-test for the variables of the benefits for a sample size of N=20. The company has a practice of accepting the survey results if the mean value for a question is more than 3.6. In case of growth of the company the questionnaire included 9 questions under this variable. Thus the total expected value is 3.6 * 9 = 32.4, in case of financial benefits (8 questions) it is 8 * 3.6 = 28.8, for productivity (18 questions), it is calculated as 18 * 3.6 = 64.8, for peoples' equity (27 questions) the expected value is 27 * 3.6 = 97.2 and for customer satisfaction (16 questions) it is 16 * 3.6 = 57.6.

TABLE 1: OBSERVED AND EXPECTED MEAN VALUES OF THE VARIABLES AND RESULTS OF ONE SAMPLE t-TEST

	Observed value of Mean	Std. Deviation	Expected value of Mean	T-value	P-value
Growth of the company	34.85	3.18	32.4	3.442	0.003 (highly significant)
Financial benefits	31.15	2.74	28.8	3.837	0.001 (highly significant)
Productivity	70.85	5.33	64.8	5.073	0.000 (highly significant)
Peoples' equity	105.85	8.11	97.2	4.768	0.000 (highly significant)
Customer satisfaction	61.9	5.39	57.6	3.52	0.002 (highly significant)

From the above table we can notice that the calculated mean is more than the expected value with respect to all the variables. Results of the one sample t-test indicate that all the variables enjoy a high significance. This is written as

- i. For growth of the company, the observed mean = 34.85 against the expected mean of 32.4, t (19) = 3.442, p (0.003) < 0.05.
- ii. For financial benefits, the observed mean = 31.15 in opposition to the expected mean of 28.8, t (19) = 3.837, p (0.001) < 0.05.
- iii. For productivity, the observed mean = 70.85 against the expected mean of 64.8, t (19) = 5.073, p (0.000) < 0.05.
- iv. For peoples' equity, the observed mean = 105.85 in comparison with the expected mean of 97.2, t (19) = 4.768, p (0.000) < 0.05.
- v. For customer satisfaction, the observed mean = 61.9, against the expected mean of 57.6, t (19) = 3.52, p (0.002) < 0.05.

Since the result of the one sample t-test established a high significance of difference of means between calculated and expected one can infer that all the five components of the hypothesis H1 is accepted. This means Six Sigma has helped the company in terms of financial benefits, growth of the company, productivity, peoples' equity and customer satisfaction.

TESTING OF HYPOTHESIS H2

After accepting the first hypothesis regarding the benefits of Six Sigma now it is required to check whether the managers and workers differ in their opinion. For this an independent sample t- test was used.

The following table gives result of the independent sample t – test.

TABLE 2: GROUP STATISTIC TABLE FOR BENEFITS OF SIX SIGMA AND RESULT OF INDEPENDENT SAMPLE t TEST

Variable	Designation of respondent	N	Mean	Std. Deviation	t-value	P-value
Growth of the company	Worker	15	34.6	3.51	-.436	0.668 (not significant)
	Manager	5	35.4	2.07		
Financial benefits	Worker	15	30.9	3.05	-0.602	0.554 (not significant)
	Manager	5	31.8	1.48		
Productivity	Worker	15	71.06	4.44	0.307	0.762 (not significant)
	Manager	5	70.2	8.07		
Peoples' equity	Worker	15	105.8	9.08	-.048	0.963 (not significant)
	Manager	5	106	4.84		
Customer satisfaction	Worker	15	62.0	6.02	0.14	0.89 (not significant)
	Manager	5	61.6	3.36		

The independent sample t –test suggest that the difference of mean values of managers and workers are not statistically significant written as

- i. For growth of the company, $t = -0.436$; $P = .668 > 0.05$
- ii. For financial benefits, $t = -0.602$; $P = .554 > 0.05$
- iii. For productivity, $t = 0.307$; $P = .762 > 0.05$
- iv. For peoples' equity, $t = -0.048$; $P = .963 > 0.05$
- v. For customer satisfaction, $t = 0.14$; $P = .89 > 0.05$

Since the result of independent sample t-test established a non significant difference between managers and workers with respect to all the benefits one can infer that managers and workers do not differ in their opinion towards practice of Six Sigma. Hence hypothesis H2 is rejected.

CONCLUSIONS

The investigation of the benefits of Six Sigma at a pharmaceutical industry had aroused curiosity as there was a lack of clarity about its implementation in pharmaceutical industries. The survey of the opinion of employees of the company leads us to following observations.

1. Employees experience that the implementation of Six Sigma has helped the company to grow, due to its improved financial status and vice versa i.e. the improved financial status helped the company expand its market.
2. The respondents believe that the implementation of Six Sigma has resulted in process improvement which has improved the productivity with reduced price of non conformance.
3. The changes in a company will not sustain for a long time in any company. However, in this case, the work force has enjoyed the implementation of Six Sigma and they have preferred to work with more number of projects as per Six Sigma methodology. This fact is indicated by improved peoples' equity after the implementation.
4. Employees have observed that the implementation of Six Sigma resulted in a win-win situation with the customers as a result the customer satisfaction has become higher.
5. It is believed that the opinions of managers and workers usually differs as they belong to two different class of work force. But in this case their opinion does not differ significantly. In other words both of them feel that the Six Sigma implementation has helped their company to reap benefits and stay on course of the competition.

All these facts and figures have helped to come to conclusion that the implementation of Six Sigma is a success even in pharmaceutical industry. This should arouse the interest in other pharmaceutical industries to go ahead with the implementation of Six Sigma or else they may lose the competitive edge that the Six Sigma provides.

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A STUDY ON EVALUATING THE EFFECTIVENESS OF TUTORIAL PROGRAMS IN QUANTITATIVE TECHNIQUES

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ABSTRACT

The intake of students into the master's programme of business studies poses many problems with regard to the curriculum. Students come from a wide spectrum of undergraduate courses that range from English Literature to Engineering and Commerce. This results in great variances in quantitative and accounting abilities. To bridge the apparent gaps many b-schools have adopted bridge courses as a tool to stabilize the learning outcomes. However these were found to be inadequate and the result is the slowing down of the teaching process to accommodate those with weaker foundations. The article discusses the adoption of a tutorial system to go alongside the main course for a select group of students. In parallel, the teaching of the main course was restricted to the prescribed hours. The results show a significant improvement of scores along with a significant reduction of student hours.

KEYWORDS

curriculum, quantitative, tutorial system, learning outcomes, student hours.

INTRODUCTION

The intake of students into the master's programme of business studies poses many problems with regard to the curriculum. Usually students are admitted on the basis of an aptitude test which tests their analytical and verbal abilities. However these tests don't take into account any specific subject content. Students come from a wide spectrum of graduate courses that range from English Literature to Engineering to Commerce. This results in great variances in quantitative and accounting levels of students within the same batch. To bridge the apparent gaps many b-schools have adopted bridge courses as a tool to stabilize the learning outcomes. However these prove to be inadequate as many concepts are still not well assimilated by the time the actual course commences and this slows down the teaching process during the actual allotted schedule. This often results in the extension of the class hours to accommodate those students with weaker foundations in the relevant subjects.

This has been the practice in many b-schools and for the purposes of this study, this will be termed as the traditional method. This method is problematic and inefficient in many ways. Firstly, it results in the extension of class hours, and the accommodation of unscheduled hours into the semester negatively affects the efficiency of the programme. Secondly the extended coaching benefits only a few students who have graduated from programmes that do not include mathematics and statistics. This leads to a heavy wastage of formal class hours for students who do not need the extra input. Thirdly, the large student-teacher ratios limit the effectiveness of the class for two reasons- the first is that this factor may facilitate acquisition of knowledge but will be less effective in the process of analysis and synthesis of information; the second is that opportunities for individual attention may be limited in large classrooms.

REVIEW OF LITERATURE**TEACHING METHOD**

Teaching method comprises the methods which are used by the instructor for delivering the subject to the students. Lecture based classroom teaching has been supported by many researchers as one that is appropriate to achieve the learning outcomes expected. A study by Barnes & Blevins (2003, p.41) suggests that active, discussion-based methods are inferior to the traditional lecture-based method. In contrast, a more modern view of learning is constructivism, where students are expected to be active in the learning process by participating in discussion and/or collaborative activities (Fosnot, 1989, p.89). Overall, the results of recent studies concerning the effectiveness of teaching methods favor constructivist, active learning methods. The findings of a study by de Caprariis, Barman, & Magee (2001, p.1) suggest that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. Further, research on group-oriented discussion methods has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001, p.111; Yoder & Hochevar, 2005, p.479). Hunt, Haidet, Coverdale, and Richards (2003, p.53) examined student performance in team learning methods, finding positive learning outcomes as compared to traditional lecture-based methods.

Thus both methods seem to have their own respective merits. A comparison of lecture combined with discussion versus active, cooperative learning methods by Morgan, Whorton, & Gunsalus (2000, p.341) demonstrated that the use of the lecture combined with discussion resulted in superior retention of material among students. A study conducted by Sweeney and Ingram (2001, p.55) has found that foreign students who were weak in language were provided with different web based tutorials as additional hours. These have produced excellent results in the performance of the students, as the extra time used for developing the answers and analyzing the process built their confidence levels and enhanced their performance in the class.

In terms of students' preferences for teaching methods, a study by Qualters (2001, p.51) suggests that students do not favor active learning methods because of the in-class time taken by the activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active structure. In contrast, research by Casado (2000, p.65) examined perceptions across six teaching methods: lecture/discussion, lab work, in-class exercises, guest speakers, applied projects, and oral presentations. Students most preferred the lecture/discussion method. Lab work, oral presentation, and applied projects were also favorably regarded. Hunt et al (2003, p.53) also noted favorable student attitudes towards active learning methods.

Extant research on the relationship between class size and student performance has identified conflicting results (Toth & Montagna, 2002, p.253). The results of some studies show no significant relationship between class size and student performance (Hancock, 1996, p.479; Kennedy & Siegfried, 1997, p.385), while other studies favor small class environments (Gibbs, Lucas, & Simonite, 1996, p.261; Borden & Burton, 1999, p.6; Arias & Walker, 2004, p.311). Results vary based on the criteria used to gauge student performance, as well as the class size measure itself. When traditional achievement tests are used, small classes provide no advantage over large classes (Kennedy & Siegfried, 1997, p.397). However, if additional performance criteria are used (e.g., long-term retention, problem-solving skills), it appears that small classes hold an advantage (Gibbs et al., 1996, p.270; Arias & Walker, 2004, p.325).

Tutorials also harness the advantages of small groups. In a study by Sargent, Borthick and Lederberg (2011, p.76) among accounting students, it was seen that tutorial use rates were more than 60% even though there were no credits attached to its use. Tutorial use was correlated to lower course drop rates, higher exam scores and better pass rates.

ATTENDANCE AND PERFORMANCE OF THE STUDENTS

Several studies have investigated the relationship between attendance and grades. Silvestri (2003, p.483) found a significant but weak negative correlation between the number of absences and course grades for students who missed three or fewer classes. However, for students who missed four or more classes, the author found a significant and strong negative correlation between the number of absences and course grades. Callahan (1993, p.23) found a relationship between attendance and grades in basic mathematics courses (see also Thomas & Higbee, 2000, p.67). In addition, the level of the student does not seem to influence the relationship between attendance and grades. Moore (2003, p.367) discovered that class attendance is influenced by whether students receive points for attending. He has found that even without the motivation of points for attending class, there is a strong positive correlation between attendance and grades. Similarly, Shimoff and Catrina (2001, p.192) found that students who signed in at each class meeting attended more classes and scored higher grades on quizzes. Levine (1992, p.4) discovered that there were significantly more absences when attendance was not required. Davenport (1990, p.8) found that attendance and grade point averages dropped when attendance was no longer required.

THE NEED FOR SUPPORT IN MATHEMATICS FOR MANAGEMENT COURSES

Quantitative methods have become an integral part of the syllabus for Business Studies. Fisher (1966, p.67) explains that modern techniques of quality control, production scheduling, research and development planning where network systems are used—all require a fairly thorough knowledge of mathematics and statistics. Moreover, the trend is towards technological advancements and therefore the b-school graduate will be able to cope with his professional environment only if he has a basic knowledge of mathematics and Statistics.

Sargent, Borthick and Lederberg (2011, p.15) speak of the maths anxiety among students which affects their math's performance. They quote Yates (2005, p.600) when they argue that classroom teaching is not enough and 'building in a process for remediation, re-teaching topics, and tailoring instruction to individual students should reduce avoidant behaviors that math anxiety prompts'

HYPOTHESES

On the basis of these considerations it must be determined which is the best way to design the course so that the hours spent by the students to learn and understand the subject can be well utilized. From literature we understand that attendance is related to performance, and it is important to determine the relationship with the target group.

The three hypotheses proposed for this investigation are as follows:

1. Extended classroom teaching results in inefficient utilization of student hours
2. Attendance in tutorials significantly increases performance in the subjects
3. Equal or higher student performance is registered in fewer student hours using the new method. For the purpose of this study the term **student hours** for an intervention is calculated in the following manner:

Number of attending students x number of hours taken = number of student hours

RESEARCH METHODOLOGY

The total sample of 240 students who were doing MBA degree from a leading Business School in India during the year 2010-12 was selected. The sample consists of 120 students from MBA 2010-12 batch and 120 students from MBA 2011-13 batches.

DESIGN OF THE LEARNING PROCESS**STUDY 1**

Study 1 is the data based on the 2010-11 MBA batch of students who were subject to a bridge course of 20 hours in Basic Mathematics and Statistics before the commencement of the main First semester courses in Business Statistics and Business Mathematics. Each of these core courses have a stipulated time slot of about 50 hours in the academic schedule for the semester. However due to the inability of students of non-math backgrounds to keep pace with engineering and math related graduates, extra classes are scheduled outside the academic schedule to facilitate a better understanding of the subject. On an average the students have been subject to 25-30 extra hours in order to achieve the desired learning objectives. Their marks in the mid-semester (Internal Assessment Test 1 or IAT-1) as well as end semester examinations (Internal Assessment Test 2 or IAT-2) of Business Mathematics and Business Statistics were recorded.

STUDY 2

Study 2 is based on data from the 2011-12 batches of MBA students who were subject to the newly designed teaching process. This includes 20 hours of the bridge programme in Basic Mathematics and Statistics. The core courses in Business Statistics and Business Mathematics in the first semester were restricted to 53 hours each. The tutorial sessions in Business Mathematics and Statistics were introduced and the intake of the number of students in each tutorial was restricted to 25. The tutorial programme was given as three hour sessions per week for the selected students for three months and their performance was measured through the first internal assessment test which is taken for all subjects as a mid-semester exam. On the basis of their mid-semester evaluation in Business Mathematics and Statistics for Managers, the students who had showed considerable improvement in their performance were relieved from the tutorials and others who had shown a significant drop in performance from the screening test to the mid semester exam were taken in for the next phase of tutorials. The final results were taken from their performance in the end-semester examinations.

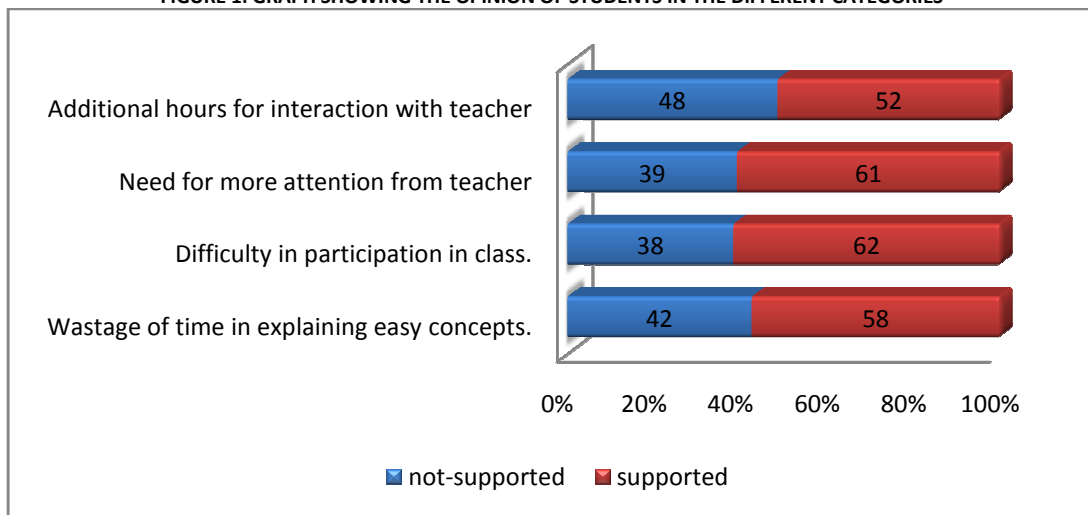
PROCEDURE AND ANALYSIS

A needs analysis was conducted among the 2010-12 batch of MBA students (Study 1) to assess the strengths and deficiencies of the traditional process. An open ended questionnaire was used to assess student expectations. Based on the responses the researcher has segregated the responses in four different categories. These categories are

1. Wastage of time in explaining easy concepts.
2. Difficulty in participation in class.
3. Need for more attention from teacher
4. Additional hours necessary for interaction with teacher

Figure 1 show the percentage of students who agreed and disagreed with the following categories. While 58% of the students felt that their class hours were wasted with unnecessarily detailed explanations of known concepts, the rest felt the time was well spent. 62% found it difficult to participate in class mainly due to the disparity of knowledge among class members. 61% felt that they needed more individual attention from the teacher to clarify their doubts and 52% felt that the extra hours were justified as it gave them the much needed opportunity to interact with the teacher.

FIGURE 1: GRAPH SHOWING THE OPINION OF STUDENTS IN THE DIFFERENT CATEGORIES



TESTING OF HYPOTHESIS

Hypotheses H1:- Extended classroom teaching results in inefficient utilization of student hours

Student hours can be defined as the number of hours spent on the subject by the students as stipulated by the college.

The formula for calculating student hours

= total number of hours for both the subjects * number of students

Student hours for the group in Study 1

Total number of hours for both the subjects (regular class) is 150 hrs

Total number of students in class = 120

Students hours used in Study 1= 150*120 = **18000**

Student hours for the group in Study 2

Students hour = total number of hours for both subjects (regular class) * number of students + total number of hours in tutorial class* number of students in tutorial class

Total number of hours for both the subject = 106

Number of student =120

Total number of hours in tutorial class = 36

Number of students in tutorial class =25

Student hours for the group in Study 2 = (106*120) + (36*25)

= 12720 + 900 = **13620**

What we can conclude from the needs assessment done for the group in Study 1 is that while there was a need for personal attention and opportunities for interaction, there were students who felt that their hours were being wasted with repetitive learning. Others felt that the presence in the class of members with higher levels of knowledge in the subject was creating an unhealthy learning environment that was stifling class participation. On the basis of this we can conclude that a number of students were dissatisfied with the manner in which the student hours were utilized.

Compared with the model in Study 1 which uses 18,000 student hours, the model in Study 2 uses only 13,620 hours to achieve the same objectives. Thus we can conclude that Hypothesis 1 is proved true and extended classroom teaching results in inefficient utilization of student hours.

Hypotheses 2:- Attendance in tutorials significantly increases performance in the subjects

In this study the researcher has examined the relationship between attendance of the students in tutorials and their performance in the mid semester and final semester examinations (IAT 1&2). There were two groups for tutorials. The first group was chosen on basis of their performance in the examination after the bridge course. The group was reshuffled after the mid semester IAT 1 to exclude the students whose performance had considerably improved and to include instead those whose performance showed a downward trend.

Table I shows the relationship between attendance and the performance of the tutorial students in IAT 1. Spearman correlation was used as the statistical tool as the sample for the study was small and did not follow a normal distribution. The result for the first group of the study shows that there is a significant relation between attendance and exam performance (p value< 0.05).

TABLE I: TABLE SHOWING THE RELATIONSHIP BETWEEN ATTENDANCE AND PERFORMANCE IN IAT 1

		IAT 1	ATTEND
IAT 1	Pearson Correlation	1	.053*
	Sig. (2-tailed)		.045
ATTENDANCE	Pearson Correlation	.053*	1
	Sig. (2-tailed)	.045	

Table II shows the relationship between attendance and the performance of the tutorial students in IAT 2. The result from the test shows that there is significant relationship between the attendance of students and their performance in the test (p value< 0.05).

TABLE II: TABLE SHOWING THE RELATIONSHIP BETWEEN ATTENDANCE AND PERFORMANCE IN IAT 2

		ATTEND	IAT 2
ATTENDANCE	Correlation Coefficient	1.000	.164
	Sig. (2-tailed)	.	.007
IAT 2	Correlation Coefficient	.164	1.000
	Sig. (2-tailed)	.007	.

Thus we can conclude that Hypothesis 2 is true for the subjects under study.

Hypotheses 3:- Equal or higher performance is registered in fewer student hours using the new method.

To test this hypothesis a paired sample t test was carried out where marks obtained by the students in Study 2 in the post bridge examination, IAT 1 and IAT-2 were taken and compared. The results obtained by the analysis are given below.

Table III shows the mean score obtained for the post Bridge exam, IAT 1 & IAT 2 of students in Study 2. The mean score of IAT I (60.04) shows that there is increase in the performance when compared to mean of the post Bridge exam (51.35). There is a further improvement in the mean score comparison between IAT I and IAT II. The mean value of IAT II (63.95) is higher than the mean recorded value of IAT I (60.04)

TABLE III: TABLE SHOWING THE MEAN MARK OBTAINED FOR THE POST BRIDGE EXAM, IAT 1 & IAT 2 OF STUDENTS IN STUDY 2

	Mean	N	Std. Deviation	Std. Error Mean
Bridge exam	51.3559	118	16.68283	1.53578
IAT I	60.0424	118	19.77972	1.82087
IAT II	63.9576	118	24.84667	2.28732

Table IV table shows the difference between performances of the students in study 2 in the post bridge examination and IAT I, and between the performance in the two IATs. The paired sample t-test shows that the differences registered are statistically significant. This significant increase in the performance of students was registered in 13620 student hours.

TABLE IV: TABLE SHOWING THE RESULTS OF THE PAIRED SAMPLE T-TESTS FOR THE POST BRIDGE EXAM, IAT 1 & IAT 2 OF STUDENTS IN STUDY 2

PAIRED SAMPLE t-TEST							
		Mean	Std. Deviation	Std. Error Mean	t value	df	Sig.
Pair 1	Bridge- IAT I	-8.68644	17.51322	1.61222	-5.388	117	.000
Pair 2	IAT I- IAT II	-3.91525	22.89499	2.10766	-1.858	117	.006

PERFORMANCE OF STUDENTS IN STUDY 1

The performance on the three exams by the students in Study 1 were also analysed and the results have been recorded in Table 5&6 Table V shows the mean score obtained for the post Bridge exam, IAT 1 & IAT 2 of students in Study 1. The mean score in the bridge test (68.14) is higher than the mean performance score in IAT I (65.78). The mean score in IAT 2 (66.15) shows an increased mean performance level when compared with IAT 1.

TABLE V: TABLE SHOWING THE MEAN MARK OBTAINED FOR THE POST BRIDGE EXAM, IAT 1 & IAT 2 OF STUDENTS IN STUDY 1

	Mean	N	Std. Deviation	Std. Error Mean
bridge	68.1441	111	18.98365	1.80185
IAT I	65.7876	113	25.15291	2.36619
IAT II	66.1504	113	29.83982	2.80709

Table VI table shows the difference between performances of the students in study 1 in the post bridge examination and IAT I, and between the performance in the two IATs. There is a significant difference between the performance in the Bridge test and IAT I as the mean score of bridge test (68.14) is significantly higher when compared to IAT I (65.78). The performance of the student in IAT II (66.15) is significantly higher when as compared to IAT I. This significant increase in the performance of students is done in the 18000 student hours. From the results of the analyses done for both studies we can conclude that Hypothesis 3 has been proved right.

TABLE VI: TABLE SHOWING THE RESULTS OF THE PAIRED SAMPLE T-TESTS FOR THE POST BRIDGE EXAM, IAT 1 & IAT 2 OF STUDENTS IN STUDY 1

PAIRED SAMPLE t-TEST							
		Mean	Std. Deviation	Std. Error Mean	t value	df	Sig.
Pair 1	Bridge- IAT I	2.38739	30.90960	2.93381	.814	110	.018
Pair 2	IAT I- IAT II	-0.36283	25.49617	2.39848	1.933	112	.046

DISCUSSION

Tutorials were found to be effective as a tool that would help teachers to concentrate their extra inputs in the weakest areas and ensure improvement in these. It also ensures the utilization of students' time in the most efficient and effective manner. The three hour tutorial class was given regularly every week. This provided an opportunity for the students to clarify the doubts that could not be dealt with in the scheduled class and get some practice on the ongoing exercises before they moved on to a new topic in the next week.

The advantage of the limited size of the class gave students ample opportunities for discussion, repeated explanations and extra time for supervised practice. Class participation was free of the usual anxiety that surfaces when intra-class knowledge levels are skewed. In spite of this, there was unwillingness among some students to attend the tutorials perhaps because of the pressure it exerted on the crowded schedule of the students. This was one of the factors that affected the performance of students.

CONCLUSION

The entry and exit to and from the tutorial class on the basis of performance was one of major reasons for the success of this model in terms of improvement in subject knowledge of the participants. One weakness of the model under study was that reduced motivation levels may have hampered the teaching learning process to some extent as can be seen from the results of students who cut tutorial classes whenever possible. There are other models that have been tested that have enrollment on a voluntary basis. It remains to be seen whether the motivation factor in these type of tutorials drive participants to greater success. The results of comparative studies in this area could lead to greater success in the application of this method of teaching support in institutions of higher learning.

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PROFITABILITY ANALYSIS OF REGIONAL RURAL BANKS IN INDIA: WITH SPECIAL REFERENCE TO WESTERN REGION

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ABSTRACT

The history of regional rural banks in India dates back to the year 1975. It's the Narsimham committee that conceptualized the foundation of regional rural banks in India. Regional rural banks (RRBs) can be seen as a unique experiment as well as experience in improving the efficacy of rural credit delivery mechanism in India. They have played a key role in rural institutional financing in terms of geographical coverage, clientele outreach and business volume as also contribution to development of the rural economy. Current study aims to check the profitability of selected RRBs of India. This study focuses on western region and covers three states, i.e. Gujarat, Maharashtra and Rajasthan. Prime objectives of the study are, to analyze the interest coverage ratio of selected RRBs during study period, to analyze the Return on Equity (RoE) of RRBs, to examine the Non Interest Income Ratio during period under review, to study net Interest margin ratio of selected RRBs during study period, etc. Current study focuses purely on secondary data which is collected from published annual reports of selected RRBs. To test to hypothesis One way ANOVA has been used and major findings shows that the selected banks of Rajasthan showed higher profitability than selected RRBs of Gujarat and Maharashtra.

KEYWORDS

Regional Rural Banks, Profitability, Interest Coverage Ratio, Return on Equity, Net Interest Margin Ratio.

INTRODUCTION

In India rural people such as small and marginal farmers, landless agricultural laborers, artisans and socially and economically backward castes and classes they have been exploited in the name of credit facility by informal sector. The rural credit market consists of both formal and informal financial institutions and agencies that meet the credit needs of the rural masses in India. The supply of total formal credit is inadequate and rural credit markets are imperfect and fragmented. Moreover, the distribution of formal sector credit has been unequal, particularly with respect to region and class, cast and gender in the country side. Regional Rural Banks were established under the provisions of an Ordinance promulgated on the 26th September 1975 and the RRB Act, 1975 with an objective to ensure sufficient institutional credit for agriculture and other rural sectors. The RRBs mobilize financial resources from rural/semi-urban areas and grant loans and advances mostly to small and marginal farmers, agricultural laborers and rural artisans. For the purpose of classification of bank branches, the Reserve bank of India defines rural area as a place with a population of less than 10,000. RRBs are jointly owned by Government of India, the concerned State Government and Sponsor Banks; the issued capital of a RRB is shared by the owners in the proportion of 50%, 15% and 35% respectively.

REVIEW OF LITERATURE

Saveeta and Verma Sateesh (2001), Shravan Singh (2001), Kantawala Amita S (2004), Ketkar W Kusum et al. (2004), analyze the performance of banks from a profitability point of view, using various parameters. Most of the studies (Ganesan P 2001; Rayapati Vijayasree, 2002; Das M R, 2002-2003; and Gupta V & Jain P K, 2003) compared the performance of public, private and foreign banks by using measures of profitability, productivity, and financial management (Trehan Ruchi and Sonu Nitti, 2003).

Hosmani (1999) studied the Performance and impact of a RRB, (Malaprabha Grameena Bank) in Karnataka. A comparative assessment has also been made for the period of establishment and period of development. He found that liquidity and solvency position of the bank was sound. The pattern of credit flow to beneficiaries remained unchanged as indicated by significant Kendall's Coefficient of Concordance (0.90) and Gini Coefficient (0.12) indicated a lower inequality in credit distribution among beneficiaries. Operating NRI account, export financing, procedure simplification, credit enhancement, long run planning and periodical evaluation were some of the recommendations made for enhancing the performance of grameena banks.

Deshpande et al. (1999) studied the impact of deregulation of interest rates in turning the loss making RRBs to profit making institutions. A sample of 15 RRBs were taken for the study and the information was obtained for the period 1996-97. They found that impact of deregulation of interest rates on profitability was felt more strongly via advances (through increased interest cost) compared to decomposits (through increased interest income) compared deposits (through possible reduction in interest cost) and the combined impact on both advances and deposits on profitability was found to be limited.

Kalkundrickars (1990) in his study on "Performance and Growth of regional Rural Banks in Karnataka" found that these banks had benefited the beneficiaries in raising their income, productivity, employment and use of modern practices and rehabilitate rural artisans.

Malhotra asserts that geographical location of RRBs is not the limiting factor for their performance. He further finds that it is the specific nourishment which each RRB receives from its sponsor bank, is cardinal to its performance. In other words, the umbilical cord had its effect on the performance of RRBs. The limitation of the study is that the financial health of the sponsor bank was not considered directly to infer about the umbilical cord hypothesis. Nitin and Thorat (2004) on a different note provide a penetrating analysis as to how constraints in the institutional dimensions have seriously impaired the governance of the RRBs. They have argued that perverse institutional arrangements that gave rise to incompatible incentive structures for key stakeholders such as political leaders, policy makers, bank staff and clients have acted as constraints on their performance. The lack luster performance of the RRBs during the last two decades, according to the authors can be largely attributed to their lack of commercial orientation.

Patel and Shete (1980) of the National Institute of Banking Management made a valuable analysis of performance and prospects of RRBs. They also gave a comparative picture of performance in deposits, branch expansion and credit deployment of the co-operative banks, commercial banks and RRBs in a specified area. This was an eye opener for many researchers engaged in this field of rural credit.

Kumar Raj (1993) carried out a study on the topic "Growth and Performance of RRBs in Haryana". On the basis of the study of RRBs of Haryana, it is found that there was an enormous increase in deposits and outstanding advances. The researcher felt the need to increase the share capital and to ensure efficient use of distribution channels of finance to beneficiaries.

A. K. Jai Prakash (1996) conducted a study with the objective of analyzing the role of RRBs in Economic Development and revealed that RRBs have been playing a vital role in the field of rural development. Moreover, RRBs were more efficient in disbursal of loans to the rural borrowers as compared to the commercial banks. Support from the state Governments, local participation, and proper supervision of loans and opening urban branches were some steps recommended to make RRBs further efficient.

OBJECTIVES OF STUDY

- To analyze the interest coverage ratio of selected RRBs during study period
- To analyze the Return on Equity (RoE) of RRBs

- To analyze the Non Interest Income Ratio during period under review
- To study net Interest margin ratio of selected RRBs during study period
- To check the performance of selected banks on spread ratio

RESEARCH METHODOLOGY

STATEMENT OF PROBLEM

In recent years, there have been considerable pressures on the profitability of banks. Profitability is considered to be an index of financial health. The term profitability refers to an indication of the efficiency with which the operation of the business is carried on. Poor operational performance may indicate poor selling of bank products and hence poor profits. A lower profitability may rise due to lack of control over the expenses. Banks are urged to generate sufficient revenue to meet the rising cost of funds. Profitability is a key result area where performance and result directly and virtually affect the survival. Therefore, this study analyses the financial performance of regional rural banks in India. The Problem Statement for this research is:

"Profitability Analysis of Regional Rural Banks in India (with special reference to western region)"

SCOPE OF STUDY

The scope of this study is limited to Profitability Analysis of Regional Rural Banks in India. Current study covers RRBs of Western Region of India, which includes three states i.e. Gujarat, Maharashtra and Rajasthan. The study covers 2 Banks of Gujarat, 1 Bank of Maharashtra and 2 Banks of Rajasthan State.

DATA COLLECTION AND PERIOD OF STUDY

Present study is purely based on secondary data which is collected from published annual reports of selected RRBs working in western region of India. Profitability Analysis is carried out for five successive financial year i.e. 2007-08 to 2011-12.

POPULATION AND SAMPLE SIZE OF STUDY

Current study is conducted to check profitability of Regional Rural Banks in India. This study focuses on Western region of India which includes three states i.e. Gujarat, Rajasthan and Maharashtra. The Population consists of RRBs working in these three states. It was found that there were 3 RRBs working in Gujarat, 6 RRBs working in Rajasthan and 3 RRBs are working in Maharashtra. Depending upon the data availability 2 RRBs from Gujarat, 1 from Maharashtra and 2 from Rajasthan have been selected as sample of study.

TOOLS AND TECHNIQUES OF ANALYSIS

Current study has included broadly two types of tools i.e. accounting tools and Statistical tools. Accounting tools include various profitability ratios i.e. Interest Coverage Ratio, Return on Equity Ratio, Non-Interest Income Ratio, Interest Margin Ratio and Spread Ratio. Statistical tools include calculation of Mean, Standard Deviation, Coefficient of Variance and ANOVA.

LIMITATIONS OF THE STUDY

- Current study focuses only on profitability aspect of RRBs, which would become a major limitation of this study
- The concept of Regional Rural Banks is still in a developing stage, this leads to limitations of this research
- Present study is based on secondary data and secondary data has its own limitations which would definitely affect this research

PROFITABILITY ANALYSIS OF RRBS

1. INTEREST COVERAGE RATIO

A ratio used to determine how easily a company can pay interest on outstanding debt. The interest coverage ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) of one period by the company's interest expenses of the same period. The lower the ratio, the more burdens is on company by debt expense. When a company's interest coverage ratio is 1.5 or lower, its ability to meet interest expenses may be questionable. An interest coverage ratio below 1 indicates the company is not generating sufficient revenues to satisfy interest expenses.

Formula: Interest Coverage Ratio = EBIT / Interest Expenses

TABLE NO. 1: INTEREST COVERAGE RATIO

Year	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGGB	MGB	RGB	BRGB
2007-08	0.23	0.77	0.27	0.08	1.69
2008-09	0.19	0.07	0.29	0.08	1.84
2009-10	0.17	-0.27	0.29	0.14	1.87
2010-11	0.13	-1.35	0.15	0.09	2.13
2011-12	0.14	-2.06	0.17	0.13	1.75
Average	0.172	-0.568	0.234	0.104	1.856
State Avg.	-0.20		0.234	0.98	
Overall average	0.338				
Std. Dev.	0.040	1.131	0.068	0.028	0.169
CV	23.400	-199.256	29.235	27.701	9.108

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the Interest Coverage ratio of selected regional rural banks during the period under review for three states. The Interest coverage ratio of Dena Gramin Bank and Baroda Gujarat Gramin Bank shows decreasing trend during the study period. The ratio was below 0.25 in DGB and 0.77 in BGGB. Interest coverage ratio of Maharashtra Gramin Bank shows fluctuating trend during the study period. It ranges between 0.15 in FY 2010-11 to 0.29 in FY 2008-09 and 2009-10. The ratio of Rajasthan Gramin Bank and Baroda Rajasthan Gramin Bank shows increasing trend during the study period except FY 2010-11 and FY 2011-12 respectively. The Average Interest Ratio of Gujarat State was -0.20 where as the average interest ratio of Maharashtra was 0.23. Rajasthan State has recorded the highest interest coverage ratio during the period under review. It has 0.98 which is very near to 1 so, it can be concluded that RRBs of Rajasthan are generating sufficient revenue during the study period.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the interest coverage ratio of selected banks during study period

H1: There is significance difference in the interest coverage ratio of selected banks during study period

TABLE NO. 2

ANOVA					
Source of Variation	SS	DF	MS	F	F crit
Between Groups	16.079776	4	4.019944	15.266	2.866
Within Groups	5.26652	20	0.263326		
Total	21.346296	24			

Here, hypothesis is tested at 5% level of significance and (4,20) d.f. Here, calculated value is higher than tabulated value so, null hypothesis is rejected and alternative hypothesis is accepted. So, it can be concluded that there is significance difference in interest coverage ratio of selected Regional Rural Banks during the period under review.

2. NON INTEREST INCOME RATIO

Bank and creditor income derived primarily from fees. Examples of non-interest income include deposit and transaction fees, insufficient funds (NSF) fees, annual fees, monthly account service charges, inactivity fees, check and deposit slip fees, etc. Institutions charge fees that provide non-interest income as a way of generating revenue and ensuring liquidity in the event of increased default rates.

Formula: Noninterest income / Net income

TABLE NO. 3: NON INTEREST INCOME RATIO

YEAR	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGGB	MGB	RGB	BRGB
2007-08	0.39	0.49	0.57	0.56	0.52
2008-09	0.36	0.41	0.60	0.49	0.56
2009-10	0.28	0.39	0.37	0.35	0.57
2010-11	0.49	0.32	0.42	0.44	0.56
2011-12	0.56	0.27	0.75	0.29	0.69
Average	0.416	0.376	0.542	0.426	0.58
State Avg.	0.396		0.542	0.503	
Overall average	0.489				
Std. Dev.	0.110	0.0847	0.151	0.107	0.064
CV	26.475	22.535	27.962	25.315	11.106

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the non Interest income ratio of selected Regional Rural Banks during the period under review for three states. Non Interest income ratio of Dena Gramin Bank shows fluctuating trend during the study period. It ranges between 0.28 and 0.56. Non Interest Income ratio of Baroda Gujarat Gramin Bank shows decreasing trend during the period under review. It also ranges between 0.27 in 2011-12 to 0.49 in 2007-08. Non Interest income ratio of Maharashtra Gramin Bank shows fluctuating trend during the study period, in the year 2011-12 it was 0.75 which was highest among five years. This ratio was lowest in the year 2009-10 and it was 0.37. Non Interest income ratio of Rajasthan Gramin Bank shows fluctuating trend during the study period, in the year 2007-08 it was 0.56 which was highest interest among five years. Baroda Rajasthan Gramin Bank shows decreasing trend during the study period, in the year 2007-08 it was 0.56 which was lowest interest among five years. In Gujarat state, the average ratio of last five years of Dena Gujarat Gramin Bank was 0.416 which was higher than the Baroda Gujarat Gramin Bank was 0.376. In Rajasthan state, the average ratio of last five years of Baroda Rajasthan Gramin Bank was 0.58 which was higher than Rajasthan Gramin Bank. Comparing State wise average of all states, The grand average of Gujarat state was 0.396 which was lower than the grand average of Rajasthan and Maharashtra states.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the non interest income ratio of selected banks during study period

H1: There is significance difference in the non interest income ratio of selected banks during study period

TABLE NO. 4

ANOVA					
Source of Variation	SS	DF	MS	F	F crit
Between Groups	0.185712	4	0.046428	4.997847	2.75871
Within Groups	0.23224	25	0.00929		
Total	0.417952	29			

Here, hypothesis is tested at 5% level of significance and (4,20) d.f. Here, calculated value is higher than tabulated value so, null hypothesis is rejected and alternative hypothesis is accepted. So, it can be concluded that there is significance difference in Non Interest Income ratio of selected Regional Rural Banks during the period under review.

3. OPERATING EXPENSE RATIO

The **Operating Expense Ratio (OER)** is equal to a company's operating expenses divided by its revenues. The measure is very common in real estate analysis, whereby analysts are measuring the costs to operate a piece of property versus the income it generates. Operating expenses are costs associated with running a business's core operations on a daily basis. Thus, the lower a company's operating expenses are, the more profitable it generally is. Over time, changes in the OER indicate whether the company can increase sales without increasing operating expenses proportionately (i.e., if the business is scalable). In real estate, companies can compare properties by using the ratio. As such, the OER is also a measure of managerial flexibility and competency that makes companies easier to compare.

Formula: Operating Expenses / Revenue * 100

TABLE NO. 5: OPERATING EXPENSES RATIO (Figures in Percentage)

YEAR	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGGB	MGB	RGB	BRGB
2007-08	25.56	22.17	11.28	43.96	27.91
2008-09	26.43	20.88	7.34	38.12	22.41
2009-10	22.03	22.53	33.56	26.38	24.64
2010-11	27.51	21.98	39.74	31.03	30.43
2011-12	30.86	19.63	33.37	25.22	27.45
Average	26.478	21.438	25.058	32.942	26.568
State Avg.	23.958		25.058	29.755	
Overall average	26.257				
Std. Dev.	3.197	1.183	14.668	7.977	3.102
CV	12.076	5.520	58.539	24.216	11.677

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the non Interest income ratio of selected regional rural banks during the period under review for three states. Operating expense ratio of Dena Gramin Bank shows fluctuating trend during the study period, in the year 2011-12 it was 30.86 percent which was highest among five years. Operating expense ratio of Baroda Gujarat Gramin Bank shows decreasing trend during the study period which would have positive effect on profitability, in the year 2009-10 it was 22.53 which was highest among five years. This ratio was lowest in the year 2011-12 and it was 19.63. Baroda Gujarat Gramin Bank's Operating expense ratio was below 22.53 percent during the period of five years. Operating expense ratio of Maharashtra Gramin Bank shows fluctuating trend during the study period, ratio was lowest in the year 2008-09 and it was 7.34 percent which would increase profitability for the bank. Rajasthan Gramin Bank shows fluctuating trend during the study period, in the year 2007-08 it was 43.96 which was highest among five years which affected negatively to profitability of bank. Operating expense ratio of Baroda Rajasthan Gramin Bank shows decreasing trend during the study period, which affects positively to profitability of the Baroda Rajasthan Gramin Bank's Operating expense ratio was below 30.43 during the period of five years. Comparing state wise RRBs it was found that RRBs of Gujarat

state had lowest operating ratio among all the states which would have positive impact on profitability. The above table also shows the overall average of all the three state was 26.257 percent.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the operating expenses ratio of selected banks during study period

H1: There is significance difference in the operating expenses ratio of selected banks during study period.

TABLE NO. 6

ANOVA					
Source of Variation	SS	DF	MS	F	F crit
Between Groups	14411.9602	4	3602.99	47.96784	2.866081
Within Groups	1502.25232	20	75.11262		
Total	15914.2125	24			

Here, hypothesis is tested at 5% level of significance and (4,20) d.f. here, f calculated value is higher than f tabulated value so, null hypothesis is rejected and alternative hypothesis is accepted. So, it can be concluded that there is significance difference in operating expense ratio of selected Regional Rural Banks during the period under review.

4. RETURN ON EQUITY

The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Formula: Return on Equity = Net Income / shareholder's Equity * 100

TABLE NO. 7: RETURN ON EQUITY (Figures in Percentage)

YEAR	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGGB	MGB	RGB	BRGB
2007-08	4.05	12.99	7.63	0.22	4.04
2008-09	4.36	17.35	9.5	0.25	4.51
2009-10	5.29	20.24	15.98	0.48	4.76
2010-11	4.2	20.2	14.48	13.64	5.63
2011-12	4.5	18.22	5.3	17.69	5.88
Average	4.48	17.8	10.578	6.456	4.964
Grand Avg.	11.14		10.578	5.71	
Overall average	9.14				
Std. Dev.	0.48327	2.96768428	4.530929265	8.528295	0.77202979
CV	10.7872	16.6723836	42.83351545	132.0987	15.5525743

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the non Interest income ratio of selected Regional Rural Banks during the period under review for three states. Return on equity ratio of Dena Gramin Bank and Baroda Gujarat Gramin Bank shows fluctuating trend during the study period, it was 5.29 percent and 20.24 percent which was highest among five years. Return on equity ratio of Maharashtra Gramin Bank also shows fluctuating trend during the study period. Rajasthan Gramin Bank and Baroda Rajasthan Gramin Bank show increasing trend during the study period. RGB recorded higher ratio comparing to BRGB. Comparing Return on Equity ratio of all the states, RRBs of Gujarat has recorded highest during the period under study. Whereas RRBs all Rajasthan has recorded lower ratio during study period.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the return on equity ratio of selected banks during study period

H1: There is significance difference in the return on equity ratio of selected banks during study period

TABLE NO. 8

ANOVA					
Source of Variation	SS	df	MS	F	F crit
Between Groups	0.185712	4	0.046428	4.997847	2.75871
Within Groups	0.23224	25	0.00929		
Total	0.417952	29			

Here, hypothesis is tested at 5% level of significance and 4,20 d.f. here, f calculated value is higher than f tabulated value so, null hypothesis is rejected and alternative hypothesis is accepted. So, it can be concluded that there is significance difference in return on equity ratio of selected regional rural banks during the period under review.

5. NET INTEREST MARGIN

Performance metric that examines how successful a firm's investment decisions are compared to its debt situations, a negative value denotes that the firm did not make an optimal decision, because interest expenses were greater than the amount of returns generated by investments. A positive net interest margin means the investment strategy pays more interest than it costs. Conversely, if net interest margin is negative, it means the investment strategy costs more than it makes.

Formula: Net Interest Margin = Investment Returns – Interest Expenses / Avg. Earning Assets

TABLE 9: NET INTEREST MARGIN

YEAR	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGGB	MGB	RGB	BRGB
2007-08	0.03	0.05	0.32	-0.3	0.03
2008-09	0.03	0.04	0.34	0.04	0.03
2009-10	0.03	0.04	0.053	0.03	0.03
2010-11	0.03	0.04	-0.02	0.03	0.03
2011-12	0.03	0.04	0.03	0.03	0.03
Average	0.03	0.04	0.1446	-0.034	0.03
Grand Avg.	0.035		0.1446	-0.002	
Overall average	0.1776				
Std. Dev.	0	0.00707107	0.171437452	0.148762	0
CV	0	17.6776695	118.5597871	-437.534	0

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the non Interest income ratio of selected regional rural banks during the period under review for three states. Net interest margin ratio of Dena Gramin Bank and Baroda Gramin Bank shows constant ratio during the study period. Net interest margin ratio of Maharashtra Gramin Bank shows

fluctuating trend during the study period, ratio was highest in the year 2008-09 and it was 0.34 so that it was profitable for the bank. In the year 2010-11, the ratio was -0.02 which was lowest among all the 5 years. Maharashtra Gramin Bank's Net interest margin ratio was below 0.34 during the period of five years. Net interest margin ratio of Rajasthan Gramin Bank shows fluctuating trend during the study period, in the year 2007-08 the ratio was -0.03 it was much low. Net interest margin ratio of Baroda Rajasthan Gramin Bank shows constant ratio during the study period. In Gujarat state, the average ratio of last five years was 0.035 which was higher than Rajasthan state and lower than the average ratio of Maharashtra State.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the Net Interest Margin ratio of selected banks during study period

H1: There is significance difference in the Net Interest Margin ratio of selected banks during study period

TABLE NO. 10

ANOVA					
Source of Variation	SS	df	MS	F	F crit
Between Groups	0.08297344	4	0.020743	2.011154	2.866081
Within Groups	0.2062832	20	0.010314		
Total	0.28925664	24			

Here, hypothesis is tested at 5% level of significance and 4,20 d.f. here, f calculated value is lower than f tabulated value so, null hypothesis is accepted. So, it can be concluded that there is no significance difference in Net Interest Margin ratio of selected regional rural banks during the period under review.

6. SPREAD RATIO

In banking, the net interest rate spread is the difference between interest earned on loans, securities, and other interest-earning assets and the interest paid on deposits and other interest-bearing liabilities. The higher the ratio better will be the profitability of the bank and vice versa.

Formula: Interest Income- Interest Expenses

TABLE NO. 11: SPREAD RATIO (Amount in thousand rupees)

YEAR	GUJARAT		MAHARASHTRA	RAJSTHAN	
	DGB	BGBB	MGB	RGB	BRGB
2007-08	399381	422380	7815938	-5504110	703710
2008-09	446768	467880	8972676	715927	682629
2009-10	543658	525855	1505047	715632	772479
2010-11	598738	552368	-486987	1017178	1042879
2011-12	686338	572856	1109667	1216358	1059396
Average	534976.6	508267.8	3783268.2	-367803	852218.6
Grand Avg.	521622.2		2976734.24		242207.8
Overall average	1246854.7				
Std. Dev.	115345.2	62116.144	4294353.668	2879136	184694.1
CV	0.004167	0.01730564	0.002422844	-0.01513	0.001232

Source: Calculated from the Annual Reports of selected RRBs

Above table shows the spread ratio of selected regional rural banks during the period under review for three states. The spread of Dena Gramin Bank shows increasing trend from 2007 – 08 to 2011-12 i.e. INR 3,99,381 to 6,86,338 during the study period of five years. Spread ratio of Baroda Gujarat Gramin Bank also shows increasing trend from 2007 – 08 to 2011-12 i.e. INR 4,22,380 to 5,72,856 during the study period of five years. Spread ratio of Maharashtra Gramin Bank shows fluctuating trend during the study period, ratio was highest in the year 2008-09 and it was 78,15,938 so that it is good for the bank. In the year 2011 - 12, the ratio was 1,10,967 which was lowest among all the 5 years. Spread ratio of Rajasthan Gramin Bank shows increasing trend during the study period. It shows fluctuating ratio during the study period. In the year 2008 -09 the ratio was INR 6,82,629 which was lowest period under review. In Gujarat state, the average spread ratio of last five years was INR 5,21,622.2, the grand average of Maharashtra state was INR 29,76,734.24 which was highest among all the states and the grand average of Rajasthan was INR 2,42,207.8 so the bank of Maharashtra state is having the highest Spread during the period under review.

HYPOTHESIS STATEMENT

Ho: There is no significance difference in the spread of selected banks during study period

H1: There is significance difference in the spread of selected banks during study period

TABLE NO. 12

ANOVA					
Source of Variation	SS	df	MS	F	F crit
Between Groups	0.08297344	4	0.020743	2.011154	2.866081
Within Groups	0.2062832	20	0.010314		
Total	0.28925664	24			

Here, hypothesis is tested at 5% level of significance and 4,20 d.f. here, f calculated value is lower than f tabulated value so, null hypothesis is accepted. So, it can be concluded that there is no significance difference in spread of selected regional rural banks during the period under review.

FINDINGS OF THE STUDY

1. During the study period, all five Regional Rural Banks the Interest Coverage ratio of Dena Gujarat Gramin Bank is higher than Gujarat Baroda Gramin Abnk i.e. 0.172.
2. The bank of Rajasthan is having efficient capacity to pay the interest expense.
3. Interest coverage ratio of Maharashtra Gramin Bank shows fluctuating trend during the study period.
4. In the interest coverage ratio there is significance difference between selected banks during the study period.
5. Return on equity ratio of Baroda Rajasthan Gramin Bank shows increasing trend during the study period
6. The average noninterest income ratio of Gujarat state is 0.396 which is lower than Maharashtra or Rajasthan Gramin Bank.
7. The average operating expense ratio of Rajasthan state was 29.755 i.e. Higher than Gujarat state so the bank of Gujarat state having the more profit than Rajasthan state.
8. Dena Gramin Bank's return is below 5.29 during the period of five years. The return of equity of Maharashtra state is highest then Gujarat and Rajasthan state.
9. In ROE ratio, there is a significance difference between the select banks during the study period.

CONCLUSION

The role of Regional Rural Banks is for betterment of socio-economic movement of the rural society which is functionally diverse and geographically widespread deserves for recognition. Time has come to make the rural banking system successful and the beneficiaries should not be skeptical about the purpose of its existence. The Regional Rural Bank should have strict regimen to follow and the results with a marginal error always appreciated. However the duress on the RRBs while setting the standards shall not be an impediment in delivering its responsibilities towards the rural society. The acumen by the sponsoring banks and

the RRBs itself on the financial figures and selection of schemes for the beneficiaries should be appropriate in order to sustain the efficiency. The judicious mix in capital configuration and extending hand by the sponsoring banks in attaining the operational efficiency is the need of the hour. However current study shows profitability of the RRBs, it is very clear from the study that some of the RRBs are not generating handsome amount of profit as like other commercial banks in India. The seldom profit of the Loss making RRBs is worrisome and they should live up to their expectations. However the ray of hope is getting brighter over the period of years, thanks to the recommendations made by various committees for identifying the weaknesses of RRBs and the reforms taken by the Reserve Bank of India. It is evident from facts that the number of loss making RRBs are on the declining trend.

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A SMALL TRIBUTE TO COMPUTER LEGENDS WHO MADE AN IMPACT ON THE COMPUTER INDUSTRY AND PASSED AWAY IN THE YEAR 2011

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ABSTRACT

The death of Steve Jobs at the age of 56 on October 5, 2011 activated an unprecedented level of mourning and tributes across the IT industry. And while Jobs was the most high profile technology innovator to die that year, he was far from the only significant loss for the Tech industry. We have lost many other notable people who had immense influence on our industry. This article is dedicated to those who left an empty space in the Computer World in year 2011. Their impact on the industry and our lives will carry on.

KEYWORDS

Daniel D. McCracken, Dennis Ritchie, Harry Olsen, Jean Bartik, Kenneth, Michael Stern Hart, Paul Baran, Steve Jobs.

INTRODUCTION



Several IT professionals who contributed so much to our society passed away in year 2011. They touched our lives in so many ways. Their contributions are immense and unforgettable. This article is just a tribute to all of them for providing us with technological innovations.

KENNETH HARRY OLSEN

Kenneth Harry Olsen (February 20, 1926 - February 6, 2011) the **co-founder of DEC and minicomputers pioneer**

Kenneth Harry Olsen, the co-founder of DEC, a pioneer in developing minicomputer, died on February 6, 2011.

Kenneth Harry Olsen, born on February 20, 1926 in Bridgeport, Connecticut, was an American engineer who co-founded Digital Equipment Corporation (DEC) in 1957 with colleague Harlan Anderson. Olsen began his career working in summers in a machine shop. Fixing radios in his basement gave him the reputation of a neighborhood inventor.

Olsen earned BS (1950) and an MS (1952) degrees in electrical engineering from the Massachusetts Institute of Technology. During his studies at MIT, the Office of Naval Research of the United States Department of the Navy recruited Olsen to help build a computerized flight simulator. Also while at MIT he directed the building of the first transistorized research computer. Olsen was an engineer who had been working at MIT Lincoln Laboratory on the TX-2 project.

Ken Olsen was known throughout his career for his paternalistic management style and his fostering of engineering innovation. Ken Olsen's valuing of innovation and technical excellence spawned and popularized techniques, such as engineering matrix management, that are broadly employed today throughout many industries. In 1986, Fortune Magazine named Olsen "America's most successful entrepreneur", and the same year he received the IEEE Engineering Leadership Recognition Award.

Olsen retired from DEC in 1992. He subsequently became the chairman of Advanced Modular Solutions. Olsen was also a major contributor to 'The Family', a religious and political organization.

Olsen was a trustee of Gordon College in Wenham, Massachusetts. There, the Ken Olsen Science Center was named after him in 2006, and dedicated on 27 September 2008. Its lobby features a Digital Loggia of Technology, documenting Digital's technology and history, and an interactive kiosk to which former employees have submitted their stories.

Olsen died on February 6, 2011. Ken Olsen launched DEC during the mainframe era of computing. Computing was mainframe-centric before Ken Olsen started the ball rolling with commercially-successful minicomputers; first the PDP-8, later the PDP-11 and PDP-15. Minicomputers made it possible to distribute computing power throughout an organization instead of having only a centralized data center. Ken Olsen was in the unique class of creative people who brought about major innovation in computing with minicomputers.

JEAN BARTIK

Jean Bartik (December 27, 1924 - March 23, 2011) the **first woman programmer of ENIAC**

Jean Bartik, the first woman programmer of ENIAC, died on March 23, 2011.

Jean Bartik was a women pioneer and a computer programmer - the first woman to program the ENIAC, the first large-scale, fully electronic, and general-purpose computer developed in the United States. Bartik also worked on the BINAC and UNIVAC computers, which were successors to the ENIAC. She was one of the original programmers for the ENIAC computer.

She was born on December 27, 1924 in Northwest Missouri in Gentry County. She attended Northwest Missouri State Teachers College, majoring in mathematics. In addition to a BS in mathematics from Northwest Missouri State Teachers College, Bartik held an MS in English from the University of Pennsylvania and an honorary Dr. of Science from Northwest Missouri State University.

In 1945, she was hired by the University of Pennsylvania to work for Army Ordnance at Aberdeen Proving Ground. When the ENIAC computer was developed for the purpose of calculating ballistics trajectories, she was selected to be one of its first programmers. Bartik later became part of a group charged with converting the ENIAC into a stored program computer; in the original implementation, ENIAC was programmed by setting dials and changing cable connections. She went on to work on the BINAC and UNIVAC I computers. In 1997 she was inducted into the Women in Technology International Hall of Fame, along with the other original ENIAC programmers. In 2008 she was one of three Fellow Award honorees of the Computer History Museum, along with Bob Metcalfe and Linus Torvalds.

PAUL BARAN

Paul Baran (April 29, 1926 - March 26, 2011) **Father of Packet Switching Technology and Internet pioneer**

Paul Baran, passed away on March 26, 2011, leaving behind his remarkable inventions, the fruits of which we all currently enjoy.

Paul Baran was a Polish American engineer who was a pioneer in the development of computer networks. He invented packet switching techniques, and went on to start several companies and develop other technologies that are an essential part of the Internet and other modern digital communication. Paul Baran was born in Grodno, Poland (which is now in Belarus) on April 29, 1926. He graduated from Drexel University in 1949 (then called Drexel Institute of Technology), with a degree in electrical engineering. He then joined the Eckert-Mauchly Computer Company, where he did technical work on UNIVAC models, the first brand of commercial computers in the USA. He obtained his Masters degree in engineering from UCLA in 1959, with advisor Gerald Estrin while taking night classes. After joining the RAND Corporation that same year, Baran took on the task of designing a "survivable" communications system that could maintain

communication between end points in the face of damage from nuclear weapons. While conducting research at the historic RAND organization, he invented the field of *packet switching* networks, a concept embedded in the design of the *ARPANET* and the standard *TCP/IP* protocol used on the *Internet* today. Baran later left RAND to become an entrepreneur and private investor in the early 1970's, and founded Metricom, co-founded Com21.com, and co-founded the Institute for the Future. Baran extended his work in packet switching to wireless-spectrum theory, developing what he called "kindergarten rules" for the use of wireless spectrum. In addition to his innovation in networking products, he is also credited with inventing the first metal detector, a doorway gun detector.

DANIEL D. MCCRACKEN

Daniel D. McCracken (July 23, 1930 - July 30, 2011) **the first best-selling author of computer books**

Daniel D. McCracken, the first best-selling author of computer books, died on July 30 in New York.

Daniel D. McCracken was a computer scientist in the United States. He was a Professor of Computer Sciences at the City College of New York, and the author of over two dozen textbooks on computer programming. His *"A Guide to Fortran Programming"* (Wiley, 1961) and its successors were the standard textbooks on that language for over two decades. His books have been translated into fourteen languages.

McCracken was born on July 23, 1930 in Hughesville, Judith Basin County, Montana, a mining town, and graduated in 1951 from Central Washington University with degrees in mathematics and chemistry. He worked seven years with the General Electric Company in computer applications and programmer training. After that, he worked at the New York University Atomic Energy Commission Computer Center, and was a graduate student at the Courant Institute of Mathematical Sciences. In 1959 he became a consultant and continued writing on computer subjects. In 1970 he earned a Master of Divinity degree from the Union Theological Seminary in New York. From 1976-78, he was vice president of the Association for Computing Machinery (ACM), from 1978-80 he was president of the the ACM, and in 1994 he was inducted as a Fellow of ACM.

McCracken died a week after his 81st birthday on July 30, 2011

MICHAEL STERN HART

Michael Stern Hart (March 8, 1947 - September 6, 2011) **Father of e-books**

Michael S. Hart, known as the "father of e-books" died on September 6, 2011.

Michael Stern Hart was an American author, best known as the inventor of the electronic book (or ebook) and the founder of Project Gutenberg, a project to make ebooks freely available via the Internet. Most of the early postings were typed in by Hart himself.

Michael Stern Hart was born in Tacoma, Washington on March 8, 1947. Hart attended the University of Illinois, graduating in just two years. He then attended but did not complete graduate school. Michael Hart was a street musician in San Francisco. He made no money at it, but then he never bought into the money system much—garage-sale T-shirts, canned beans for supper, were his sort of thing. He gave the music away for nothing because he believed it should be as freely available as the air you breathed, or as the wild blackberries and raspberries he used to gorge on, growing up, in the woods near Tacoma in Washington State. All good things should be abundant, and they should be free. He came to apply that principle to books, too. Everyone should have access to the great works of the world, whether heavy. The joy of e-books, which he invented, was that anyone could read those books anywhere, free, on any device, and every text could be replicated millions of times over.

In 1971, Michael Hart was given some operator time on a Xerox mainframe in the University of Illinois, and felt obligated to produce something worthwhile. Struck by an idea, he typed in, letter by letter, the text of the U.S Declaration of Independence, from a copy he had been given on the fourth of July. He then attempted to send it to everyone connected to the mainframe, and narrowly escaped bringing the network (such as it was) down around their heads. It was an inauspicious start for Project Gutenberg, one of the most forward-thinking projects in the history of technology. The basic principles of the web as we know it are embodied in Project Gutenberg. The idea of digitizing and making freely available the world's information found its first real grip there. YouTube, iTunes, and Google Books of course are merely scaled-up versions of that first impetus, to take the written page and translate it to ones and zeros. Hart also predicted the enhancement of automatic translation, which would provide all of the world's literature in over a hundred languages. While this goal has not yet been reached, by the time of his death Project Gutenberg hosted eBooks in 60 different languages, and was frequently highlighted as one of the best Internet-based resources. Michael S. Hart left a major mark on the world. The invention of eBooks was not simply a technological innovation or precursor to the modern information environment. A more correct understanding is that eBooks are an efficient and effective way of unlimited free distribution of literature.

STEVE PAUL JOBS

Steve Paul Jobs (24 February 1955 - October 5, 2011) **the visionary co-founder of Apple**

He was an American businessman and inventor widely recognized as a charismatic pioneer of the personal computer revolution. He was co-founder, chairman, and chief executive officer of Apple Inc. Jobs was co-founder of Pixar Animation Studios. Jobs' first job was with Hewlett-Packard, as a summer employee.

In 1976, at the age of 21 years old, Steve Jobs founded Apple with his summer job's co-worker at HP, Steve Wozniak, making them the first and second Apple employee. The legend of Jobs' innovation had just started.

Jobs introduced the Macintosh to the world in 1983, and it became the first commercially successful small computer with a GUI (Graphical User Interface). In 2007 Jobs entered the mobile market with his new and revolutionary iDevice, named iPhone, which changed the way people using the mobile phone, thus forcing mobile giants like Nokia to innovate at its best. Following the tremendous success of iPhone, Jobs took on the next risky step to introduce his last revolutionary product to the world – iPad in 2010. Once again Steve Jobs shocked the world by the device which can't even be categorized into either computer or smart phone category, but its surprising success once again proved the visionary power of the Jobs.

He was one of the key people bringing the true innovation to the world. He showed us how making the difference can change the world; He changed the way we interact with gadgets and computers. And when he left, he left behind a great deal of legacy he created and improved. He just changed the world.

It is undeniable that Steve Jobs brought us innovation and iconic products like the world had never seen, as well as a cult following of consumers and end users that mythicized him.

DENNIS MACALISTAIR RITCHIE

Dennis MacAlistair Ritchie (September 9, 1941 - October 12, 2011) **Father of C programming**

Dennis Ritchie, father of C programming, died on October 12, 2011

Dennis Ritchie was an American computer scientist who "helped shape the digital era." He created the C programming language and, with long-time colleague Ken Thompson, created the UNIX operating system. He was also co-author of the book *"The C Programming Language"*, published in 1978, acted as both a concise definition of C and a peerless introduction to the style and techniques of programming in that language. It remains a source of inspiration and practical help to programmers to this day.

Modern computing as we know it would not have existed without Dennis Ritchie, father of the C programming language and Co-creator of the UNIX operating system. The C programming language, a shorthand of words, numbers and punctuation, is still widely used today, and successors like C++ and Java build on the ideas, rules and grammar that Mr. Ritchie designed. The UNIX operating system has similarly had a rich and enduring impact. Its free, open-source variant, Linux, powers many of the world's data centers, like those at Google and Amazon, and its technology serves as the foundation of operating systems, like Apple's iOS, in consumer computing devices.

Dennis MacAlistair Ritchie was born on Sept. 9, 1941, in Bronxville, N.Y. Ritchie graduated from Harvard University with degrees in physics and applied mathematics. In 1967, he began working at the Bell Labs Computing Sciences Research Center, and in 1968, he received a PhD from Harvard.

Ritchie received the Turing Award from the ACM in 1983, the Hamming Medal from the IEEE in 1990 and the National Medal of Technology from President Clinton in 1999. Ritchie was the head of Lucent Technologies System Software Research Department when he retired in 2007.

His death came a week after the death of Steve Jobs, although Ritchie's death did not receive as much media coverage. Computer historian Paul E. Ceruzzi said after his death: "Ritchie was under the radar. His name was not a household name at all, but... if you had a microscope and could look in a computer; you'd see his work everywhere inside."

"Steve Jobs was the king of the visible, and Ritchie was the king of what is largely invisible," said Martin Rinard, professor of electrical engineering and computer science at MIT and a member of the Computer Science and Artificial Intelligence Laboratory.

"Jobs' genius is that he built products that people really like to use because he had taste and built things that people really find compelling. Ritchie built things that technologists were able to use to build core infrastructure that people don't necessarily see much anymore, but they use every day."

CONCLUSION

We have lost the great professionals but their remarkable contributions to the technology shall always be remembered by us. They changed the way we use technology now and made our lives easier through their great work. I would like to say a big Thank you to all of them for their tremendous contributions to the world. May their souls rest in peace!

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A STUDY ON MANAGERIAL EFFECTIVENESS

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ABSTRACT

The manager, as a person, as the key individual in society and as the member of his organization-becomes the matter of increasing importance. Careers in organizations that is, careers as managers or other professionals are the principal career opportunities for educated people. Nine out of ten youngsters who receive a college degree can expect to spend all their working lives as managerial employees. The first job of the manager is to make his organization perform. Results are always on the outside. There are only costs on the inside. Even the most efficient plant is still a cost-centre until a distant customer, has paid for its products. The manager thus lives in a constant struggle to keep performance for being overtaken by the concerns of the Inside that is by bureaucracy. Organizations cannot be properly run without competent first-level managers. This study is an exploration towards identifying the relationship between certain individual level variables and managerial effectiveness. Managerial effectiveness was conceptualized in terms of competence, satisfaction, conflict resolution, need fulfillment, value realization, self-concept and recognition variables of the managers. The widespread recognition of this fact holds managers accountable for whatever goes wrong in a work organization. Managers have thus become the leadership groups in our society. The concept of effectiveness is dealt with different ways in different times by theorists and real life practitioners. Undoubtedly it is difficult to arrive at a single conclusion on the construct of managerial effectiveness. The present study is an attempt to explore further on this ever important construct of managerial effectiveness.

JEL CODE

M00

KEYWORDS

managers, managerial effectiveness

INTRODUCTION

The History of Human resource management is as old as the history of mankind. Ever since the creation of mankind, man has been aware that in most endeavors he can accomplish relatively little alone. For this reason, he has found it expedient and even necessary to join with others in order to attain his goals. Thus the concept of human resource management took birth. Management is the function of getting things done through people and directing the work together towards the attainment of a common objective. The effectiveness with which people work together towards the attainment of their joint goals is greatly influenced by the ability of those who hold managerial positions known as managers. Managers are those persons who undertake the tasks and functions of managing, at any level in any kind of enterprise. Their goal is to establish and maintain an environment for performance that individuals will contribute to group objectives with the least cost- whether money, time, effort, materials, discomfort or dissatisfaction- to create a surplus value, or profit. Managers perform the task of designing and maintaining an environment for the effective and efficient performance of individuals working together in groups towards the accomplishment of reselected missions and objectives. Plant, equipment, materials and people do not make a business any more than airplanes, tanks, ships and people make an effective military force. One other element is indispensable: i.e. effective managers. The quality of managers is one of the most single determining factors for the continuing success of any organization. Managers essentially possess the art of influencing people to strive for group objectives. Individuals are much more than merely a productive factor in manager's plans. They are members of social system in many organizations; they are consumers of goods and services and thus they are vitally influence demand; they are members of families, schools and churches; and they are citizens. In these different roles they establish laws that govern managers, ethics that guide behavior and a tradition of human dignity that is a major characteristics of our society. In short managers and the people they lead are interacting members of a broad social system.

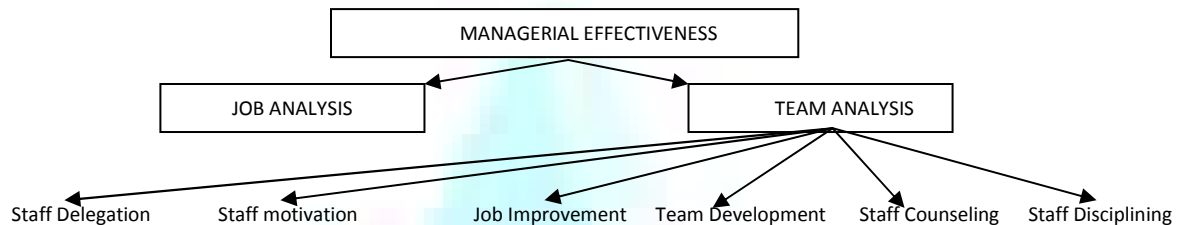
REVIEW OF LITERATURE**CONCEPT OF EFFECTIVENESS**

There are two common words, efficiency and effectiveness considered as one and the same. Efficiency is determined by how one does it, whereas effectiveness depends upon what one does. The concept of managerial effectiveness is the central issue of the management. Intelligence, imagination and knowledge are essential resources, but only effectiveness converts them into results. Effectiveness is best seen as something a manager produces from a situation by managing it appropriately, producing the results or meeting the targets in every sphere of the activities of organizations. The manager's job is linked with three major dimensions— technical, conceptual, and human (Katz, 1974). The productivity of any organization can be increased by the effective management of all the three dimensions and specially by managing the conceptual and human dimensions of management. To be effective is the job of the Manager. The Manager is expected to get the right things done and this is simply saying that he is expected to be effective (Drucker 1967, p1). Individual's effectiveness is a key component in making an individual successful in all aspects of life; including the organizational life. That is why we need effective Managers. A review of literature shows that managerial effectiveness has been studied with three perspectives: 1. Traditional/Conventional perspective, 2. Organizational level competency based perspective, and 3. an individual level competency based perspective. The traditional model emphasizes the ability to set and achieve goals where it is implicitly assumed that managerial effectiveness leads to organizational effectiveness (Campbell, 1970). Personal effectiveness (in problem solving perspective) refers to an ability to solve four of the systems problems. They are (a) adaptation, (b) goal attainment, (c) integration, and (d) latency or tension management (Sutton & Ford, 1982). Apparently within a company, managerial competence is important, particularly at the level where the shortage of top-flight ability is most keenly felt. However, little attention seems to have been paid to managerial effectiveness in comparison to some other aspects of organizational dynamics. According to Campbell (1970) managerial effectiveness should reflect in organizational effectiveness as well. Even if it does not, the effectiveness of the individuals by itself should be a matter of concern; because performing well is a prerequisite to any subsequent positive organizational dynamics. The concept of effectiveness is dealt with different ways in different times by theorists and real life practitioners. Undoubtedly it is difficult to arrive at a single conclusion on the construct of managerial effectiveness. The present study is an attempt to explore further on this ever important construct of

managerial effectiveness. The idea of managerial effectiveness can be clearly understood when managers learn to distinguish sharply between Managerial, Apparent and Personal effectiveness. Managerial Effectiveness –Is not an aspect of personality. It is not something a manager produces from a situation by managing it appropriately. It represents output and not input. Before a manager can operate with full effectiveness, he must:

- Understand the overall contribution his unit should make, which means knowing. What his superior is responsible for?
- Understand his role in his unit, which means knowing, what he is responsible for achieving and knowing?
- Establish specific objectives which he intends to achieve in a determined time period.
- Have the help of the superior in overcoming obstacles which may prevent the attainment of these objectives. The obstacles may be in the organization, the job, the superior, or the manager himself.
- Have willingness to work to achieve his objectives, which may mean preparedness to change his behavior.
- Receive concrete periodic feedback on his progress towards objectives.
- Be held responsible for his actions.

If any of these is missing, full effectiveness is unlikely to be achieved.



THE FACTORS THAT MAKE UP MANAGERIAL EFFECTIVENESS

Apparent Effectiveness:-It is difficult to judge managerial effectiveness by observation of behavior alone. The behavior must be evaluated in terms of whether or not it is appropriate to the output requirement of the job. **Personal Effectiveness:**-Poorly defined job outputs can also lead to what might be called "personal effectiveness", that is, satisfying personal objectives rather than the objectives of the organization. To be effective a manager needs to pick and concentrate on the vital areas that will vary from situation to situation and again from time to time in a given situation. Many Researchers have found that "off-the-job satisfaction" could also be thought of as having multiple facets like job satisfaction. Takalkar and Covert (1994) measured job satisfaction in an Indian corporation. They suggested that the structure of job satisfaction in India was a modification of an eight oblique factor model proposed by Spector (1985). The eight correlated factors were pay, promotion, supervision, operation procedures, nature of work, co-workers, communication and benefits.

SCOPE OF THE STUDY

The present study is a study on Managerial effectiveness of managers in the sample unit. The study aims at measuring the managerial effectiveness of the managers working at different levels. It also aims at providing some suggestions to the managers to improve their managerial effectiveness in management.

STATEMENT OF THE PROBLEM

All human progress begins at the moment somebody is not satisfied. As long as they are satisfied with themselves as managers, they will never get anything better. The fact is that most of them get to be managers abruptly- without previous experience.

She is good at designing and he is good at production. So who is better to put in charge of designing and of production? Suddenly, she is made design manager and he is made production manager. From that day, their personal skills in designing and production are no longer of prime importance. Their success depends on how well they get other designers, producers and sales people to give their best.

Managers are much maligned group of people pressurized by bosses, envied and misunderstood by their staff and in competition with their fellow managers for scarce resources, managers need to be a resilient breed. So most of the managers just muddle through. Some do so successfully and others don't. The most successful managers are usually those who realize early that there is something to be learnt- and that it may not come naturally. Among the most important considerations in ensuring effective managers, the effective future managerial practice will depend at least on the manager's willingness to learn, Managers acceleration of Management Development, Managers Importance of planning and innovation and measuring and rewarding management by tailoring information. The chances of being an effective manager depend to a large extent on how clearly they understand the nature of their job and the nature of their team. As against the above mentioned factors a study was carried out to find the effectiveness of managers who have committed themselves to self-development. So in this study, A analysis of the job and team of the managers have been made to know some of the basis effective skills that becomes part of a manager's job.

OBJECTIVES

1. To find the personal background of the managers.
2. Identify the variety of tasks and skills that make up the job of managing.
3. Analyze the effective managerial tasks and skills of the managers.
4. Measure the level of managerial effectiveness among the managers.
5. Derive the findings and inferences from the analysis of the data.
6. Give suitable suggestions based on the findings of the study.

HYPOTHESIS

The following hypothesis were framed and tested:

- Ho₁: Age level of the managers does not influence the nature of leadership preferred by them.
 Ho₂: Educational qualification of the managers does not influence their job analysis.
 Ho₃: Experience of the managers does not influence their team analysis.
 Ho₄: Job analysis of the managers does not influence their team analysis
 Ho₅: Native background of the managers does not influence their job analysis.

RESEARCH METHODOLOGY

The data was collected from forty five managers, mostly belonging to the top, middle and low hierarchical level from a public sector unit which constituted the sample. Descriptive research was adopted to describe the effectiveness of the managers. Both primary and secondary data were collected. A structured questionnaire was prepared and distributed to the managers in the sample unit to collect the necessary data. Informal interviews were held with the managers to know their general attitude towards management. Necessary secondary data were also collected from the company literature. For analyzing the data statistical tools like percentages, arithmetic mean, standard deviation and chi-square test were used.

RESULTS AND DISCUSSION

A sample of 45 respondents were taken for the study. The term respondent refers to the manager in the following analysis. The analysis is divided into the following three categories:

I. SIMPLE TABULATION OF DATA PERTAINING TO THE BACKGROUND OF THE MANAGERS**TABLE 1.1 – TABLE SHOWING RESPONDENTS AGE GROUP**

Age	Number of Respondents	Percentage
Below 30	6	13
30-34	10	22
35-39	3	7
40-44	3	7
45-49	2	4
50-54	17	38
Above 55	4	9
TOTAL	45	100

TABLE 1.2 – TABLE SHOWING SEX OF THE RESPONDENTS

Sex	Number of Respondents	Percentage
Male	43	96
Female	2	4
TOTAL	45	100

TABLE 1.3 – TABLE SHOWING NATIVE BACKGROUND OF THE RESPONDENTS

Native Place	Number of Respondents	Percentage
Rural	16	36
Urban	19	42
Semi-Urban	7	15
Metropolitan	3	7
Total	45	100

TABLE 1.4 – TABLE SHOWING MARITAL STATUS OF THE RESPONDENTS

Marital Status	Number of Respondents	Percentage
Married	38	84
Unmarried	7	16
TOTAL	45	100

TABLE 1.5 – TABLE SHOWING EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

Educational Qualification	Number of Respondents	Percentage
Graduate	11	24
Post-Graduate	13	29
Technical/Professional	18	40
Others	3	7
Total	45	100

TABLE 1.6 – TABLE SHOWING THE PRESENT POST HELD BY THE RESPONDENTS

Present Post held	Number of Respondents	Percentage
Top level	10	22
Middle level	15	33
Lower level	20	45
Total	45	100

TABLE 1.7 – TABLE SHOWING EXPERIENCE OF THE RESPONDENTS

Experience	Number of Respondents	Percentage
Graduate	33	73
Post-Graduate	10	22
Technical/Professional	2	5
Others	45	100

TABLE 1.8 – TABLE SHOWING NUMBER OF RELATIVES WORKING THE RESPONDENTS

Relatives	Number of Respondents	Percentage
Working with	13	29
Not Working with	32	71
TOTAL	45	100

II. SPECIFIC ANALYSIS PERTAINING TO MANAGERIAL EFFECTIVENESS**TABLE 2.1-TABLE SHOWING JOB ANALYSIS**

Job Analysis	Number of Respondents	Percentage
High	9	20
Medium	29	64
Low	7	16
TOTAL	45	100

The study brings out the job analysis of the respondents. Accordingly every respondent is rated as per his efficiency and they have been classified "Highly efficient, moderately efficient and less efficient". The classification has been done with the help of mean and standard deviation in order to find out the confidence limits.

TABLE 2.2-TABLE SHOWING TEAM ANALYSIS

Rate of Efficiency	Number of Respondents	Percentage
High	9	20
Medium	29	64
Low	7	16
TOTAL	45	100

The study discloses the team analysis of the respondents. Every respondent is classified as highly efficient, moderately efficient and very less efficient.

TABLE 2.3-TABLE SHOWING STAFF DELEGATION ANALYSIS

S.NO	Staff Delegation	Always		Frequently		Occasionally		Seldom		Never	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	I feel over-burdened with duties.	0	0	5	11	19	42	7	16	14	31
2.	I find myself having to work longer hours than most colleagues.	1	2	4	9	23	51	11	25	6	13
3.	I feel my subordinates come to me too frequently to ask about what they should do.	0	0	10	22	19	42	11	25	5	11
4.	I feel necessary to check each of my subordinates work in detail.	2	4	3	7	18	40	16	36	6	13
5.	My staff thinks that I don't let them use their initiative enough.	0	0	0	0	7	16	10	22	28	62
6.	I dread the thought of having to put right other people's mistakes.	1	2	1	2	8	18	12	27	23	51
7.	I am worried that subordinates may undermine my authority or even challenge me for my job.	0	0	0	0	0	0	3	7	42	93
8.	I am prepared to relax my control as the individual gains confidence and competence.	23	51	7	16	7	16	4	9	4	8
9.	I am clear about the limits of my authority to take decisions without referring back to my boss.	34	76	7	16	3	6	1	2	0	0
10.	If a vacancy arises because someone is leaving, I could want someone who will do exactly the same work as that person.	13	29	8	18	2	4	8	18	14	31

If you are to improve the motivation of individuals in your team, you need to know what they expect to get out of their work.

TABLE 2.4-TABLE SHOWING STAFF MOTIVATION FACTORS

S.NO	Motivating Factors	Of utmost importance		Of very importance		Of moderate importance		Of lesser importance		Of no importance	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Good wages or salary	13	29	21	47	8	18	2	4	1	2
2.	The prospect of promotion	11	25	24	53	8	18	1	2	1	2
3.	Official fringe benefits	5	11	11	24	23	51	3	7	3	7
4.	Unofficial fringe benefits	2	4	3	7	16	36	11	24	13	29
5.	Getting as much as free time as possible	0	0	1	2	7	16	17	38	20	44
6.	Gaining personal status or power	2	4	10	22	19	42	8	18	6	14
7.	Agreeable working conditions	10	22	21	47	11	25	2	4	1	2
8.	Social relationship with work-mates	13	29	20	44	11	25	1	2	0	0
9.	The prospect of developing new enterprise	3	7	13	29	16	36	9	20	4	8
10.	The feeling of being needed	19	43	15	33	9	20	2	4	0	0

TABLE 2.5-TABLE SHOWING STAFF MOTIVATION APPROACHES

S.NO	Staff Motivation Approaches	Of utmost importance		Of very importance		Of moderate importance		Of lesser importance		Of no importance	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Ensure that the team has discussed and committed itself to the overall tasks or objectives of the group	25	56	18	40	2	4	0	0	0	0
2.	Keep the team informed of its progress towards objectives and of its own level of performance	18	40	21	47	5	11	1	2	0	0
3.	Encourage shared beliefs, values and rewards within the team	13	29	20	45	10	22	2	4	0	0
4.	Promote, Discussion, Suggestion and constructive criticism of work practice within the team	20	45	19	42	5	11	1	2	0	0
5.	Give the team as much freedom	17	38	20	45	6	13	1	2	1	2

TABLE 2.6-TABLE SHOWING JOB IMPROVEMENT ANALYSIS

S.NO	Improvements	Always		Frequently		Occasionally		Seldom		Never	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Seems meaningful or worth doing?	24	53	15	33	4	9	2	4	0	0
2.	Provides sufficient variety in tasks or types of activity?	5	11	26	58	12	27	2	4	0	0
3.	Allows him or her sufficient freedom to make decisions in doing her work?	18	40	16	36	9	20	1	2	1	2
4.	Makes adequate call on his or her skills and talents?	19	42	14	31	9	20	2	4	1	2
5.	Allows sufficient contact with colleagues?	18	40	21	47	5	11	1	1	0	0
6.	Provide adequate scope for learning and development?	24	53	16	36	3	7	2	4	0	0
7.	Is reasonably demanding / challenging?	15	33	17	38	8	18	5	11	0	0

TABLE 2.7-TABLE SHOWING TEAM DEVELOPMENT ANALYSIS

S.No	Team Development Approaches	Number of Respondents	Percentage
1.	TELLING- I decide what to do and simply tell my staff to do it.	3	7
2.	SELLING-I decide what to do but then I explain to my staff why it needs to be done.	8	18
3.	FINE-TUNING- I decide what to do but I invite questions and comments from staff in case I see ways, I can improve my decision.	10	22
4.	PROBLEM SOLVING-I present staff with the problem and get them to come up with possible solutions before I make the decision.	12	26
5.	CONSULTING-I present staff with one or more tentative solutions to a problem and invite discussions of them before I make the decision.	8	18
6.	PARTLY DELEGATING-I present the staff with the problems and let them make the decision.	3	7
7.	FULLY DELEGATING-I expect staff to both define the problem and decide what to do about it (subject to whatever limits I impose).	1	2
	TOTAL	45	100

TABLE 2.8-TABLE SHOWING STAFF COUNSELING ANALYSIS

S.NO	Staff Counseling	Always		Frequently		Occasionally		Seldom		Never	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	I know or suspect what the problem is.	13	29	24	53	5	11	3	7	0	0
2.	My staff member also knows the problem.	12	27	14	31	18	40	1	2	0	0
3.	I have allowed plenty of time for the interview.	18	40	17	38	6	13	4	9	0	0
4.	My staff member knows how much time is available for the interview.	20	44	10	22	13	29	2	4	0	0
5.	I find a place for the interview that is quiet, Private and free from interruption.	25	56	8	18	7	16	4	9	1	2
6.	There is already some rapport or sense of trust between me and my staff member.	35	78	7	16	1	2	2	4	0	0
7.	I have made my staff member aware of the extent to which the discussion can be kept confidential.	31	69	11	24	3	7	0	0	0	0
8.	I have refreshed my memory sufficiently from the personal file and work records about the person whom I am going to counsel.	23	51	11	24	8	18	1	2	2	4
9.	I expect the counseling to be mainly, -directive -non-directive	6 17	13 38	5 11	11 24	2 3	4 7	0 1	0 2	0 0	0 0

TABLE 2.9-TABLE SHOWING STAFF DISCIPLINING ANALYSIS

S.NO	Staff Disciplining	Always		Frequently		Occasionally		Seldom		Never	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	-Encourage the individual to improve.	33	73	8	18	4	9	0	0	0	0
2.	-Is fair and reasonable	32	71	8	18	4	9	1	2	0	0
3.	-Is the same for all such offenders	23	51	7	16	4	9	5	11	6	13
4.	-Follow procedure that all employees are fully aware of	25	55	7	16	8	18	4	9	1	2

III. HYPOTHESIS TESTING RESULTS

1. Ho1-The age of the managers thus influence the nature of leadership provided by them.
2. Ho2-The educational qualification of the managers does not influence their job analysis.
3. Ho3-Experience of the managers does not influence their team analysis.
4. Ho4-Job analysis of the managers does influence their Team analysis.
5. Ho5-The native background of the managers does not influence their job analysis.

SUMMARY OF FINDINGS

The findings are as follows:

1. Majority of the managers were in the age group of 50-54.
2. The sample consisted of more number of male respondents than female respondents.
3. Majority of the managers had a collegiate degree.
4. Majority of the managers had less than 10years of experience.
5. Managers in the sample unit were moderately efficient in their job, since these managers knew all about their job but have failed to show keen interest in the development of their job.
6. A handful number of the managers were found to be fully aware of their team and team members.

RECOMMENTATIONS/SUGGESTIONS FOR IMPROVEMENT

1. It is suggested that these managers who are moderately efficient should show keen interest in the development of their job by identifying their aims and targets clearly and must try to master them. It is always better for these managers to clarify the purpose of any activity before they carry it out and they should carry out the self development activities, which would make them more efficient
2. Managers must set their goals and targets in detail and must carry out self development activities such as self motivation thoroughness, initiative and the capability of making good judgment. It is suggested that these managers should discuss their conclusions with their boss.
3. Managers should pay more attention to what their team members do and bring fresh insights into team work. They should be sensitive to the needs of the team and be the maintainer of harmony. They should also improve their communication network which is a vital factor.
4. Managers should try to be good listeners, good communicators, good watchers, good recorders, good communicators and should have good understanding powers. The nature of leadership followed by them must be to keep their team focused on the task objective.
5. It is suggested that managers should consider the staff to whom they are delegated, consult with them and should agree to hand over the work. Full details of the work should be informed to the staff and training must be given to the staff if they are not clear about the job.
6. When managers make an effort to improve people's job, they should make sure that they do so only in consultation with the people concerned.
7. Managers who follow the democratic style of leadership are preferred to the autocratic style of leadership.
8. Managers should not concentrate on getting job done and neglect the people or concentrate on the people to the neglect of the job. They should balance both equally.

- Managers are suggested to overturn their decision if they are in need to discipline their staff.

CONCLUSION

One of the effective ways to become an effective manager is to find out for your self, observe its behavior and imitate it. In short, the effective manager is there to make sure that the staff are working to clear guidelines training and support to do that work.

LIMITATIONS

The following are the limitations of the study.

- The study is a micro level study and it is restricted only to the sample unit.
- The sample selected for the study belongs to the sample unit only. Environments and involvement level of the managers may differ from those of other industries. Hence the extent of participation and involvement of the managers in management activities of the sample unit which is arrived from this study cannot be generalized to other industries.
- This study covers only the managers and does not include the persons working in the supervisory and layman cadre.
- The study is based on the opinion expressed by the managers which is purely qualitative in nature. The inherent nature of the problems of converting the qualitative data into quantitative data for the purpose of analysis is applicable for the study.
- All limitations pertaining to the tools applied to analyze the statements will also be applicable for the study.

SCOPE FOR FUTHER RESEARCH

- It is a micro level study and can be done at a macro level.
- A comparative study of the managers at different levels and industries can be made.
- The same project may be taken up in other types of organization, organizations with differing product-mix, and service organizations.
- The study may be extended for other hierarchical levels not included in this study.
- Though it's a difficult proposition in organizational research, a better sampling procedure that would come closest to random sampling and a considerably larger sample size would be highly desirable.
- The study could be done in a longitudinal design.

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APPENDIX

APPENDIX-I: A STUDY ON MANAGERIAL EFFECTIVENESS QUESTIONNAIRE (STRICTLY CONFIDENTIAL)

PART-I

Please feel absolutely free in answering the questionnaire

I Age: a. Below 30, b. 30-34, c. 35-39, d.40-44, e. 45-49, f. 50-54, g. Above 55

II Sex a. Male, b. Female

III Native Place: a. Rural, b. Urban. Semi-Urban. Metropolitan

IV Marital Status: a. Married b. Unmarried

V Educational Qualification: a. Graduate, b. Post-Graduate, c. Technical/Professional. Others (please Specify)

VI Date of joining the service: a. Previous Organization, b. Present Organization

VII Present Post Held a. Top Level Managers, b. Middle Level Managers, c. Lower Level Managers

VIII Experience as a Manager a. Previous Organization (if any) - Yes / No If Yes No. of years b. Present Organization- No. of Years

IX Does any of your Relative work with you? a.. Yes, b. No

XI If Yes HE/ She are your a. Husband. b. Wife, c. Son, d. Daughter, e. Other Please Specify

XI If your answer to the above question is yes, specify whether they are working in a. Your Department, b. Other department

PART II

Below are given some questions and statements under separate headings. You are requested to give you 'True' and 'Frank' answers to them. Your response will be used only for research purpose and will be kept strictly confidential. Against each question under the first two headings, there are two response categories

and under the other headings there are five response categories and under the other headings there are five response categories. Indicate your most appropriate answer with a tick mark ().

A. JOB ANALYSIS

S.No		Yes	No
1	Does your job have a title?		
2	Are you sure to whom you are responsible?		
3	Could you draw some sort of organization chart showing how your job connects up to the other jobs in your organization?		
4	Can you state the overall purpose of your job in a single sentence?		
5	Can you state your time-span of discretion' – that is, how long you a allowed to carry on managing before someone checks on your results?		
6	Do you have job description listing your duties and responsibilities?		
7	Do you have a work plan, updated periodically in discussion with your boss, and setting out any specific tasks and targets expected out of you- and perhaps of your section-in the months ahead?		
8	Whether or not you have a job description or work plan, could you? -rank those main duties in order of importance -list of staff, expenditure and other resources that you are responsible for: -Say in what circumstances you would need your boss's agreement before you could act on your decisions; -list any specific tasks that you are expected to carry out as a matter of priority during the present year; -list any specific objectives(involving quantities, quality, costs, targets, etc) that you are expected to attain during the present year;		
9	Are there any regular activities that you cannot neglect (or delegate) without incurring some sort of penalty?		
10	Are there any specific targets that you are required to meet?		

B. TEAM ANALYSIS

S.No		Yes	No
1	Does each member of your team have a job description?		
2	Even without a formal job description, is each member of your staff duties and/or work targets clear to them?		
3	Are any members of your team deficient in the skills or knowledge they need for the work they are currently doing?		
4	Do any members of your team feel that too much or to little I being demanded of them?		
5	Is it important for the members of your team to collaborate with one another?		
6	The general atmosphere within the team is one of : -Mutual support and co-operation? -Competition and selfishness?		
7	Does your team have official and informal relationships with other teams?		
8	Could any member of your team benefit from a change in duties?		

C. STAFF DELEGATION

S.No		Always	Frequently	Occasionally	Seldom	Never
1	I feel overburdened with duties					
2	I find myself having to work longer hours than most colleagues.					
3	I feel it necessary to check each of my subordinates work in detail.					
4	My staff think that I don't let them use their initiative enough.					
5	I dread the thought of having to put right other people's mistake.					
6	I am worried that subordinates may undermine my authority or even challenge me for my job.					
7	I am prepared to relax my control as the individual gains confidence and competence.					
8	I am clear about the limits of my authority to take decisions without referring back to my boss.					
9	If a vacancy arises because someone is leaving, I would want someone who will do exactly the same work as that person.					

D. a. STAFF MOTIVATION

S.No	If you are to maintain or improve the motivation of individuals in your team, you need to know what they expect to get out of their work. Tick the Chief motives you think is important that will motivate your staff at various circumstances.	Of utmost Importance s	Of very Importance	Of moderate Importance	Of Lesser Importance	Of no Importance
1	Good wages or salary					
2	The prospect of promotion					
3	Official fringe benefits					
4	Unofficial fringe benefits					
5	Getting as much as free time as possible					
6	Gaining personal status or power					
7	Agreeable working conditions					
8	Social relationship with work-mates					
9	The prospect of developing new enterprise					
10	The feeling of being needed					

D.b. STAFF MOTIVATION APPROACHES

S.No	Sometimes you might feel that your team members are not working together as a coherent team, that you would like them to be. Which of the following approaches do you think is important that might help you to improve the motivation of your team as a whole?	Of utmost Importance	Of very Importance	Of moderate Importance	Of Lesser Importance	Of no Importance
1	Ensure that the team has discussed and committed itself to the overall tasks or objectives of the group.					
2	Keep the team informed of its progress towards objectives and its own level of performance.					
3	Encourage shared beliefs, values and rewards within the team.					
4	Promote discussion, suggestions and constructive criticism of work practice within the team.					
5	Give the team as much freedom as they can handle deciding what needs doing and how to do it.					

E. JOB IMPROVEMENT

S.No	Below are some of the main features that you might go for if you were trying to design someone a satisfying job. Think about them in relation to each member of your team. Would each one agree that his or her job	Always	Frequently	Occasionally	Seldom	Never
1	Seems meaningful or worth doing?					
2	Provides sufficient variety in tasks or types of activity?					
3	Allows him or her sufficient freedom to make decisions in doing the work?					
4	Makes adequate call on his/her skills and talents? Allows sufficient contact with colleagues?					
5	Provide adequate scope for learning and development?					
6	Is reasonably demanding/ challenging?					

F. TEAM DEVELOPMENT

S.No	The following list indicates several different approaches to leadership. First please read through these approaches and indicate the most likely approach that you would like to work under, with a tick mark.
1	Telling: I decide what to do and simply tell my staff to do it.
2	Selling: I decide what to do but then I explain to my staff why it needs to be done.
3	Fine Tuning: I decide what to do but I invite questions and comments from staff in case I see way, I can improve my decision.
4	Consulting: I present staff with one or more tentative solutions to a problem and invite discussions of them before I make the decision.
5	Problem Solving: I present staff with the problem and get them to come up with possible solutions before I make the decision.
6	Partly Delegating: I present staff with the problem and let them make the decision.
7	Fully Delegating: I expect staff to both define the problem and decide what to do about it (Subject to whatever limits I must improve).

G. STAFF COUNSELLING

S.No		Always	Frequently	Occasionally	Seldom	Never
1	I know or suspect what the problem is.					
2	My staff member also knows the problem.					
3	I have allowed plenty of time for the interview.					
4	My staff member knows how much time is available for the interview.					
5	I find place for the interview that is quiet private and free from interruption.					
6	There is already some rapport or sense of trust between me and my staff member.					
7	I have made my staff member aware of the extent to which the discussion can be kept confidential.					
8	I have refreshed my memory sufficiently from the personal files and work records about the person whom I am going to counsel.					
9	I expect the counseling to be mainly -directive -or non directive					
10	I feel the following expect to benefit most from the interview a. Myself b. The staff member c. The team d. The organization					

H. STAFF DISCIPLINING

S.No	If and when you do find it necessary to formally discipline a member of staff you must be seen to act the way that	Always	Frequently	Occasionally	Seldom	Never
1	-Encourage the individuals to improve;					
2	-Is fair and reasonable;					
3	-Is the same for all such offenders;					
4	-Follow procedures that all employees are fully aware of.					

COMPARATIVE STUDY ON TALENT MANAGEMENT PRACTICES

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ABSTRACT

This paper aims at tracking the evolution of TM and the various perspectives/approaches (Process/Cultural/Competitive/Developmental/HR Planning & Change Management Perspectives) adopted by the organizations. It examines the inter-relationship between TM and Psychological Capital (Psycap), TM and Succession Planning, TM and Rewards Linkage, TM and Leadership. It then captures in detail the TMO practices and architecture, in five different organizations and help to comparative view, and provide holistic inputs on practices in TM Area

KEYWORDS

Talent Management, Psychological Capital, Talent Management Office (TMO), Heads of Talent (HoTs), Talent Agenda

BACKGROUND & MOTIVATION

Talent Management (TM) as a practice amongst HR fraternity has come a long way from the initial stages where organizations. Today organizations views view it as mandatory process as part of their employee offerings.

The rising competition in business context has put in a lot of pressure on organization to identify the core competences at organizational level track the competences across the organization, to achieve and maintain competitive edge in the market place. In their work on Psychological capital (Psycap)(Fred Luthans, Carolyn M Youssef, Bruce J Avolio, 2007) have given a comprehensive definition for Psycap as under:-

“Psycap is an individual’s positive psychological state of development and is characterized by 1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks 2) making a positive attribution (optimism) about succeeding now and in the future 3) persevering towards goals and when necessary redirecting path to goals (hope) in order to succeed; and 4) when beset by problems and adversity, sustaining & bouncing back and even beyond (resilience) to attain success.

Talent Management as a concept has evolved, post the article titled “War for Talent” coined by Mckinsey consultant (Michaels eta al.,2001; Axelrod et al.,2002) and the contribution on Positive Organizational Scholarship (POS) and Positive Organizational Behavior (POB) (Michaels eta al.,2001; Axelrod et al.,2002).

RESEARCH AREA & APPROACH

Organizations have been adopting differentiated approach towards Talent Management and the success or otherwise of these approaches are dependent on variety of factors. The study aims to understand the following

- Approaches towards Talent Management adopted by organizations
- Architecture/modus-operandi established by organizations to design & execute TM
- Identify key influencing factors impacting the design and execution of TM in organizations

The research covered the following five organizations:-

- Johnson & Johnson
- Capital One
- Internal Revenue Service
- Celanese
- Coca-cola Hellenic Bottling Company (CCHBC)

The Research Methodology/Approach used for the purpose primarily the secondary data in terms research carried out by researchers and published in various Journals.

LITERATURE SURVEY

The research (Barnett & Hall, 2001; Johnson, 2004, Lance, 2005; Olson, 2003) on way of managing talent has identified the following ways:

- Job design
- Pay & benefits
- Growth Opportunities
- Work-life balance
- Programs and other benefits

The challenges for managing talent are compounded by highly specialized jobs and the diverse need of talented employees and the need for person-job fitment (Ng & Burbe, 2005, Trank, Rynes & Bretz, 2002).

The changing nature of psychological contract between employer-employee, on account of business turbulence and the issue is accentuated by lack of personal identity in large corporates have further compounded the perspective. Life time employment, seniority based human resources, union negotiated wage settlement, and entitlement based employee view have given way to Career Resiliency (Waterman, Waterman & collard, 1994). In the revised employment landscape, organizations would like their employees to take ownership for their workplace and careers.

Psychological Ownership has been defined as “the state in which individual feel as though the target of ownership or a piece of that target as theirs (Pierce, Kostova, Dirks, 2003, P86) and experience feelings of concern for the target, which could be their job or that of their organization (Parker, Wall & Jackson, 1997). In case of employees, the best place to work are not those which provide life-time employment, but that those which provide flexible for sustainable learning, growth and development opportunities. Employees are looking at roles that will help them to realize their long term career aspirations (beyond the organization). In the tough economic situations, perceptions of “losing control” can hamper the self-confidence and eventually the resilience of the employees (Fred Luthans et al, 2007, P6).

In contrast to conventional approach of accumulating all resources for competitive advantage, the contemporary approach, it is argued that competitive advantage is achieved through context-specific, cumulative, renewable and the hard-to imitate factors (Drucker, 1994; Luthans & Youssef, 2003). It is further proposed that such advantage can be achieved by investing, leveraging, developing and managing psychological cap (Psycap, Fred Luthans et al, 2007, P7). The Psycap approach is based on the premise that organizations are not able to leverage on full-potential of their Talent (Avolio, 2005). The reasons could vary from lack of belief in the value of their talent, or lack of investment in development of the talent. Though there are organizations which are deploying HPWS (High Performance Work Systems) and 360 degree performance systems, or self-managed teams, they do not truly understand the linkage/impact of these systems on core organizational values and practices (Pfeffer, 1998). It is because of these dimensions, most HR practices become a passing fad and organizations do not benefit from them.

The efforts by organizations to achieve elusive competitive advantage are unfulfilled for reasons, such as competitors replicating training with technology support, flexible/innovative compensation packages being adopted by competitors. Further competencies like Teambuilding /decision-making have become universal and generic competencies across organization (Fred Luthans et al, 2007).

The premise of most HR practices is oriented from limiting the negative impact, rather than having the positive outcome as the basic premise. Even the prevention of psychological problems, beyond philosophical discourses and scattered extrapolation from research findings, based on pro-active application of disease oriented application, was largely absent (Keyes & Haidt, 2003; Seligman & Csikszentmihalyi, 2000). The sustainable approach would be to look at Gallup's Strengths Based Organization (Leveraging the individual strengths rather than their weaknesses) rather than war-akin short-term approach will fetch long lasting results for the organization (e.g. Buckingham & Clifton, 2001; Buckingham & Coffman, 1999). In the new paradigm of positive perspective, POS and POB have supported the building of new construct on Psycap (Fred Luthans, et al, 2007, P9).

TALENT MANAGEMENT & PSYCAP

CIPD, UK have defined Talent as "consists of those individuals who can make a difference to organisational performance either through their immediate contribution or, in the longer-term, by demonstrating the highest levels of potential" and Talent management "is the systematic attraction, identification, development, engagement, retention and deployment of those individuals who are of particular value to an organisation, either in view of their 'high potential' for the future or because they are fulfilling business/operation-critical roles".

In the Talent Pulse Survey conducted by Deloitte, covering 1400 practitioners worldwide, the critical people management issues are attracting and retaining "High-Caliber" employees. In the survey, 72% nominated attraction and retention as a key issue, while 44% indicated talent management and succession planning was a significant challenge. In the study conducted by IDC (2005), Talent Management was identified as key competency in HR domain expertise.

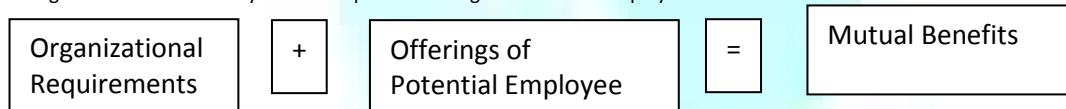
The consulting firm (Towers Watson), in their study on Talent Management & Rewards (2011/2012) has identified the following:

- 6/10 of the companies in North America are having trouble in attracting critical skill talent, over 2010, apart from coming under pressure to manage cost due to slow growth and in productivity & sales.
- Only 11% have trouble in retaining employees generally, but those struggling to retain critical skill employees have increased by 5% in US (31% to 36%) and 4% in Canada (From 35% to 39%)
- Organizations with reward and talent management programs that support business goals are more than twice as likely to report being high-performing companies (28% vs 12%)
- Those with reward & talent management programs that support their attraction and retention goals are less likely to report having trouble in attracting critical skill employees (52% Vs 68%) or retaining critical skill employees (29% Vs 43%)
- Those whose programs support the desired culture are more than twice as likely to report having a high-performance work culture (56% Vs 26%)
- Only 44% of organizations formally identify employees with critical skills
- Fully 68% identify high performers but only 28% inform these employees who have been identified.

HBR article (Jan, 2000) in its research article has indicated that organizations tend to revert to the option of "Golden Hand-cuff", for talent retention, which is not always a winning proposition. According to Gorden Institute of Business Science (GIBS), organizations are into the game of "Talent Management Catch-up", instead of engaging talent as a strategic imperative (mba.co.za, 2007).

The study by Business Process Management Forum (BPM, 2007) has revealed the following issues:-

- The ability and having a framework to measure success criteria is the greatest determinant of good talent management.
- The challenging & demanding nature of global talent landscape is indicated by the fact that 75% of the respondents in the survey, have confirmed the longer time taken to identify good employee
- Employer Branding is the key determinant factor
- Talent by definition has to be inclusive and not exclusive (including "B" players and not "A" players)
- Talent management to reflect 2-way relationship between organization and employee:-



(Source: Talent Management Review, Andre O Callaghan, 2008)

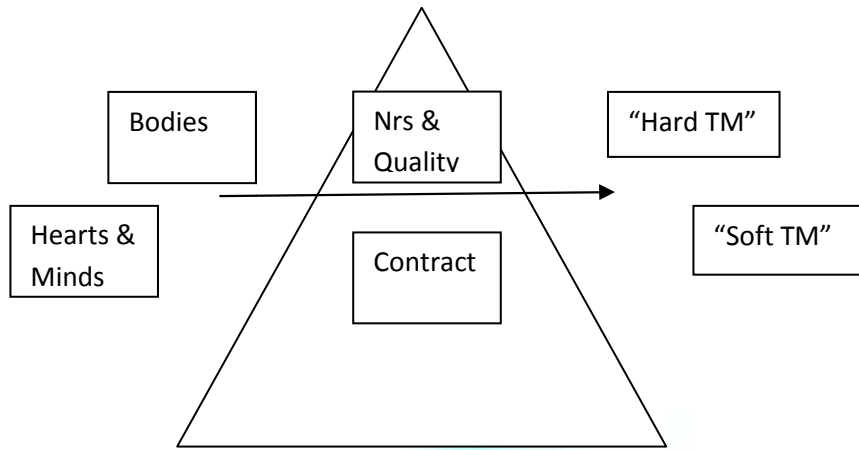
- Talent Management as a process to focus on "Hearts & Minds" – "Soft TM" as against Numbers and Quality (Bodies – "Hard TM")

CHRONOLOGY OF TM EVOLUTION

- The Towers Perrin study "How Leading Organizations manage their Talent" examined 22 employers and found that Talent Management is a strategic priority (Towers Perrin, 2002).
- Questionability on whether succession planning is a subset of Talent Management or later is an evolution of former (Heinen & O'Neil, 2004).
- Carey (2004) argues that good succession planning is more of a culture than activity.
- Part of the difficulty is that talent identification and measures of potential are generally decisions made subjectively on judgment rather than objectively based on facts (Carrington, 2004).
- Dalziel (2004) argues that past performance indicators lead to Peter Principle (People promoted to their level of incompetence) rather than where decisions are made on the recognition of self-confidence, self-awareness and emotional fortitude needed by people who deal with high pressure situation.
- Heinn & O'Neill (2004) also stress the difference between potential & promotability arguing that the first needs developing in order to for second to be successful
- Michaels et al (2001) argue that a certain part of talent eludes description but you know when you see it.

TM SEGMENTATION

Berger (2004b) argues that it is the top 3-5% who is defined as "Superkeepers". Chowdury (2002) describes "Talent" as a spirit of the enterprise, and they are found to be temperamental, creative, rule breakers, and change initiators. Boudreau & Ramstad (2005) identify the Talent Pool as those jobs, roles and competencies, where 20% of improvement in terms of availability/quality would make a huge difference to the success of the organization. Talent segmentation for an organization is as vital as customer segmentation. Heinen & O'Neil (2004) argue that every organization has a talent management process in place either by default or by design and it consists of interrelated welfare activities connected with employee development.



(Source: Prof T Veldsman)

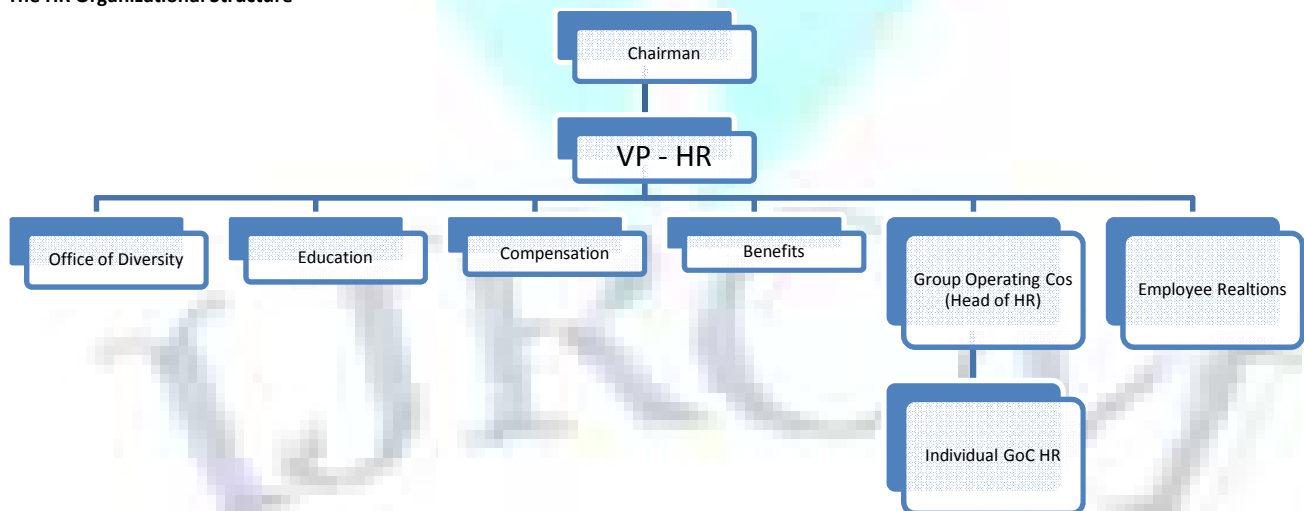
In the knowledge based economy, organizations must realize that it is the people who unlock value and create wealth, not assets & machines (Andre O' Callaghan, 2008). According to J Nel of SABMiller "Business Strategies are realized through people and it is the Higher Caliber People who create sustained advantage.

JOHNSON & JOHNSON (J & J)

1) It is into manufacturing and sale of broad range of products in healthcare field.. It has decentralized structure, with 28 franchises, 200 operating companies and affiliates in 54 countries world-wide. The business is structured into 3 segments i.e., Consumer, Pharmaceutical and Medical Devices and Diagnostics, as depicted below :-

Consumer Products	Pharmaceutical Products	Medical Devices and Diagnostics – Products
Personal Care products	Antifungal	Broad range of products used by or under the directions of Physicians, Nurses, Therapists, Hospitals, Diagnostic laboratories and clinics
Adult Skin and hair care	Infection Prevention	
Baby care	Cardiovascular	
Oral Care	Contraceptive	
First Aid	Dermatology	
Women Heath	Gastro-intestinal	
Nutritional	Hematology	
	Immunology	
	Neurology	
	Oncology	
	Pain Management	
	Psychotropic &	
	Urology	

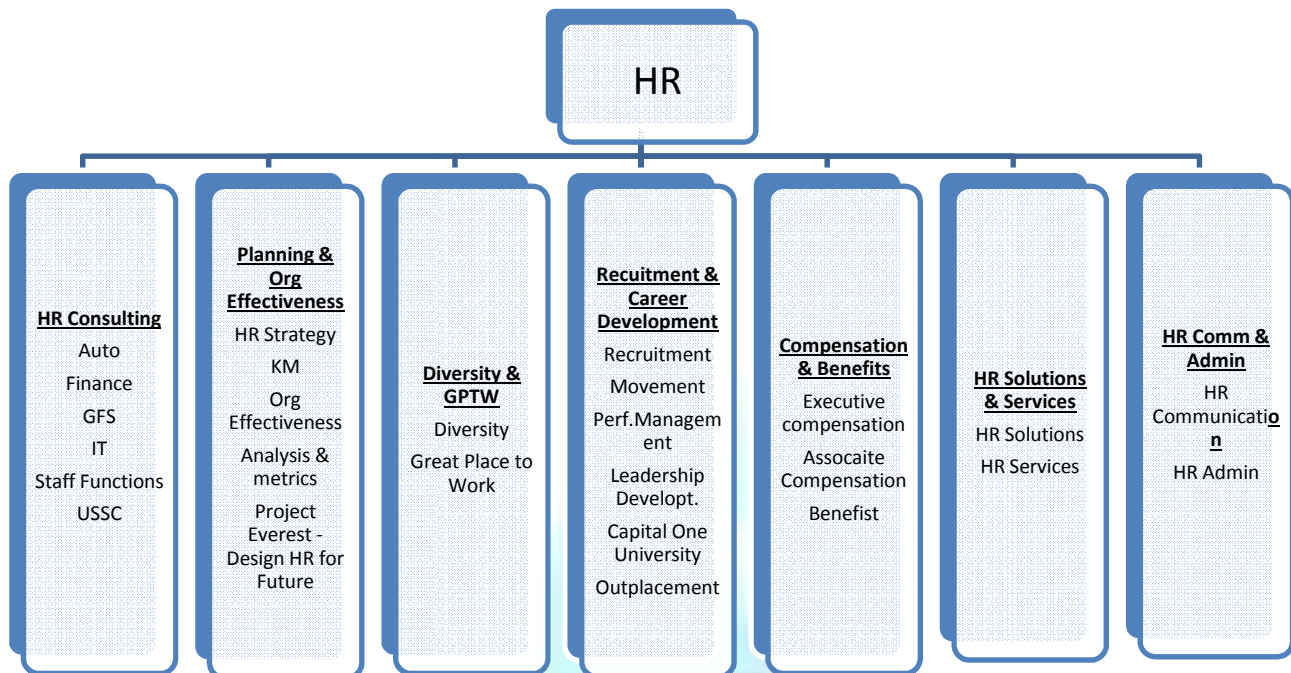
2) **The HR Organizational Structure**



- 3) **The ten components of TM** are
- Values & Principles
 - Decentralization
 - Breadth of Experience
 - Diverse recruiting sources
 - Executive education
 - Johnson & Johnson e-university
 - Action Learning
 - Perspectives Program
 - Global Standards of Leadership and
 - Succession Planning

- 4) **The philosophy of J & J** being that first responsibility is to customers (doctors, nurses, patients, and consumers), followed by employees, then the communities in which it operates and then the stakeholders. The belief of organization is that if these segments are taken care of then the stakeholders are automatically taken care of.
- 5) **Scope of TM @ J&J:** It scopes end2end i.e, from recruitment to development and succession planning to international recruitment and assignment planning. The compensation & retention strategies have been developed to emphasize long term growth of people and the organization.
- 6) **Evolution of TM @ J&J :**
- Started in late 1960s when Sr Management was no longer able to identify top performers and provide adequate guidance to succeed.
 - The decentralized structure helps talent with opportunities for career planning, experience and growth opportunities.
 - The talent sourced is representative of geographical operations of company.
 - There are no set criteria for identification of HiPo Talent, and it is primarily based on judgment of the management.
 - Succession Planning is an outgrowth of the identification of HiPO talent in each of operating companies. The general succession plan covers a five year term.
 - Emotional Intelligence is a key facet of growth along with customer and market focus, innovation and collaboration to lesser degrees
 - Provides learning opportunities through the career, especially when employees are transitioning from one role to another
 - Management fundamentals is 192 hour long program which is majorly delivered through e-learning and to a certain extent through the on-the-job (with weekly learning logs)
 - J & J e-university with 45 schools (organizational units)
 - Talent Development :-
 - Action learning is key learning facilitator for Talent Development. This involved working on real business issues. And interact heavily with business leaders In the program called "Perspectives" teams of Sr Leaders are immersed for 4 months to study business challenges and suggest recommendations, that are to be presented to executive committee.
- 7) **Role of Sr Leadership in TM**
- Sr Leaders spend 10-25% of their time on TM issues (setting direction, development, recruiting)
 - The Senior Leadership has active role in development of new talent
 - TM is the first item on the executive committee's monthly meeting, wherein development plans and slates are discussed for critical jobs
 - Members are responsible for driving succession planning and leadership development process in the companies run by them.
 - They personally team typically 10-15 times in a year in the leadership development programs.
 - They are assigned to be mentors for talent in the leadership pipeline.
 - HR involved senior leadership in the talent development process through :
 - Designing of HR processes that require active leaders active participation (Recruiting, evaluation and promotion)
 - Design of development programs that are aimed at achieving business strategy
 - Having "High-touch" processes that integrate HR consultants with each business unit.
 - Socializing HR strategy and high-priority with Sr Leaders on an ongoing basis.
 - Metrics for assessing the results of Talent Management
 - The ROI on leadership development program has not been calculated. Though there were attempts to assess effectiveness, they were not successful and currently the following metrics are being used:-
 - No of internal promotions for management positions
 - No of succession candidates for a managerial role, and
 - No of "ready now" candidates
 - 75% of talent requirements are met from internally
- 8) **Capital One**
- About the company:** It was established in 1995 as a spin-off of credit card business of Signet Financial Corp (Originally Bank of Virginia). In addition of credit cards business, it offers mortgage services, auto financing, credit insurance and other consumer lending products.
 - Process under TM :** The following processes are considered to be under TM @ Capital One :-
 - Competency Model Development
 - Recruitment
 - Staffing
 - Employee Development
 - Management Education
 - Retention Programs
 - Workforce planning
 - Talent Gap Analysis
 - Talent Reviews
 - Mentoring
 - Evaluation of Talent Management processes and
 - Selection Processes.
 - Scope of TM :** The TM is focused on executive, upper, and functional management levels in the organization in the following areas:-
 - Information Technology
 - Marketing and sales,
 - Finance,
 - Human Resources,
 - Supply Chain,
 - Legal, and
 - Strategy

4. HR Structure



5. **Talent Management Technologies** : In order to ensure, smooth operation of TM initiatives, Capital One has deployed technology tools and the summary is placed under:-

S.No	Talent Management Process	Technology Used
1	Recruiting	<ul style="list-style-type: none"> In-house solution (Computer Testing and recruiting (non-exempt associates) and online testing for exempt associates)
2	Internal Employee Development Courses	<ul style="list-style-type: none"> Computer-based training on the Capital One intranet
3	Registration for employee development courses	<ul style="list-style-type: none"> Learning Link
4	Performance Management and Evaluation process	<ul style="list-style-type: none"> E-feedback
5	Workforce Planning	<ul style="list-style-type: none"> Dynamic Modeling
6	Competency Development	<ul style="list-style-type: none"> 360 degree feedback tools
7	Staffing	<ul style="list-style-type: none"> Skills Inventory
8	Employee Satisfaction	<ul style="list-style-type: none"> Annual Online survey

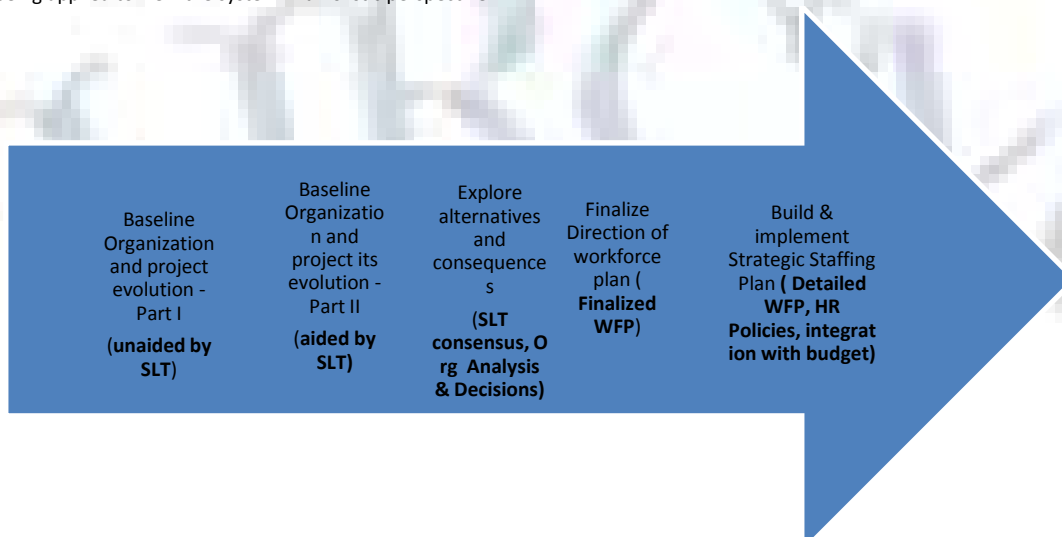
6. **Role of Senior leadership in Talent Management:-**

Though HR has primary accountability for TM, Senior Leadership (CEO, Executive Vice Presidents, BU Heads, and lien management) spend 10-25% of their time on TM related issues. HR team has brought in involvement of senior leaders in the following areas:-

- Designing of HR processes that require Leadership involvement (recruitment, evaluation and promotion etc.)
- Prosing of new initiatives/programs that support business strategy and employee engagement
- Have "High-Touch" processes that integrate HR consultants with Bus
- Socialize HR programs and initiatives on an ongoing basis.

7. **Workforce Planning**

At capital One, technology is being applied for making decisions relating to talent sourcing externally or develop from internally. For the purpose dynamic modeling is being applied to view the system in a holistic perspective.



The three key benefits of the process are:-

- Allowing HR to be a business partner
 - Shaping of HR strategy and resource prioritization
 - Building of consensus view of future
8. **Core Competency Model:** A formal model has been in use since 1995, and is the foundation for all HR programs and initiatives. HR undertook a detailed process of interviewing Senior Leader and associates to identify six critical success factors (with 23 corresponding competencies), differentiated tier-wise :
- i. **Building Relationships:** Communicates clearly and openly, collaborates with others and treats others with respect.
 - ii. **Applying integrated Thinking:** Analyzes information, generates and pursues ideas, develops and shapes strategies, identifies and solves problems and applies integrated decision making.
 - iii. **Driving towards Results :** Focus on strategic priorities, organizes and manages multiple tasks, gets the job done, and directs and coordinates work;
 - iv. **Leads in Learning environment :** Recruits talent, motivates and develops others, builds and leads teams, and promotes the culture;
 - v. **Taking personal ownership –** Takes responsibility, learns continuously, embraces change, shows integrity, maintains perspective, and initiates opportunities for improvement ; and
 - vi. **Job-specific knowledge**
9. **Driving Talent to Performance :** Capital One has structured programs across levels to develop the talent :-

S.No	Talent Management Programs	Level Applicable to
1	Coaching	Executives, upper and middle management
2	Action Learning	Middle and functional Management
3	Stretch Assignments	All employees
4	Seminars/Coursework	All employees
5	Taskforce Assignments	All employees
6	Assessment Centers for HiPO employees	Executives, upper and middle management
7	360 Degree assessment feedback	All employees
8	Talent Review Discussions	All employees
9	Development Planning	All employees
10	Informal Mentoring program	All employees

10. **Capita One University:** Launched in Jan 2004. The organization has been investing USD 60 million in training (Half of which goes to training related suppliers). Based on a business case analysis of cost towards training vis-à-vis the industry (due to decentralized training), which has led to “entitlement mentality” amongst the associates regarding training & development. The university’s is supported by a guiding vision (“to be one of the five most valuable assets that define the company”) and mission statement (“growth and excellence through learning”), with 4 primary goals:-

- i. Create Meaningful learning experience
- ii. Meet specific business learning needs
- iii. Build associate and organizational capability
- iv. Establish and sustain operational excellence

11. **Gauging Results of TM @ Capital One**

Capital One is a very analytical, metrics-focused organization and tracks the following indicators to track the effectiveness:

- Number of internal promotions for management positions
- Speed at which open management roles are filled
- No of external hires for management positions
- Cost and quality of hire
- Frequency of leadership meetings about the talent
- Performance distribution (Semi-annually)
- Employee Moral & Satisfaction (Semi-annually)
- Attrition & Head Count analysis (monthly)
- Recruiting costs (annually)
- Infrastructure metrics that include “people Management” (monthly)

II. **Celanese**

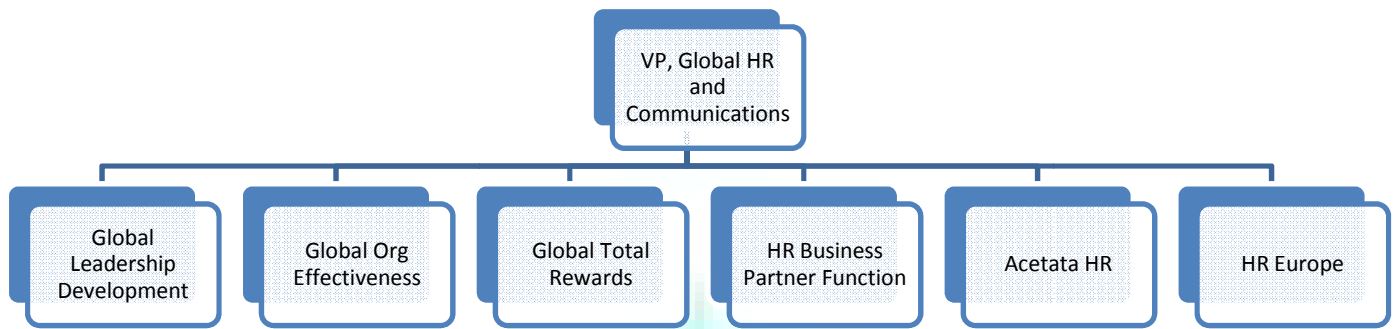
1. **About the company:** The company is a leading global chemicals company and have the following 4 units i.e, 1) Chemical Products (acetic acid etc) 2) Acetate Products (tow and filaments) 3) Ticona Technical Polymers and 4) Performance Products (components for nutrition market). Its people development initiatives designed to bolster employee performance and enhance careers so that results and personal integrity are intertwined :-

- i. Intensive Performance and Leadership Development process
- ii. Focused development of HiPOs
- iii. Developmental job assignments and stretch opportunities across businesses
- iv. Performance feedback and personal development viewed as an entitlement
- v. Lean organization with visibility for top contributors
- vi. International business exposure
- vii. Opportunity to work with both industry veterans and top-flight new hires
- viii. Six Sigma training and certification, and
- ix. Rewards for performance

2. **HR and TM Evolution:** Post the demerger of Celanese from Hoechst Corp, the company de-scaled from being a large enterprise (1,80,000 employees) to a medium sized (Aprox 9500 employees). Consequently the HR budget was lowered and organization was constrained to do more with less. Subsequently “Project Forward” was rolled-out in the year 2000 focused on cost reduction and process efficiency and in the year 2001, Celanese implemented SAP HR and established HR shared services. Also in the same year “People Excellence” initiative was implemented and key drivers are :-

- i. Strong Management Board commitment
- ii. Existing corporate thinking and systems were not aligned from being a large enterprise to medium enterprise.
- iii. Desire to establish a strong performance culture and to establish a direct correlation between performance and rewards.
- iv. Desire to make talent visible throughout the organization
- v. Need to break-down organizational silos
- vi. New corporate focus on talent and how people impact organizational capability to achieve business strategy and results

3. **HR Organizational Structure:** There are 59 employees at Celanese’s US sites and 153 employees HR employees globally.



4. Overview of TM Process: TM is referred to as “Performance Management”. The organization has defined a closed-loop HR Performance Management System composed 4 key elements :-

- i. Goal Setting Process
- ii. Employee Development
- iii. Talent Review Process
- iv. Performance Review Process

The timelines for the process are pre-defined and are as follows:-

S.No	Activities	Timelines
1.0	Site TRP Review	January
2.0	<ul style="list-style-type: none"> • Performance Reviews & Development Discussion • Bonus/Increase Discussion 	February
3.0	<ul style="list-style-type: none"> • Functional & BL TRP Review 	March
4.0	<ul style="list-style-type: none"> • EXCO TRP Review 	Late March
5.0	<ul style="list-style-type: none"> • Board TRP Review 	April
6.0	<ul style="list-style-type: none"> • Employee Mid-year Review 	June
7.0	<ul style="list-style-type: none"> • Leadership Development Forum 	July
8.0	<ul style="list-style-type: none"> • Follow-up TRP Meetings 	November
9.0	<ul style="list-style-type: none"> • Completion of Self-appraisals 	September
10.0	<ul style="list-style-type: none"> • Manager – Draft Appraisal completion 	October

The four key elements of Performance Management System are highly integrated i.e, Linkage of Performance Reviews to Compensation; Information in Performance Reviews to Talent Reviews; Linkage of Employee Needs and Organizational needs to plan of employee development.

5. Technology & TM

In order to provide the linkage the following technologies are used:-

Talent Management Process	Technology Used
Recruiting & Staffing	Intranet & Internet Posting
Employee Development Planning & Performance Management	Customized Package developed in-house
Internal and external employee development process	Eduneering (external vendor) for customization of some courses

6. Role of Senior Leadership in TM : The COO is the primary champion of Talent/Performance @ Celanese. The senior leaders are involved in formal coaching activities and informal mentoring programs; each leader has set coaching and mentoring partnerships with HiPOs (2 per leader). Further they are involved as “Sounding Board” for in formal development for HiPOs.

7. Talent Review process : The key aspects of performance management process is Talent Review process that is used to assess talent for current and future roles and define HiPOs. The key objectives of talent review process are:-

- i. Linking People discussions and decisions to business strategy
- ii. Identification and development of action plans scoping training, staffing and recruiting needs.
- iii. Identification and movement of road blocks
- iv. Early identification of top talent
- v. Development of right people for right positions at right times
- vi. Evaluation of individual development plans

The HR business partner will track the minutes and actionables related to talent review meetings. The talent review meetings have the following standard agenda items :-

- Organizational Capability
- People Review
- Retention Assessment
- Summary of key lessons.

HiPOs are classified into three categories i.e. : Emerging Leaders, Cross Border Potentials and Senior Executive potentials.

8. Driving Talent to Performance : In order to develop the talent the following initiatives have been put into place:

Talent Development Programs	Applies to
Coaching	Executive, Upper, Middle Management Programs and supervisors
Mentoring	Middle Management
Action Learning Programs	All Employees (except upper management & Executives)
Stretch Assignments	Middle and functional management and supervisors
Seminars & Coursework	All employees(except executives)
Task Force Assignments	All employees(except executives)
Corporate staff roles	Middle and functional management, supervisors and professional individual contributors
Assessment centers for HiPOs	Professional individual contributors
360 Degree assessment feedback	Executives, Upper/Middle and functional management
Talent Review discussions	All employees
Succession planning	Executives , upper/middle and functional management
Development Planning	All employees

9. **Talent Development programs for HiPOs:** All leadership development programs are reviewed by company's leadership development council (consisting of Board, Business presidents and VPs of corporate and shared services). The council meets twice a year to:-

- i. Discuss and approve nominations of HiPOs (from Talent Review Process)
- ii. Support development of HiPOs and foster cross border movements.
- iii. Identify employees for corporate leadership development programs and engage in coaching HiPOs.
- iv. The Talent Development Programs for all employees are :-
 1. Communications training
 2. Coaching Skills workshop
 3. Change Management workshop
 4. Zodiac finance and strategy board game and
 5. The business excellence program (Mini MBA Program)
 6. The training modules offered to HiPOs are :-

Success Factor	Develop Others	Develop Self	Strategic Thinking	Business Understanding	Customer Focus	Managing Change & Innovation	Technical Skills
Emerging Leader	Managing & Leading People	Development Center	Emerging Leader's Forum Business Training Initiatives				
Cross Border Potentials	Executive Dialogue	Leadership Class Career Management 360 degree feedback	Cross border forum Several Modules: Customer Focus/Business Development Managing Change Creating Vision & Strategy				State of Art general or functional management program
Senior Exec Potentials	Executive Dialogue	360 feedback External coaching					

10. **Goal-setting & Performance Review Process:** The two key elements driving performance of talent are goal setting and review of performance. The goal-setting process is designed to ensure :-

- i. Measurable results that drive business
- ii. Alignment to organizational goals
- iii. Track achievements of individuals

11. **Gauging results of TM:** The results of TM in Celanese are measured through Talent Review process meetings. Some of measures being used are percentage of leadership candidates in succession plan, speed with which senior roles are getting filled by internal talent, number of cross border and developmental moves offered to the talent.

III. **Internal Revenue Service**

It is a branch of department of Treasury. Its evolution is dated back to 1862, when President Lincoln created Commissioner of Internal Revenue and enacted income tax to pay towards war expenses. The key policy initiatives assigned are:-

- i. "Critical Pay" authority to hire 40 individuals at a salary not exceeding the salary of vice president of United states of America.
- ii. "Workforce shaping "to support buy outs and early retirement.
- iii. Authority to waive to "Streamlined demonstration project" for projects relating to personnel demonstration.
- iv. Authority to assign pay band to employees based on their qualifications and performance, rather ran tenure.
- v. Authority rate prospective employees by category instead of only numerical assessment,

1. **Senior Leadership's role in Talent Management:** The senior leaders are actively involved in TM efforts as architects of future, change agents, and instructors.

i. **Active Leadership Participation:** The commissioner and division leaders have primary responsibility for TM, while the HR Team supports and directs the initiatives and programs. The commissioner plays a significant role by hosting the top team in the Leadership development Council, every month. The council meets twice a year to specifically to discuss on succession planning. The divisional leaders meet quarterly to discuss on the Talent.

ii. **Leadership Engagement in TM:** Executives are engaged with TM through two methods i.e., HR Policy Council and Leadership Development Executive Council.

iii. **Developing Talent Management Culture :-**Based on guiding principles, IRS has developed competency model and identified five core management responsibilities, moving away from KSA (Knowledge Skills and abilities) :-

1. Leadership
2. Customer Satisfaction
3. Employee Satisfaction
4. Business Results
5. Equal Employment opportunity

The IR leadership competencies arrayed under five core management responsibilities:-

Leadership	Employee Satisfaction	Customer Satisfaction	Business Results	EEO and diversity
Adaptability	Continual Learning	Customer Focus	Achievement Orientation	Supporting Competencies
Communication	Developing Others	Entrepreneurship	Business Acumen	
Decisiveness	Diversity Awareness	External Awareness	Political Savvy	
Integrity/Honesty	Group Leadership	Influencing/Negotiating	Problem Solving	
Service Motivation	Teamwork	Partnering	Technical Credibility	
Strategic Thinking	Teamwork	Partnering	Technical Credibility	

iv. Finding Talent

1. *Building a Talent Brand for Recruiting*: Based on assessment of its brand image, which was found to be negative, IRS started aggressively marketing itself as an "Employer of choice".
2. *Identifying and Resolving Talent Gaps*: IRS carried out assessment of capabilities of internal Talent, based on current and future supply by skill set.

v. Tailoring Talent Management Processes for Demographics

1. To attract and retain older employee base, IRS focused on allowing creativity/flexibility in how they conduct their cases. The training has been shortened to 16 months from 3 years.

vi. Driving Talent to Performance

1. IRS has linked job requirements, training programs and performance systems to the competencies. In order to facilitate Talent Development, it has launched Leadership Development approaches, on experiential learning framework using the following methods:-

- a. Classroom and electronic education
- b. Planned development assignments
- c. Coaching & mentoring
- d. Business related challenges
- e. Leadership simulations
- f. The critical success factors of IRS leadership Development Program are:-
 - i. Private-Public Partnership
 - ii. Continuum of Leadership Development
 - iii. Developing Leaders from within Organization
 - iv. Courses designed for aspiring, new, and experienced managers
 - v. Internal OD consultants complimenting IRS Leadership Development efforts
 - vi. Competency based evaluation
 - vii. Organizational support and Idea champions
 - viii. IRS is a Leader in Leadership Development

vii. Gauging Results of TM @ IRS

The corporate Leadership Council, Partnership for Public Service, Linkage, INC and John Hopkins University have identified the IRS leadership development, succession planning, and Organization development programs have been identified as "Best practice" . IRS has a dashboard to track quality of leadership curriculum. The specific measures include number of managers trained, cost of training (per hour), number of managers chosen from readiness programs, Level I and III training effectiveness measures and other measures include attrition.

IV. Cocoa-Cola Hellenic Bottling Company (CCHBC)

1. **About Coca-Cola**: It is the largest bottler of non-alcoholic beverages in Europe and third largest bottler of Coca-Cola bottler in the world. The company is listed in Athens, London, and New York stock exchanges and operates across 26 countries in the world, with a population of over 500 Million and customer base of 200,000 being served from 80 factories. Its product line includes carbonates and non-carbonated soft drinks, juices, water, sports and energy drinks, and ready to drink beverages such as teas and coffees.
2. **Evolution of TM @ CCHBC** : The Priorities for HR function are :-
 - i. Accelerating growth of a world class selling organization culture & capabilities
 - ii. Increasing the impact of HR-Led (and supported) activities,
 - iii. Increasing HR efficiency and,
 - iv. Building HR capabilities (to deliver all other areas)
3. **Scope of TM** : The scope of TM at CCHBC covers the following areas :-
 - i. Competency Model Development
 - ii. Recruiting
 - iii. Staffing
 - iv. Employee Development
 - v. Management Education
 - vi. Talent Gap Analysis
 - vii. Succession Planning
 - viii. Talent Reviews and
 - ix. Organizational Capability Development

CCHBC views talent management in terms of four elements to balance the demand supply of organizational talent:-

1. Define the requirement (Demand)
 2. Identify and assess current supply (supply)
 3. Manage people development & flow (supply), and
 4. Control retention and sourcing (demand)
4. **Senior Leadership Role in TM**. The senior leaders are actively involved in talent management at CCHBC right from CEO to team leaders. The CEO is the champion of Talent Management and team of six people (CEO, 3 Regional Directors, CFO and HR Director) has ownership for 300 executives (country and senior managers). This team meets on quarterly basis to discuss calibration and promotion/changes for these top executives. The roles and responsibilities are captured below :-

Leader	Involvement ratings (1=none, 7=extensive)	Number of meetings per year	Brief description of their roles
Board of Directors	2	4	Approve senior appointments Review progress in developing pools of talent for senior roles
CEO	5	10	Owns all organizational talent, plus approves appointments two levels below
Regional Directors	7	12	Own all talent under their responsibility; generally present their appraisals of senior managers and recommended next steps Assess and own potential general management talent
HR Director	7		Owns the process, ensures integrated, thorough thinking, challenges quality of decisions. Participates in all processes as a member of senior leadership team Owns HR talent
Corporate Function Heads	7		Own functional talent Define functional competencies and assess all country function heads in their functions (technical second opinion to line managers)
Country General Managers	7		Own all country talent; generally present their appraisals of managers and recommend next steps Ensure disciplined process at next level
Middle Managers			Similar to role of country manger but for parts of country

5. **CCHBC Competency Model:** At CCHBC different competencies are used for spectrum of talent management processes (recruiting, staffing, employee development, management education, talent gap analysis, succession planning, talent reviews and performance management). For instance full competency list is used for performance appraisal process, while leadership competencies are used for potential.

Leadership Competency List	Passion
	Focus
	Judgment
	Leadership
	Gets Results
	Teamwork
	Communication
	Creativity
	Capability Development
	Change Management

6. **Talent Pipeline :** CCHBC defines the talent pipeline based on demand estimates on the basis of following factors :-

- i. The number of future leaders that should undergo assessment at what levels
 - ii. Number of graduates to recruit (as well as the % that needs to be retained) and,
 - iii. Effect of changes in attrition and retention rates on the talent pipelines.
- HR revisits the talent pipeline on an annual basis and tracks the following six associated talent pipeline metrics:-

- 1. Leadership Development
- 2. Preferred employer for graduates in the industry
- 3. No Turn downs from graduates due to competitive offer with similar pay
- 4. Graduates retained and demonstrating potential after 12 months
- 5. Key people in all key positions
- 6. High-potential retention to ensure sufficient pipeline

7. **Talent Assessment: People Development Forums:** CCHBC has identifies and assesses the talent supply by assessing the in-country talent, functional talent, and potential general managers, via a network of country of countries (26 countries), functional (HR/Finance/Ops/Quality/Information services, and commercial), and general manager people development forums. These people development forums meet one or two days annually, to assess country and function specific talent. These forums are owned by general country manager of respective country, while functional people development forum process is owned by each corporate function head. The country general manager/corporate functional head present details of talent assessed and seek the views of members in plotting the talent in performance/potential grid. The potential on left axis is classified as “Significant Potential”, “Promotable”, “develop at current level” or “coach for improved performance/move out/under evaluation” and people performance is classified as High/Medium/ or low. The members discuss on competencies, technical skills, strengths compared to development areas, and mobility are discussed, agreed on and calibrated for each high-potential employee.

8. **High-Potential Assessment: Future Leaders:** CCHBC has started future leader assessments since 2002 on an annual basis. Employees assessed are usually 3-5 years away from the roles of country general managers. The assessment of potential is carried out on the basis of defined innate competencies (e.g: passion, judgment, leadership, gets results and teamwork etc). The assessment is carried out by a panel consisting of CEO, Regional Directors, HR Director, CFO and leadership development manager. The following assessment techniques are used:

- i. Tests for Verbal and numerical reasoning
- ii. An occupational personality questionnaire
- iii. Case Study Analysis
- iv. Decision Making Exercise
- v. Management in-tray exercise
- vi. Candidate interviews

9. **Driving Talent to Performance:** CCHBC has designed and rolled-out list of 77 programs level-wise to facilitate talent development. The newly hired senior managers often opt for external coach. The company also runs 4 day intensive coaching programs for top 200-300 managers. The development initiatives offered level-wise are captured below :-

Talent Development Programs	Applies to
Coaching	All Levels
Action Learning Programs	Middle & Functional Management and Professional Individual Contributors
Job Rotations	Middle & Functional Management
Stretch Assignments	Middle & Functional Management and Professional Individual Contributors and supervisors
Seminars/Coursework	All Employees
Task Force Assignments	All Employees
Corporate Staff Roles	Middle & Functional Management and Professional Individual Contributors
Assessments Centers for HiPOs	All employees
360 Degree Assessment Feedback	Middle Management & upwards
Talent Review Discussions	All Employees
Succession Planning	Executives and Upper, Middle and functional management
Development Planning	All employees

1. The curriculum/courses offered under various leadership programs are :-

- a. Foundation in Management I,
- b. Situational Leadership
- c. Foundation in Management – II
- d. Foundation in Market Place Excellence
- e. Enabling Fast Change
- f. Excel
- g. Coaching for High Performance
- h. Strategic Leadership

10. **Gauging Results of TM :** The results of TM are gauged with the help of following measures:-

- i. Customer Ratings on Talent Vs competition
- ii. Number of internal promotions for managerial roles
- iii. Number of Ready Now Candidates
- iv. % of Organizational positions filled with key players

CONCLUSION

In summary, GB has implemented the following Talent Management Best Practices:-

- 1) **Strategic Framework:** All the above organizations have a strategic framework which focuses on connecting the Talent Managements to the organizational context and business imperatives. In case of some organization, Talent Management is viewed as comprehensive and all-pervasive scoping Talent sourcing till exit of Talent, while other organizations have taken the view that Talent Management refers to the Talent Offerings made only to the HiPO's in the bank. The Talent Management efforts are spearheaded by the Senior Leadership Talent, starting from the CEO's across the levels, with clearly defined accountability. The involvement and accountability of Senior Leadership is a critical success factor.
- 2) **Talent Forecasting & Succession Planning:** The first critical step is to assess the future leadership requirements across the organization, and arrive at Talent Pipeline for ensuring continuity of Leadership and availability. All the five organizations have their Leadership assessment in place, to plan for the Talent Management.
- 3) **Talent Development:** Organizations have differentiated approaches towards Talent Development. The integrated approach is have a competency framework in place and link it to the leadership competencies, assess the capabilities of existing talent, schedule a customized developmental plan and more importantly tracks the progress over a period of time.
- 4) **Talent Analytics & Reviews:** It is imperative for the organizations to establish a rhythm for periodical review of Talent Management efforts in an organization. All the five organization, scoped in the research have established a rigor and rhythm for Talent Reviews.
- 5) **Diversity & Inclusion:** Organizations are ensuring a correlation between their D & I initiatives and Talent Management to ensure that D & I objectives are realized through the TM efforts. The organizations covered in this research have linked their D & I initiatives to the Talent Management framework.

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REVIEW AND CLASSIFICATION OF LITERATURE ON RURAL CONSUMERS' BUYING BEHAVIOUR FOR MOBILE PHONE IN INDIA

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ABSTRACT

Indian rural market is gaining more attention by marketers as urban markets are becoming more saturated and competitive. Mobile phone market is growing in rural India. Mobile phone has changed the lives of rural people. In India there is still lack of rigorous research work on rural buying behavior, compared to urban areas. This paper reviews and classifies the literature on the research issue 'Rural consumers' buying behaviour for mobile phone in India. It highlights the critical research issues with sub issues for above research subject and also classifies the research papers with reference to these issues and sub issues. The main critical issues are: The definitional issues of 'rural market', Nature and importance of rural marketing, Understanding buying behavior of rural consumers, History, evaluation and impact of mobile phone (Telecommunication sector), Diffusion of mobile telephony (New Technology), Consumers' (Rural) behavior and mobile phone, Research in rural areas. It also mentions the important secondary sources for rural data. Finally it highlights the gaps and directions for future research.

JEL CODE

M31

KEYWORDS

Consumer behavior, Diffusion of mobile telephony, Rural marketing, Rural consumer behavior of mobile phone.

INTRODUCTION

Indian rural market is gaining more attention by marketers as urban markets are becoming more saturated and competitive. India lives in her villages, 70 per cent population – 800 million – lives in villages. There are 6,38,588 villages in India, out of these 17 per cent villages in the 2000+ population category account for 50 per cent of rural population and 60 per cent of rural wealth (Census, 2001). Rural market contributes nearly 56 per cent of the total income and 64 per cent of total spending in India. Rural India accounts for more than 50 per cent of FMCG and durable sales (Kashyap, 2012). Rural telephony has seen a dramatic transformation with the opening of the telecom sector, which has witnessed a 26 – fold growth in teledensity in the last eight years (see table 1). The 219 million rural users number more than the total subscribers in Brazil (Kashyap, 2012).

TABLE 1 – RURAL TELEDENSITY GROWTH

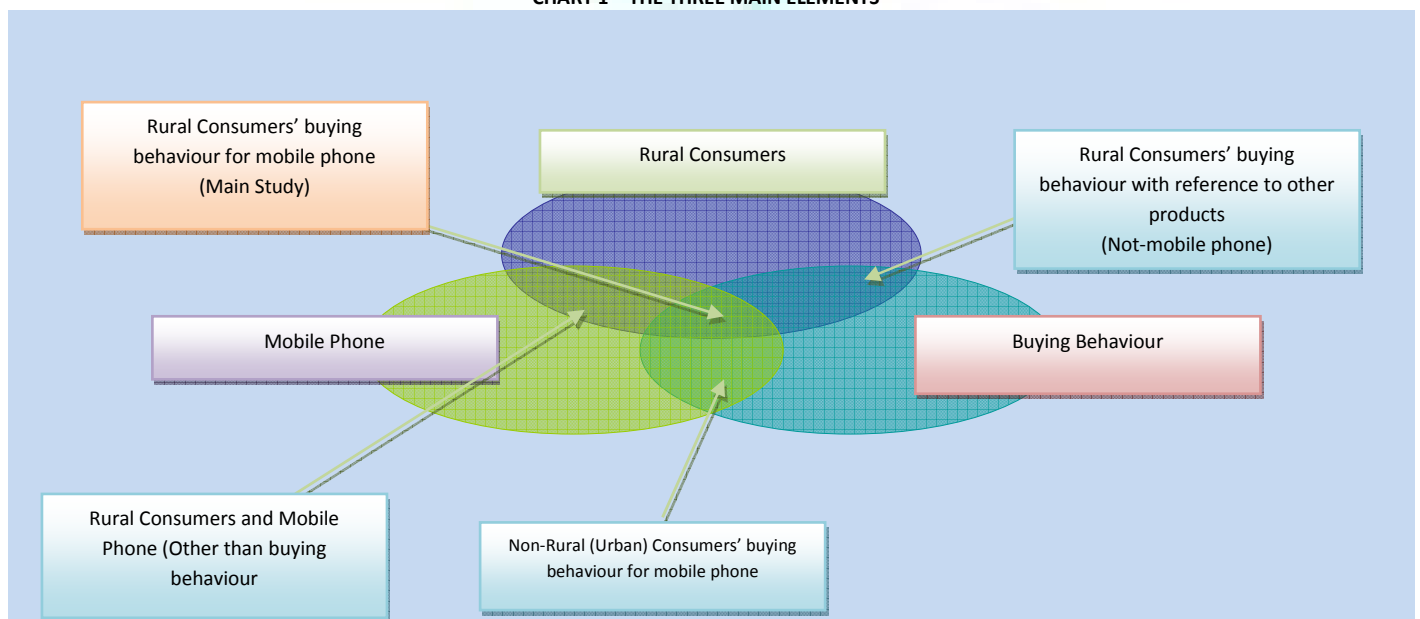
Parameter	2002	2008	Dec. 2009	June 2010
Rural Teledensity	1.2	9.5	21.2	26.4
Rural Subscriber base (in millions)	-	62	175	219
Rural development	344	890	1219	1903

Source: Economic survey, 2009-2010, TRAI Report (Kashyap, 2012).

RESEARCH SUBJECT

Initially for many years, the mobile was a luxury product. Three main obstacles to go mass were: cost per call, post-paid system of bill payment, and cost of the handset. Eventually, these obstacles were removed (Businessworld Marketing Whitebook, 2012). Mobile phone market is growing in rural India. Mobile phone has changed the lives of rural people. In India there is still lack of rigorous research work on rural buying behaviour, compared to urban areas. We do not have scientific research work on rural buying behaviour on mobile phone in India. The present article throws light on review and classification of literature on 'Rural consumers' buying behaviour for mobile phone.' Following are the main three independent but still interdependent elements of the research subject. (See chart 1).

CHART 1 – THE THREE MAIN ELEMENTS



Source: Author's work

LITERATURE REVIEW

Depending on their requirements, different organizations ascribe different meanings to the term *rural*. It is important for a marketer to look beyond these definitions at the underlying limitations of each (Kashyap, 2012). Bhavé & Markale (2008) in their paper discussed the need for definition, the environmental changes and the major issues and suggestions to resolve them.

Craig & Douglas (2011) has given the importance of empowering rural consumers in emerging markets, they examined marketing's role in tapping potential in rural areas and suggested how firms can help potential consumers develop their purchasing power, thus creating a situation that benefits both consumers and the firm.

Jha Mithileshwar (2003) has developed a framework to understand rural buyer behaviour. He has used the term *Rurban*, considering the notion of a continuum from rural to urban, rurban being the overlap between the two, with pretensions to being closer to urban in physical features and proximity to large urban centers, but with deep rural sociological moorings.

There has been some good works on history, evaluation and impact of mobile phone, though it is not directly related with rural market. Lacohee, Wakeford & Pearson (2003) explained that the social history of the mobile telephone involves both the history of technological development and an account of changing social and political frameworks into which the new technological developments become integrated. There are also works on relationship between mobile and fixed-line communication. Vogelsang (2010) wrote in his article that the dramatic worldwide increase in mobile communication that has led to more than 4 billion users over the last few years accompanied in wealthy countries by a significant decline in fixed network subscriptions. Such fixed-to-mobile substitution (FMS) is the center of literature survey of his article.

It is in the same manner very important to understand the process of diffusion of new technology (mobile phone) in the emerging markets. Aithal & Mukhopadhyay (n.d.) inspired by the fact that even though the market attractiveness of rural market has been accepted but very few of the private operators have actually made a successful entry into the market, and attempted to understand the marketing issues underlying marketing of telecom services in rural areas and why private operators have not been entering rural areas in a big scale. Biancini (2011) analyzed the demand and supply characteristics of the Indian telecommunications market, with the aim of contributing the debate on the effectiveness of universal access policies in developing countries. Gupta & Jain (2012) studied the diffusion of mobile telephony in India; they wrote that diffusion of new technology is an important driver of economic growth. There is a vast diffusion potential in this country which needs to be exploited efficiently and in a rational way. This paper investigated the social, technological, economical and political (STEP) factors that have influenced the diffusion process of mobile telephony especially the diffusion speed. Anderson (2006) discussed the structured approach for bringing mobile telecommunications to the world's poor with the help of the 4As – availability, affordability, awareness and acceptability. Gamboa & Otero (2009) examined the diffusion pattern of mobile telephony in Colombia. In the same way Kalba (2007) assessed the drivers of mobile phone diffusion in emerging markets. It addressed both demand- and supply-side factors and provides an outlook on the diffusion process going forward, as two or three billion more mobile users are accommodated by mobile networks in addition to today's 2.5. to 3.5 billion subscribers and users. The paper focused on several specific issues, namely the relationship of mobile phone adoption to income levels and legacy phone service as well as the role of prepaid phones and asymmetrical interconnection fees in hastening mobile diffusion in emerging markets. It also analyzed the impact of different levels of competition on mobile phone adoption, indicating that the diffusion benefits recede as the number of operator increases. Finally, it attempted to explain why mobile penetration has been higher in Eastern Europe than in Latin America and in China than in India (a rapidly changing situation). Lalji & Good (2008) studied on the design of a mobile phone for illiterate persons and concluded that a user-centered design process provides a valuable framework for developing products that people will enjoy and want to use, as it ensures that the product or technology being developed will meet the needs, demands, and desires of real users.

Finally, there are some critical papers on consumers' behaviour and mobile phone. Bayraktar, Tatoglu, Turkyilmaz, Delen & Zaim (2012) using a data envelopment analysis (DEA) analyzed and compared customer satisfaction and loyalty (CS&L) efficiency for mobile phone brands in an emerging telecommunication market, Turkey. Drawing on the perceptual responses of 251 mobile phone users, the DEA models reveal that from the top six mobile phone brands in Turkey, Nokia features as the most efficient brand followed by LG and Sony Ericsson in terms of CS&L efficiency, while Motorola, Samsung and Panasonic have been ranked as the least efficient brands. Goode, Davis, Moutinho & Jamal (2005) explored the relationships between a number of key input factors and customers' overall satisfaction with their mobile phone, and developed a neural network model to predict the overall level of customer satisfaction derived from mobile phones in the UK. The final model used eleven input factors, the most important of which are experience of product quality, level of service charges, level of call charges, and level of satisfaction with the service provider. Jain & Hundal (2007) studied the factors influencing the rural consumer buying behaviour towards mobile phone and making choice of service providers prevailing in mobile phone markets in rural India. The study concluded that rural people extremely desire the facilities and knowledge along with latest technology to make choice about mobile sets and service provider. Sarker & Wells (2003) studied, through social analysis, how and why mobile handheld device adoption occurs. Singh & Goyal (2009) studied the variation in the importance given by different age and gender groups to the selected factors while buying mobile handsets in India. Stark, Rumpel, Meier & Bell (2008) studied rural and ethnic young consumers' perceptions of bundled cellular telephone features. Basha, Lakshmana & Fayaz (2011) attempted to find the variables/factors that affect the consumer buying behaviour of mobile phone in India. Tian, Shi & Yang (2009) investigated consumers' attitudes toward the uses of mobile phones via self-report questionnaires in 3,021 Chinese participants ranging from 15 to 65 years old, and suggested that consumers' attitudes toward mobile phones are composed of three dimensions: sense of security, sense of self-character extension, and sense of dependence. Turnbull, Leek & Ying (2000) focused on the effect of confusion on information search behaviour which is part of the decision making process in the mobile phone market in UK.

SOURCES OF SECONDARY RURAL DATA IN INDIA

There are several secondary sources for rural data, but most of them revolve around demographic information and do not provide much on products or consumers (Kashyap, 2012). Following are some important organizations in India.

Census of India, NCAER (National Council for Applied Economic Research), NSSO (National Sample Survey Organization), CSO (Central Statistical Organization), State Statistical Abstract (available with State Statistical Officer), District Statistical Handbook (available with District Statistical Officer), ICDS (Integrated Child Development Scheme), CMIE, Government of India (goidirectory.nic.in), AG Census (agcensus.nic.in), Panchayat Office, Marketing Research companies and Associations – MART, Rural Relations, Anugrah Madison, Sampark, Rural Marketing Association of India (RMAI) (Kashyap, 2012).

CRITICAL RESEARCH ISSUES

It is very difficult to identify critical research issues with some unexplored discipline. This paper identified some critical research issues on 'Rural consumers' buying behaviour of mobile phone'. The list is neither all inclusive nor each issues are totally different from each other. Following are seven main themes or research issues on the subject and followed by important sub-themes in the way of questions.

- **Critical Research Issues in 'Rural consumers' buying behaviour for mobile phones:**

1. The definitional issues of 'rural market'
2. Nature and importance of rural marketing
3. Understanding buying behaviour of rural consumers
4. History, evaluation and impact of mobile phone (Telecommunication sector)
5. Diffusion of mobile telephony (New Technology)
6. Consumers' (Rural) behaviour and mobile phone
7. Research in rural areas

- **Sub issues of each main theme:**

1. The definitional issues of 'rural market':
- 1) What is 'rural market'?

- 2) What is the nature of rural market?
- 3) How do companies define rural market?
- 4) Which are the different parameters to define rural market?
2. Relevance and Importance of 'Rural Marketing':
 - 1) What is 'rural marketing'?
 - 2) What is the scope of rural marketing?
 - 3) Which are the main elements of rural marketing environment?
(Demographic, physical, economic, social and cultural, political and technological environment)
 - 4) What is the size of the Indian rural market?
 - 5) Why is rural market more important and relevant for companies in today's highly competitive market environment?
 - 6) Does rural market provide sufficient profit to the firms compared with its costs?
 - 7) Is rural market relevant for all products or services?
 - 8) Does rural market grow with reference to market opportunities?
 - 9) What is the future of rural market?
3. Understanding buying behaviour of rural consumers:
 - 1) Are rural consumers different from their urban counterpart?
 - 2) Which are the factors affecting rural consumer behaviour?
(Cultural, social, technological, economical, political and personality and psychological factors)
 - 3) Which are the characteristics of rural consumers which make them different from urban consumers?
 - 4) How do rural consumers buy? (F.M.C.G., durable goods, technological, services)
 - 5) Which are the stages of rural buying process?
 - 6) Which are the factors affecting rural buying process?
 - 7) What is the role (influence) of following in buying in rural areas?
(Women, children and youth)
 - 8) Who are the 'opinion leaders' in rural market?
 - 9) Are rural consumers 'brand conscious'?
 - 10) Are rural consumers 'brand loyal'?
 - 11) Which are the myths about rural consumers?
 - 12) What is the importance of 'Customer Relationship Management' for rural market?
 - 13) Does consumerism grow in rural areas?
4. History, evaluation and impact of mobile phone (Telecommunication Sector):
 - 1) What is the history of mobile phone? (world/ India)
 - 2) What is the evolution process of mobile phone? (Growth)
 - 3) Comparison of mobile phone with land-line phone.
 - 4) Which are the features of mobile phone? (past and present)
 - 5) What is the impact of mobile phone on?
(Communication, social, cultural, economic, psychological, behavioural, medical (health) impacts)
 - 6) What is the future of mobile phone? (World and India)
5. Diffusion of Mobile Telephony (New Technology):
 - 1) What is the process of diffusion of mobile phone in the world / India? (new technology)
 - 2) How does mobile phone technology diffuse in developed countries? (new technology)
 - 3) How does mobile phone technology diffuse in emerging / poor countries? (new technology)
 - 4) How does mobile phone technology diffuse in rural areas? (new technology)
6. Rural (Urban) Consumers and Mobile Phone:
 - 1) How do rural consumers buy mobile phone? (buying process)
 - 2) Which are the factors affecting rural buying behaviour (buying process) for mobile phone? (Demographic, Cultural, social, technological, economical, political and personality and psychological factors)
 - 3) Are rural and urban consumers different in buying a mobile phone?
 - 4) Which is the value rural consumer expect from mobile phone?
 - 5) Why do rural people buy (want) mobile phone?
 - 6) Which are the features rural people expect from mobile phone?
 - 7) How does mobile phone affect rural consumers' life (behaviour)?
 - 8) How do rural people use the mobile phone?
7. Research in Rural Areas:
 - 1) What is the difference between research in urban areas and rural areas?
 - 2) Are research instruments of urban areas relevant for rural areas?
 - 3) Are rural researches relevant for managers?
 - 4) What are the precautions for researchers for rural market?
 - 5) Which are the ethical issues in rural market research?

ANALYSIS

To identify the gaps in the literature and to highlight opportunities for future work, with the help of twenty one research papers on the above themes / critical research issues, following are the classifications of the papers with reference to the above main themes including their reference to question number in sub issues in the bracket.

CLASSIFICATION OF RESEARCH PAPERS WITH REFERENCE TO CRITICAL RESEARCH ISSUES

CRITICAL RESEARCH ISSUES	RESEARCH PAPERS
1. The definitional issues of 'rural market'	Bhave, S. W., & Markale., A. (2998). Definitional issues of rural and rural market environment. <i>Conference proceedings on marketing to rural consumers</i> (pp. 51-59). Kozhikode: IIMK. (Ques. No. 1, 4)
2. Nature and importance of rural marketing	Craig, C. S., & Douglas, S. P. (2011). Empowering rural consumers in emerging markets. <i>International Journal of Emerging Markets</i> , 6(4), 382-393. (Ques. No. 5)
3. Understanding buying behaviour of rural consumers	Jha, Mithileshwar. (2003, September). Understanding rural buyer behaviour. <i>IIMB Management Review</i> , 89-92. (Ques. No. 1, 11)
4. History, evaluation and impact of mobile phone (Telecommunication sector)	Lacohee, H., Wakeford, N., & Pearson, I. (2003). A social history of the mobile telephone with a view of its future. <i>BT Technology Journal</i> , 21(3), 203-211. (Ques. No. 1, 2) Vogelsang, I. (2010). The relationship between mobile and fixed-line communications: A survey. <i>Information Economics and Policy</i> , 22, 4-17. (Ques. 3)
5. Diffusion of mobile telephony (New Technology)	Anderson, J. (2006). A structured approach for bringing mobile telecommunications to the world's poor. <i>The Electronic Journal on Information Systems in Developing Countries</i> , 27(2), 1-9. (Ques. No. 3, 4) Aithal, R. K., & Mukhopadhyay, A. (n.d.). Rural telecom in India: Marketing issues and experiences from other countries. <i>Adopting E-governance</i> , 271-277. (Ques. No. 1) Biancini, S. (2011). Behind the scenes of the telecommunications miracle: An empirical analysis of the Indian market. <i>Telecommunications Policy</i> , 35, 238-249. (Ques. No. 1, 3) Gamboa, L. F., & Otero, J. (2009). An estimation of the pattern of diffusion of mobile phones: The case of Colombia. <i>Telecommunication Policy</i> , 33, 611-620. (Ques. No. 3) Gupta, R., & Jain, K. (2012). Diffusion of mobile telephony in India: An empirical study. <i>Technological Forecasting & Social Change</i> , 79, 709-715. (Ques. No. 1, 3) Kalba, K. (2007). The adoption of mobile phones in emerging markets: Global diffusion and the rural challenge. <i>6th Annual Global Mobility Roundtable</i> , 1-22. (Ques. No. 1, 3, 4) Lalji, Z., & Good, J. (2008). Designing new technologies for illiterate populations: A study in mobile phone interface design. <i>Interacting with Computers</i> , 20, 574-586. (Ques. No. 3, 4)
6. Consumers' (Rural) behaviour and mobile phone	Bayraktar, E., Tatoglu, E., Turkyilmaz, A., Delen, D., & Zaim, S. (2012). Measuring the efficiency of customer satisfaction and loyalty for mobile phone brands with DEA. <i>Expert Systems with Applications</i> , 39, 99-106. (Ques. No. 2) Goode, M. H., Davies, F., Moutinho, L., & Jamal, A. (2005). Determining customer satisfaction from mobile phones: A neural network approach. <i>Journal of Marketing Management</i> , 21, 755-778. (Ques. No. 2) Jain, A., & Hundal, B. S. (2007). Factors influencing mobile services adoption in rural India. <i>Asia-Pacific Journal of Rural Development</i> , 17(1), 17-28. (Ques. No. 2) Saker, S., & Wells, J. D. (2003). Understanding mobile handheld device use and adoption. <i>Communications of the ACM</i> , 46(12), 35-40. (Ques. No. 2) Singh, Jagwinder., & Goyal, B. B. (2009). Mobile handset buying behaviour of different age and gender groups. <i>International Journal of Business and Management</i> , 4 (5), 179-187. (Ques. No. 2) Stark, J., Rumpel, J. H., Meier, R. J., & Bell, R. L. (2008). Rural and ethnic young consumers' perceptions of bundled cellular telephone features. <i>Academy of Marketing Studies Journal</i> , 12(2), 1-18. (Ques. No. 6) Suraj Basha, S., Lakshmana, B. C., & Fayaz, K. (2011). Empirical study on buying behaviour of mobile phone in India. <i>Asia Pacific Journal of Research in Business Management</i> , 2(6), 298-316. (Ques. No. 2, 5, 8) Titan, L., Shi, J., & Yang, Z. (2009). Why does half the world's population have a mobile phone? An examination of consumers' attitudes towards mobile phones. <i>CyberPsychology & Behaviour</i> , 12(5), 513-516. (Ques. No. 5) Turnbull, P. W., Leek, S., & Ying, G. (2000). Customer confusion: The mobile phone market. <i>Journal of Marketing Management</i> , 16, 143-163. (Ques. No. 2)
7. Research in rural areas	N/A

LIMITATIONS

As said above that the list of critical research issues and sub-issues might not be complete, one can find still more critical research issues. Research issues and sub issues are not completely independent rather they are inter-dependent with each other. Another important limitation is that this paper does not give the complete literature on the research subject; it has only highlighted important twenty one papers related with the research subject. Due to limitation of scope this paper has not analyzed the methodology of each research paper.

CONCLUSIONS AND FUTURE DIRECTIONS

From the above classification of research papers with reference to critical research issues and sub issues, it is found that there is a gap in literature to understand rural buying behaviour. Not much work found on rural consumers' buying behaviour for mobile phone in India. There are some works which are related with some part of the above subject but still there is a lack of holistic work to understand the buying process of mobile phone in India. Another gap is lack of research on research for rural market; not much scientific works found which highlight the specific challenges in designing and executing rural research in India.

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MOBILE BANKING IN INDIA: OPPORTUNITIES & CHALLENGES

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ABSTRACT

Mobile banking certainly seems to be one of the biggest innovations along with CBS (Core Business System) and ATM in the field of banking and this will have a long lasting effect on how banking business is conducted. Automation of some routine work processes in banks in the mid-80's has moved on and resulted in business process re-engineering culminating in making banking services branchless, anytime and anywhere, facilitated new product development and enabled near real time service delivery. CBS and ATMs have enabled banks to provide banking services 24x7x365 but not really helped in expanding their reach to the unbanked or reach to the customer wherever she/he. At the end of January 2012 the total wireless subscriber base was 936 million out of which, 313 million subscribers were from rural areas. Even ATM and Internet banking have their limitations when it comes to penetration in rural areas. Mobile as a technology, which is low cost, ubiquitous and efficient with a potential to enable achievement of the goal of deeper financial inclusion, has been recognised across the world. Any system has certain minimum features to attract customers and keep them engaged in the long run, such features are easy of use, safety and security, accessibility and affordability. Mobile Banking meets all these requirements but still the usage is nowhere near its potential.

KEYWORDS

Mobile Banking, Information and Communication Technology (ICT), Mobile Network Operation (MNO), Core Banking System (CBS).

INTRODUCTION

Mobile banking is simply performing bank transactions such as balance checks, account transactions, payment with help of mobile phone. It can also be understood as availing banking and financial services with the help of mobile telecommunication device. The scope of services offered in mobile banking may include getting account information, transferring funds, sending checkbook request, managing deposits, taking quick check of transactions and so on. Mobile banking today is most often performed by SMS (Short Message Service) so that it is also known as SMS banking. The very feature of mobile banking 'Anytime- Anywhere Banking' is making it very popular among all the categories. Using mobile phone is very common.

In India traditional branch-based banking remains the most widely adopted method of conducting banking transaction, at the same time commercial banks are undergoing a rapid change by the information & telecommunication (ITC) technology. ICICI bank pioneered in mobile banking services in India. Among public banks, Union Bank of India was first to introduce mobile banking (Ali et al. 2010). Today many commercial banks have launched mobile banking using ITC technology and now they can reach out to customers and provide them with not only general information about its services but also the opportunity of performing interactive retail banking transactions anytime, anywhere. Mobile Banking refers to provision and availing of banking and financial services with the help of mobile telecommunication devices. The offered services may include facilities to conduct bank transactions, to administer accounts and to access customized information. In the broader sense mobile banking is that type of execution of financial services in the course of which - within an electronic procedure - the customer uses mobile communication techniques in conjunction with mobile devices (Pousttchi and Schurig 2004). Around 1.72 crore people are using mobile banking services in the country and private bank HDFC Bank has the largest number of such customers. As on October 2012, nearly 1.72 crore customers are utilising the Mobile Banking Services among the 42 banks which provide the facility, Finance Minister P. Chidambaram said in a written reply to the Lok Sabha. According to the list, private sector bank HDFC tops with 88.88 lakh customers are using mobile banking services.

OBJECTIVE OF THE STUDY

- 1). To study the need for mobile banking services in India.
- 2). To discuss the customised mobile banking products in India.
- 3). To analyse the current issues in the mobile banking landscape.
- 4). To draw conclusions from the study of mobile banking services in our country.

In olden days getting draft for outstation payment is cumbersome and clearing used to take a lot of time, outstation cheques would take all the more time, reconciliation and maintaining books by the bank branches would require additional manpower and customers were never satisfied. During the last one decade, things have changed at a rapid pace and all because of technology. The initial steps of tapping technology came in the form of adoption of the core banking systems (CBS) which led to near collapse of geographical location of parent branch. Today most of the customers tapping the technology led internet banking and interconnected ATM network to transact the business desktop PCs became our anytime bank branches. Then came the next revolution - mobile banking which added anywhere to the truly anytime banking. Weaning the customer from physical banking and building customer awareness and confidence in these non face-to-face modes of banking has been a herculean task for the banking industry. In this exciting and challenging journey, the Reserve Bank, as a pro-active regulator, has defined enabling policies and, at times, has goaded the industry in achieving the desired results. The Governments, both at the central and the state levels, have also been taking measures in encouraging electronic payments and receipts, such as, electronic money transfers and e-mode of transactions for their receipts and payments.

NEED FOR MOBILE BANKING

Technology adoption has changed the face of banking in India. What started as a mere automation of some routine work processes in banks in the mid 80's has moved on and resulted in business process re-engineering is making banking services branchless, anytime and anywhere, facilitated new product development and enabled near real time service delivery. Technology helped banks to reach the doorsteps of the customer by overcoming the limitations on geographical/physical reach in branch banking and easing the resource and volume constraints mobile banking will as an important part of the business but also rapidly evolving channel to deliver better customer service, expand product range, retain market-share, enhance revenue, drastically reduce operating expenses and above all remain socially relevant without sacrificing sustainability in ICT based financial inclusion plans.

Mobile banking occupy an important place in banking and in a very short time and is expected to provide much needed platform for taking banking to the unbanked masses. Mobile banking certainly seems to be one of the biggest innovations along with CBS and ATMs in the field of banking and this will have a long lasting effect on how banking business is conducted. CBS and ATMs provided banks the much needed technological fill up to break the shackles of branch banking architecture. CBS and ATMs have enabled banks to provide banking services 24x7x365 but have not really helped in expanding their reach to the unbanked or reach to the customer wherever he/she is. One tends to concur with the view of many academicians and practitioners that this limitation can be overcome to a large extent by leveraging the mobile phone enabled banking or mobile banking. We must see it as the *giant leap* of the banking industry – leveraging technology to promote anytime and anywhere banking and more deeper and sustainable financial inclusion.

GUIDELINES ISSUED BY RBI

Recognizing the potential of mobile banking, Reserve Bank of India issued the first set of guidelines in October 2008. The guidelines defined mobile banking as undertaking banking transactions using mobile phones by bank customers that would involve credit/debits to their accounts. This definition in a sense provided larger canvas to mobile payments which in a narrow sense involved only payment made for a product or service using the mobile phone either remotely or at the point of sale (PoS). These guidelines, which were very broad-based, laid down the technology and security standards pertaining to safety, confidentiality, integrity, authenticity and non-repudiability. As this was a nascent technology and, to build up customer confidence in terms of minimizing frauds, the Reserve Bank mandated that all transactions should be encrypted irrespective of the value. The Reserve Bank also made inter-operability a cornerstone of its policy. After the initial set of guidelines, several policy relaxations have been made to further encourage the use of mobile banking taking into account changing economic environment and feedback of the industry and customers. Some of the significant norms were shown in Appendix-1

Restricted Financial institutions: The guidelines state that only existing financial institutions and banks are allowed to offer mobile banking. Although the guidelines cover Microfinance Institutions (MFIs). Significant economies of scale cannot be achieved by these due to existing large fixed costs. For a very inexpensive solution, it would have been more effective to allow non-profit organisations or evangelical organisations to build their own MFI without being encumbered by large existing infrastructure.

Rupee transactions: All transactions must be done only in India's national currency, the rupee. While this may not be a threat in the beginning, this may pose a constraint for interoperability between Indian mobile payments and the world. Also it excludes providers from the lucrative remittance market in India and limits areas from which mobile operators can be profitable.

Existing account holders: The guidelines also states that only those have valid account would be allowed mobile banking to the large number of unbanked customers in India.

The growth in mobile banking is rapid but yet to reach the critical mass. It should provide payment services at a cheaper, secure and seamless manner to the existing and potential customers. It is becoming the next wave of financial and technological innovation in banking by universalizing access to banking service without jeopardizing prudential and regulatory framework of the financial sector.

GROWTH OF MOBILE BANKING

In India where a majority of population still lives in rural areas that do not have presence of formal banking and providing banking facility has been a major challenge. Of the 0.6 million villages in India, the total number of villages with banking services through brick and mortar branches and alternate banking channels stands at approximately 0.14 million villages as at end March 2012. India has the highest number of households (approximately 145 million) who are excluded from banking. However, with the growing reach of the mobile, it has now become possible to provide the banking facilities to people who were not able to enjoy this facility so far. At the end of January 2012, the total wireless subscriber base was 936 million out of which, 313 million subscribers were from rural areas. Use of mobile banking services among this huge base of subscribers is, however, very low. Even amongst the existing bank customers less than one percent of them are covered under the mobile banking services. Notwithstanding the existing low base of customers, the growth in mobile banking transactions has shown increasing trend. For example, in the month of June 2012, 3.43 million transactions amounting to ₹3067.10 million were processed as compared to 1.41 million transactions amounting to ₹984.66 million processed in June 2011 - an increase of about 143 per cent in volume and approximately 211 per cent in value terms. It is, however, evident that the potential of mobile banking technology is yet to be fully exploited.

TABLE 1: TOTAL NUMBER OF WIRELESS SUBSCRIBERS IN INDIA

Year	Rural subscribers	Urban subscribers	Total subscribers
Upto June 2012	313 million	623 million	936 million

(Source: Speech of RBI Deputy Governor Harun. R. Khan)

TABLE 2: MOBILE BANKING TRANSACTIONS IN INDIA

Year	Number of transactions	Amount of transaction in Rs.
Upto June 2011	1.41 million	984.66 million
Upto June 2012	3.43 million	3067.10 million

(Source: Speech of RBI Deputy Governor Harun. R. Khan)

Another potential factor that has attracted all the stakeholders including policy-makers to this innovative technology is the lower cost associated with this model in providing banking services both amongst existing customers and in taking banking to the hinterland as well. According to a study, mobile banking based transaction costs about two per cent of the branch banking cost, 10 per cent of the ATM based transaction cost and 50 per cent of the internet banking cost. The main reason for non-availability of banking to a large part of our population is the limited economic viability of the branch banking. Even ATMs and internet banking have their limitations when it comes to penetration in rural areas. Recent guidelines on deployment of White Label ATMs (WLAs) has a very distinct slant towards the deployment of ATMs in the smaller tier 3 to 6 centres. Notwithstanding this, the Reserve Bank, given its constant endeavour to link every citizen of the country with the formal financial system, is keen to expand mobile banking penetration. With the availability of the mobile with almost every household, it has now become possible to make the giant leap to a reality by providing everybody with banking services including payment services. The potential of mobile banking is also underscored by the fact that the consumers are conveniently placed in terms of using the product anytime anywhere and could develop ease of using the product once they are made aware of the same.

PRODUCTS OFFERED BY MOBILE BANKING

The generic definition of mobile banking involving credit/debit to the account of the customer using mobile has been customized in India to provide two rather unique services. These are the Inter-bank Mobile Payment System (IMPS) and the Mobile linked Kisan Credit Card (m-KCC).

Inter-bank Mobile Payment System (IMPS) - mobile based remittance system

The IMPS is a mobile based remittance system which is inter-bank in nature and is owned and operated by the National Payment Corporation of India (NPCI). The IMPS facilitates access to banks accounts and transfer of funds through mobile phones. The system, launched in November 2010, provides real time transfer of funds between the customers of different banks on 24x7 basis. In other words, funds can be transferred any time to the beneficiary who receives the funds instantaneously and both the sender and receiver get the confirmation of debit and credit. 50 banks have started providing IMPS services to their customers so far and as at the end of July 2012, banks have issued 36.32 million Mobile Money Identifiers (MMIDs) to their customers.

Mobile linked Kisan Credit Card (m-KCC)

The mobile linked Kisan Credit Card (m-KCC) launched by NABARD on a pilot basis on October 2, 2011 in Villupuram district of Tamil Nadu for the farmers having KCC accounts with the Pallavan Grama Bank (an RRB sponsored by the Indian Bank). The m-KCC using mobile technology enables farmers to carry out purchase

of agricultural inputs in a cash-less manner. All transactions are carried out through mobile phones of farmers and vendors registered with the bank and the technical service provider (TSP). The transaction is performed through a combination of a secured SIM card and a PIN using an interactive voice recording/SMS system. This enables the farmers to buy agriculture inputs by putting through the transactions through a mobile phone enabled system linked to the banks CBS. NABARD is now encouraging banks, in particular the RRBs, to use this pilot for extending mobile based KCCs to the farmers.

MODELS OF MOBILE BANKING

Models of branchless banking can be classified into three categories. They are explained as follows.

1. Bank-focused model: The bank-focused model emerges when a traditional bank uses non-traditional low cost delivery channels to provide banking services to its existing customers.
2. Bank-led model: The bank-led model offers a distinct alternative to conventional branch-based banking in that customer conducts financial transactions at a whole range of retail agents (or through mobile phone) instead of at bank branches or through bank employees.
3. Non Bank-led model: The non bank-led model is where a bank does not come into the picture (except possibly as a safe-keeper of surplus funds) and the non-bank (e.g. Telco) Performs.

Why a bank led model?

Mobile as a technology, which is low-cost, ubiquitous and efficient with a potential to enable achievement the goal of deeper financial inclusion, has been recognized across the world. Different countries are following different mobile banking models depending upon their requirements and availability of infrastructure. Vision of financial inclusion, provision of payment services is one amongst the four services that we have clubbed under financial inclusion viz., a deposit product, a credit product, a micro-insurance product and a remittance product. Given this orientation, we would all agree that only banks can provide these services while adhering to the KYC/AML requirements. Accordingly, the Reserve Bank of India has consciously adopted the bank-led mobile banking model. The bank led model has also been endorsed by the Inter-Ministerial Group of the Government of India constituted in November, 2009.

There are, however, counter-views within the country and internationally as well suggesting that the non-bank led mobile banking model that have been found to be very successful elsewhere should be tried out here. It is often not appreciated when citing these success stories that only one service, i.e., a remittance product, is being offered and not the complete bouquet of financial services envisaged . The other three products identified under financial inclusion can obviously not be offered by a non-bank. Moreover, particular environments in a few countries enabled the non-bank led model to be successful viz. presence of a monopoly operator, very poor banking infrastructure and availability of a national identification number. Is it not surprising that the same success story has not been repeated by the same service operator in a neighbouring country?

Cross border remittance through mobile banking

Reserve Bank has allowed only few banks and authorized entities to undertake such cross-border transactions. To obviate any operational difficulty in remitting and receiving funds, bank account-to-bank account cross-boarder remittance has been permitted under the money transfer service scheme (MTSS). Realizing the need for facilitating hassle-free withdrawal of funds at the beneficiary end, Reserve Bank has also permitted transfer of funds to the beneficiary's account or to a pre-paid instrument (PPI) issued by banks which could be m-wallet also. The underlying rationale is to ensure flow of cross boarder funds through the banking channel only irrespective of the media, (which could also be mobile sets) opted for undertaking the transactions.

Grievance redressal mechanism

The most often faced problem in mobile banking is as to who owns the customer – the mobile network operator (MNO) or the bank? Whom shall the customer contact in case of any service related grievance? Who is required to resolve the issue? Since India has accepted the bank-led mobile banking model, the customers of the banks get full protection for effecting transactions through this delivery channel as in the case of any other banking transaction. Reserve Bank lays particular emphasis on its continuing pursuit of customer satisfaction and protection and timely resolution of complaints. Accordingly, the customers using mobile banking have recourse to the Banking Ombudsman's customer complaint redressal machinery.

Role of MNOs as Technology Service Provider (TSP)

The MNOs are expected to play the role of a technology service provider while banks are expected to provide banking services. Both the stakeholders should work together to take banking through the medium of the mobile to the masses. The customer vetting including compliance with KYC norms, customer protection, etc. should remain within the domain of the banking sector. It is heartening to note that this unique approach is taking roots with a couple of successful collaborations between banks and MNOs.

Role of MNOs as TSP-cum-BC

You may all be aware that 'for-profit' companies can now be engaged as BCs by banks. This provides another avenue to the MNOs for tapping their reach in taking banking to the masses. MNOs are particularly well placed to make use of this opportunity to become the BCs of banks keeping in view the fact that mobile phones have become ubiquitous. It is glad to note that a few MNOs have indeed become BCs of some banks. It is sure that the nascent strides being taken in this regard are likely to fructify into major achievements soon. Such collaborations between the banks and the MNOs enables each of them to exclusively perform their respective designated roles – as bankers and service providers. Reserve Bank expects that these experiments get upscaled and across the spectrum and result in a win-win partnership for both the parties, leveraging their respective capabilities and reach.

Tapping USSD to expand access to mobile banking services

The common USSD platform is offered by all MNOs, the same is expected to lead to an exponential growth of transactions in the IMPS. Simultaneously, the IMPS platform for person-to-business (P2B) transactions (i.e. in the merchant transactions) has now been enabled. Alongwith it, person-to-person (P2P) remittances can now be made to beneficiaries based on their bank account number or *Aadhaar* number which is mapped to the mobile number of the beneficiary. The requirement of MMID at the beneficiary end, therefore, becomes optional. Further, the non-bank entities like the Pre-Paid Instruments (PPI) issuers have been permitted to join the IMPS network through a sponsor bank for facilitating domestic money transfers. All these measures should lead to an increase in transactions and should significantly contribute to the revenue streams of the MNOs also. With this enabling technology within reach of the stakeholders, they need to work together in a co-operative and collaborative manner to promote and popularize this unique product.

Permitting cash-out in mobile wallets

The mobile wallet is a pre-paid instrument (PPI) issued in electronic form which resides on the mobile phone. The potential of PPIs including mobile wallets, Reserve Bank of India has laid down an enabling regulatory framework for such instruments. Simply put, the mobile wallets being issued in India are e-money products and can be used for purchase of goods & services. Mobile wallets can also be used for funds transfers where the holder has been subjected to a fully compliant KYC. The only difference in mobile wallets issued by non-banks in India and other countries is that cash-out is not permitted in India as it is akin to acceptance of demand deposit. The rationale behind the decision is based on the fact that non-banks are not permitted to accept deposits for maturity less than one year.

Security and acceptability issues

Any system has to have certain minimum features to attract customers and keep them engaged in the long run, such features are: ease of use, safety and security, accessibility and affordability. Mobile banking meets all these requirements but still the usage is nowhere near its potential. In the case of mobile banking, which is a novel product, the customer needs to be assured that it would provide her with the same kind of comfort levels that any other payment mechanism currently makes available. Comfort can be derived by the customers when they are able to put through transactions with ease with a zero-fail rate and not have any concerns regarding security issues. Customers should also be made aware as to whom they should approach in case of a failed transaction and how speedily their grievances are redressed. This is where a lot of work needs to be done to make the public aware of customer friendly as also safety features of mobile banking and engage the customers for a long term relationship. It would also like to inform that recently, the Institute for Development & Research in Banking Technology (IDRBT), established by the Reserve Bank of India launched the Mobile Banking Security Lab (MBSL). The Lab aims at exploring and providing solutions to the much needed safety, security, reliability and inter-operability, for both on low end and high-end mobile sets. The Lab will also provide the

benefit of a common technical centre for all banks and financial institutions. The testing platform of the Lab would help the banks to test their security applications in mobile banking. The Lab will also help in providing education services on security related matters in all Indian language enabling awareness creation amongst the users.

Quality of service – issue of sustainable excellence

TRAI has come out with the “Mobile Banking (Quality of Service) Regulations 2012” specifying the standards for MNOs while facilitating mobile banking which will go a long way in further improving the mobile banking services in the country. The MNOs should strive towards meeting these service standards to the banks to enable the customers to enjoy customer friendly banking services.

Engaged employees

Role of employees in driving any business to reach a critical mass is the most important but the least understood issue. The role of BCs or agents, who are being deployed by banks to expand their reach is, equally important as they represent the banks to the common man and are going to lay down the foundation of bank-customer relationship. It is being assumed that technology will take care of every aspect of banking as most of the processes are being automated. While this is true to a certain extent, it is the combination of frontline human-resources and front-end of technology which acts as the catalyst for service delivery in a nation like India. Employees are expected to help customers to move from being ‘assisted’ initially to becoming ‘self-reliant’ in use of banking related technologies including mobile banking. For the employees to hand-hold the customers, they themselves should be fully conversant with the product. Thus, for mobile banking to grow, the employees would have to strive towards improving customer service, enhancing customer satisfaction and removing any apprehensions regarding the safety and security of mobile banking transactions.

PROSPECTS OF MOBILE BANKING

1. Round the clock availability and ease of transactions attracts customers to Mobile Banking in India.
2. Through Mobile messaging and other such interfaces, banks provide value added services to the customer at marginal costs.
3. The main characteristics of mobile banking is anywhere/any time banking.
4. In India 60% of mobile banking transactions account balances, this is a significant step in building consumer trust.
5. According to the study by SBI maintaining a conventional rural bank branch cost Rs.5,00,000 per year in salaries alone per year in salaries alone which would need about Rs.20 million in deposits to sustain that at a break even point. A typical Indian village with population of 2000 can't support a conventional bank branch. Mobile banking may be the only viable method to extend banking services to rural areas in India.

CHALLENGES OF MOBILE BANKING

Security problem

The security mechanism adopted by the banks face many security issues like being attacked by unauthorised users is of highest priority in terms of security. If the device gets stolen then unauthorised persons may find the password favour saved files. Many customers save their password in their mobile. Uneducated persons are less aware of these issues and thus leading to loss of trust by customers

Virus attacks in Mobile Banking

There are 50,000 different types¹ of computer viruses and trojans are targeted mobile users. Zrus is commonly used to steal mobile transactions no of password.

Confidential information

The biggest challenge for mobile banking services is security. In the past surveys the same has been generalized as the biggest challenges for internet banking also. Security here simply means that nobody else can know the confidential information of customers bank account.

Performance

Mobile banking is anytime and anywhere so that need to ensure that their systems remain ready for the same. As customers will find mobile banking more and more useful, their expectations will increase. If the banks will be unable to meet the performance and they may lose customer confidence.

Official language

India has 18 official languages which are spoken across the country. The state governments also are dictated to correspond in their regional language for official purposes. Additionally two thirds of the population in India is illiterate, creating difficulties in deployment of mobile banking solutions. For Indian mobile banking, this will be cumbersome to overcome.

Valid bank account

The guidelines of RBI states that only those having a valid bank account would be allowed mobile banking. This limits the full potential of mobile banking to extend micro credit and bring banking to the large number of unbanked customers in India.

SERVICES OFFERED BY MOBILE BANKING

Mobile banking services includes account information of ministatments and checking of account history, alerts on account activity or passing of set thresholds, monitoring of term deposits, access to loan statements access to card statements, mutual funds/equity statements, insurance policy management and pension plan management.

Payments & Transfers includes domestic and international fund transfers, micro-payment handling, mobi complaint submission and recharging, commercial payment processing and bill payment processing.

Investments includes portfolio management services, real-stock quotes and bill payment processing.

Supporting service includes status of requests for credit, including mortgage approval, insurance coverage, cheque book and card requests, exchange of data messages and email, including tracking, credit card balance.

Content services are general information such as weather updates, news, loyalty-related offers and location based services.

Push based mobile banking services includes credit/debit alerts, minimum balance alerts and bill payment alerts

Pull based mobile banking services of transaction based are fund transfer, bill payment and other financial services like shares trading and enquiry based services includes account balance enquiry account statement enquiry, cheque book requests and recent transaction history.

CUSTOMER FOCUSED 7 A FRAMEWORK

The 7 A framework provides focus on customer. The seven parameters are Availability, Accessibility, Acceptability, Affordability, Awareness, Assurance and Appropriateness.

Availability implies the availability of technology solutions and wide range of products offering mobile banking services to the customers.

- *Accessibility* of technology is its spread across both rural and urban India irrespective of the mobile handset being used.
- *Acceptability* of the product is dependent on making it available in the local language with easy-to-use operational menu.
- *Affordability* is another benchmark which should guide the product offering as being value for money in providing cost effective and quality services.
- Creating *Awareness* about the availability of the product through financial literacy campaigns to increase the volumes in mobile banking business and generate necessary network effects.
- *Assurance* is an aspect which is related to trust in the products and processes and the security and authenticity relating to the transactions.
- *Appropriateness* is combined effect of all the above features. The mobile banking as a product and as a process scores well on all the above parameters and is, therefore, very appropriate for providing cost effective, easy to use product by both existing and prospective customers.

¹ T. Wilson- Molicious mobile, ode.

2. Internet business,

Accordingly, an appropriate business model taking into account all the above aspects should form part of the corporate plan of the banks as well as the MNOs. Thus, using the 7A framework, the stakeholders can provide mobile banking services which, suits the needs of the customers leading to its widespread adoption and usage.

APPENDIX-1

Some of the significant norms were as under:

October 8, 2008

- Customer complaints and grievance mechanism were laid down.
- Daily cap of `5,000 per customer for funds transfer and `10,000 per customer for transactions involving purchase of goods & services were prescribed.
- Banks to seek one-time prior approval of the Reserve Bank of India after obtaining their respective Board's approval.
- Such services could also be offered through the (Business correspondents) BCs.

December 24, 2009

- Raise in the daily cap transaction limits for funds transfer and for purchase of goods & services to ` 50,000
- Transactions upto ` 1,000 can be facilitated without end to end encryption of messages.
- Permitted to provide cash-outs to the recipients through ATMs or BCs subject to a cap of ` 5,000 per transaction and a maximum of ` 25,000 per month per customer.

May 4, 2011

- Transaction upto ` 5,000 can be facilitated without end to end encryption of messages.

December 22, 2011

- Transaction cap limits for funds transfer and for purchase of goods & services of `50,000 per customer per day removed.
- Banks may place their own limits based on their risk perception with the approval of their Board.
- Ceiling on cash-outs to the recipients through ATMs or BCs raised to `10,000 per transaction subject to the existing cap of `25,000 per month.

Appendix 2: Mobile Banking (Quality of Service) Regulations 2012

The Telecom Regulatory Authority of India (TRAI) has issued Mobile Banking (Quality of Service) Regulations 2012 prescribing quality of service standards for mobile banking to ensure faster and reliable communication for enabling banking through the mobile phones.

The salient features of the Regulations are as under:

- Access service providers shall facilitate banks to use SMS, USSD and IVR to provide banking services;
- The response time for delivery of message for mobile banking services generated by the customer or the bank shall be within the prescribed time frame;
- If the SMS sent by the bank is not delivered to the customer due to network or handset related problems, an USSD communication to the customer confirming the completion of the transaction should be sent;
- Service providers have to maintain complete and accurate record of transactions, using mobile banking services through mobile phones.

CONCLUSIONS

The future Mobile banking depends on efforts of all concerned parties the service providers, service facilitators, regulatory system and customers . In India 52 banks have started mobile banking for their customers and, of them, only a few have achieved sufficient traction in mobile banking transactions. This needs to be reviewed by each individual bank at the corporate level and strategy should be worked out to operationalise mobile banking to reap all its benefits. Banks need also have to be proactive in upscaling their mobile banking products and services if they have to safeguard their traditional advantage in the payment system and leverage it to expand their customer base including the tech-savvy

Educating users and potential users, particularly through engaged employees, remains a challenge in the sphere of mobile banking which is true for any new technology based service offering. All the stakeholders need to put in concerted and sustained efforts in spreading awareness about the benefits of mobile banking. Reserve Bank would be happy to collaborate with banks and the Indian Banks' Association (IBA) as part of its e-BAT (electronic Banking Awareness and Training) initiatives to spread retail e-payment awareness. Simulation/training camps, town-hall events and reaching out to schools and colleges across the nation to 'catch them young.' It is expected that these initiatives will bring awareness of the various technology payment products including the mobile banking and the ease with which they can be used to encourage the use of non-cash payment products.

Mobile banking has a great potential. But it is at the initial stage of this development. It should be the earnest endeavour of all the stakeholders - banks, MNOs, technology vendors, NPCI, Reserve Bank, Government of India, IBA, industry associations like the FICCI, and, of course, the customers to make mobile banking as ubiquitous as the mobile itself. It is for us to harness this potential to achieve the objective of reaching to the customer wherever he/she is, deepening the financial inclusion supported by low cost, secured ICT based mobile banking model and moving towards a less-cash society.

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THE STUDY OF RELATIONSHIP BETWEEN REFINED ECONOMIC VALUE ADDED (REVA) AND DIFFERENT CRITERIA OF THE RISK ADJUSTED RETURN

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ABSTRACT

Stockholders are the main owners of a business entity and are continually trying to maximize their own wealth and this wealth will result in the desirable performance of the business entity. Lack of using appropriate criteria to assess the performance will result in not achieving the real value of the company to be realized. The present research is going to try to study the information content of the refined economic value added and the different criteria of the risk adjusted return (RVAR, RVOL, α) during the years between 2007 and 2011 for 200 companies accepted in Tehran Stock Exchange. The research results which have been estimated by using the integrated regression model (PANEL DATA) and using Eviews 7 software showed that there is a positive relationship between the refined economic value added and the total risk adjusted return but regarding the relationship between refined economic value added and the systematic risk adjusted return, on the contrary to acceptance of a negative relationship between them, the relationship between them was assessed to be weak. Finally the refined economic value added has had a positive relationship with the excess return.

KEYWORDS

Return, Risk, REVA, Value Added.

INTRODUCTION

The main role of management in new organizations is to create value for all individuals and institutions which search for their interests in the organization. From among the beneficiaries of every organization and entity which entail stockholders, customers, staffs, goods suppliers, society and governmental referents, the stockholders are especially important due to their principal role in job creation and forming the entity (Nikomaram & Asgari, 2006). On the other hand we can not study different investment resolutions without considering the risk and only through return and thus we adjust return based on the risk to assess investment appropriately (Jahankhani & Zariffard, 1995).

The researchers and scholars in finance and accounting have done many studies regarding value creation and have posed different approaches for decision making for the investors to help investors to use these tools and criteria to achieve their objectives. It is clear that the traditional criteria do not have the capability of predicting future and remove the information needs of the users but they solely present some information for the investors which may deviate them in decision makings. Currently the performance assessment of most companies and organizations is carried out based on financial (traditional) criteria (Young & Byrne, 2001). Although these methods are still practically utilized they are not very suitable for assessing the performance of managers because profitability has a close relationship with the amount of investment and none of these traditional methods care about the amount of investment. In summary, the novel criteria for performance assessment have a close relationship with the value of stockholders. These criteria reflect the future trends because the investors and market expect inflation to affect the risk and money value all the time. The novel criteria, as a pattern, are capable to create value for the stockholders in a company from one period to the other (Hovezakova, 2010).

In the present research we will focus on one of the criteria based on value, refined economic value added (REVA) and the study of relationship between these criteria and different criteria of the risk adjusted return (RVAR, RVOL, α) to help stockholders to make proper decisions by using the most appropriate performance assessment criteria.

If the relations above are proved the results of this study will lead to introduce an appropriate criterion for performance assessment. This will be related to stock return on one hand and it will represent the wealth created for the stockholders on the other hand which help them greatly to make decisions better regarding the purchase or sales of stocks or making decisions to invest in companies and also assess the efficiency of management.

Due to the growth of bourse in Iran during recent years and considering the principle 44 of the constitution of Iran our country is moving towards privatization. Meanwhile, the bourse market in Iran still needs to progress and develop to be a safe place for investment and acceptance of investment. Besides that the financial managers who are considered as the main body of decision making in companies have a lot of problems in this area to increase the wealth of their stockholders. On the other hand, the stockholders try every day to purchase those stocks which have the least risk for them with the highest returns. These factors force them to choose from among the present companies.

The results of this study will be helpful in recognizing the behaviors of economic units active in Tehran Stock Exchange and the results of utilizing REVA will be considered as a criterion in assessing the performance of managers of the companies and its role in increasing the wealth of stockholders will be great.

REVIEW OF LITERATURE

Bacidore & et al (1997) studied the relationship between economic value added and refined economic value added with extraordinary return for a sample of companies including 600 American companies during the time period between 1982 and 1992. The results of their research showed that refined economic value added predicts extraordinary return better. As pointed out by Bacidore & et al it is better to use refined economic value added to assess the performance of the top levels of the organization and to use economic value added to assess the performances of the lower levels of performance.

Bausch & et al (2003) carried out a research about the question below: Is the earnings' residual based on market value a better criterion to assess performance compared to the earnings' residual based on book value?, and it was presented in accounting congress in Europe. They studied the residual based on market value and compared it with earnings' residual based on book value. Their results showed that refined economic value added can lead to under-investment in projects with a positive net present value (NPV) or over-investment in projects with a negative net present value (NPV). They emphasized that market value added (MVA) and the refined value added are the same in an unlimited time period after considering the results of utilizing economic value added.

Badavar-e-nahandi (2004) studied the relationship between refined value added and the risk adjusted return in firms accepted in Tehran Stock Exchange during the years between 2001 and 2003. He concluded that there is a weak positive correlation between REVA and risk adjusted return and α (the excess return) and RVAR (the total risk adjusted return), and RVOL (the systematic risk adjusted return) have had the most amount of correlation with REVA.

Goyandeh (2007) tested the relationship between economic value added and the refined economic value added with the return of firms accepted in Tehran Stock Exchange by using the integrative data for 71 firms accepted in Tehran Stock Exchange during 10 years. The results of the research showed that there is not a meaningful relationship between economic value added and the refined economic value added with the return.

OBJECTIVE

The ideal objective of the present research is to recognize new criteria to assess the performance of managers and companies and make them in line with the managers' benefits and the owners' through connecting the benefits and their rewards with stockholders' wealth.

In fact our main objective is the study of effects and descriptive capability of the refined economic value added on each of the criteria of the risk adjusted return that is the total risk adjusted return, the systematic risk adjusted return and the excess return to achieve a criterion to make useful decisions.

Finally the applied objective of this research is to help investors to determine the appropriate investment strategy. This research will help them in choosing a type of stock which has a better return, a risk adjusted return, and avoid investors to make mistakes in choosing the stocks and the creditors and lenders can devise validity for the decisions. On the other hand, by decision makings of investors based on risk and return, the capitals will be led towards some industries which have a risk adjusted return and this will prepare grounds for optimized appropriation of the resources and the results of this research will be helpful.

RESEARCH METHODOLOGY

The present research is post incidental and it has a descriptive nature. Also due to the fact that it is possible to discover the relationship between the two variables through correlation method and therefore, our research method is correlation by using the integrative regression model (panel data). Finally the present research is applied regarding the objective.

The statistical method used in the present research is the regression method by using integrative data and we have used the estimated generalized least squares (EGLS) for estimating of regression models with panel data. Also the hypotheses were tested through the results of the econometrics models and multiple regression by using Eviews 7 software.

The statistical society of the present research entails all companies accepted in Tehran Stock Exchange during the time period between 2007 and 2011 which have had the following conditions:

1. Due to the necessity of the existence of the coverage of the data for the research period, the name of companies should have been enlisted in the list of firms accepted in Tehran Stock Exchange before 2007.
2. To prepare reports in the same date and delete seasonal effects, their fiscal year should end on end of year.
3. Due to the special type of activities of investing companies, banks, insurances and financial intermediaries, the companies for the present project should not be among them.
4. The companies included should not have accumulated loss before the year 2007.
5. The data needed to carry out the present research should be presented completely for the period between 2007 and 2011.

The sampling method was systematic deletion and we could not have random sampling and the companies were selected considering the conditions defined for them. By applying the conditions above, the number of our selected sample was 200 companies.

HYPOTHESIS

H1: There is a relationship between refined economic value added and the total risk adjusted return (RVAR).

H2: There is a relationship between refined economic value added and the systematic risk adjusted return (RVOL).

H3: There is a relationship between refined economic value added and the excess return (α).

VARIABLES

In the present research different criteria related to the risk adjusted return (RVAR, RVOL, α) have been used as the dependent variable. The extra return is the rate of return created without any risks by an investment which has been incurred by the investor and make the return of different stocks comparable in the market and we have used 3 criteria of the risk adjusted return, the reward to variability ratio (RVAR) to calculate the total risk adjusted return, the rewards to volatility ratio (RVOL) to calculate the systematic risk adjusted return, and the criterion of differential excess return or alpha (α). The calculation method for them is as follows (Jones, 2012):

$$RVAR = \frac{R_i - R_f}{\sigma(R_i)}$$

$$RVOL = \frac{R_i - R_f}{\beta_i}$$

$$\alpha_i = R_{it} - E(R_{it})$$

Ri = real return of stocks

Rf = rate of interest without risk

O (Ri) = deviation or total risk

β = beta

E (Rit) = the expected return rate

Rm = market return

The independent variable of the present research is refined economic value added (REVA). REVA is the net residual which is gained after the subtraction of investment opportunity cost to the market value of the market from the operational net profit after the taxation and it is expressed in the following form (Giurca, 2007).

$$REVA_t = NOPAT_t - WACC (MCPITAL_{t-1})$$

NOPATt = operational profit after taxation.

WACC= weight average of capital cost

MCPITALt-1 : the market value of the capital in the beginning of the period

FINDINGS

H1: There is a relationship between refined economic value added and the total risk adjusted return (RVAR).

TABLE 1: A MODEL BY USING ESTIMATOR ELGS

Dependent variable: RVAR							
Regression model: $RVAR_{it} = \beta_0 + \beta_1 REVA_{it} + \epsilon_{it}$							
hypothesis	independent variable	coefficients	t statistics	P-Value	F statistics	Durbin-Watson	adjusted R ²
1	REVA AR (1)	1.59 -0.253	6.457 -4.625	0000 0000	4.56	2.28	0.47

As it can be seen above the amount of F statistics regarding %5 alpha error level, is higher than F statistics. Thus we can say that it means the meaningfulness of the regression model and the amount of Durbin-Watson, regarding its tendency towards number 2, and it is appropriate for after removing first order self-correlation. Also P-Value gained and the results of testing the model and the coefficient of the independent variable showed that the coefficient of the refined economic value added is positive and meaningful.

Finally the amount of the identification coefficient of the model showed that the estimating variables of the model have a capability of good descriptiveness (%47) to describe the dependent variable. Thus, the first hypothesis is accepted. Therefore it is suggested that the investors, creditors, and other beneficiaries to use refined economic value added as an alternative for the total risk adjusted return to assess management's performance and be used as a success assessment criterion and pricing for stocks of the companies.

Also the research findings of Badavarnahandi (2004) showed that there is a positive but weak correlation between refined economic values added and the total risk adjusted return.

H2: There is a relationship between refined economic value added and the systematic risk adjusted return (RVOL).

TABLE 2: A MODEL BY USING ESTIMATOR ELGS

Dependent variable: RVOL							
Regression model: $RVOL_{it} = \beta_0 + \beta_1 REVA_{it} + \epsilon_{it}$							
hypothesis	independent variable	coefficients	t statistics	P-Value	F statistics	Durbin-Watson	adjusted R ²
2	REVA	-4.11	11.19	0.000	2.08	2.42	0.21
	AR (1)	-0.22	-3.07	0.002			

As it can be seen above the amount of F statistics regarding %5 alpha error level, is higher than F statistics. Thus we can say that it means the meaningfulness of the regression model and the amount of Durbin-Watson, regarding its tendency towards number 2, and it is appropriate for after removing first order self-correlation. Also P-Value gained and the results of testing the model and the coefficient of the independent variable showed that the coefficient of the refined economic value added is negative and meaningful.

Although the second hypothesis is accepted, the amount of the identification coefficient of the model showed that the estimating variables of the model have a capability of good descriptiveness (%21) to describe the dependent variable. Therefore it is not suggested for the investors, creditors, and other beneficiaries to use refined economic value added as an alternative for the the systematic risk adjusted return to assess management's performance and be used as a success assessment criterion and pricing for stocks of the companies.

Also the research findings of Badavarnahandi (2004) showed that there is a positive but weak correlation between refined economic values added and the systematic risk adjusted return.

H3: There is a relationship between refined economic value added and the excess return (α).

TABLE 3: A MODEL BY USING ESTIMATOR ELGS

Dependent variable: α							
Regression model: $\alpha_{it} = \beta_0 + \beta_1 REVA_{it} + \epsilon_{it}$							
hypothesis	independent variable	coefficients	t statistics	P-Value	F statistics	Durbin-Watson	adjusted R ²
3	REVA	2.90	2.96	0005	5.83	2.43	0.55
	AR (1)	-0.17	-2.68	0007			

As it can be seen above the amount of F statistics regarding %5 alpha error level, is higher than F statistics. Thus we can say that it means the meaningfulness of the regression model and the amount of Durbin-Watson, regarding its tendency towards number 2, and it is appropriate for after removing first order self-correlation. Also P-Value gained and the results of testing the model and the coefficient of the independent variable showed that the coefficient of the refined economic value added is positive and meaningful.

Finally the amount of the identification coefficient of the model showed that the estimating variables of the model have a capability of good descriptiveness (%55) to describe the dependent variable. Thus, the third hypothesis is accepted. Therefore it is suggested that the investors, creditors, and other beneficiaries to use refined economic value added as an alternative for the adjusted stock return as an alternative for differential stock return to assess management's performance and be used as a success assessment criterion and pricing for stocks of the companies.

Also the research findings of Badavarnahandi (2004) showed that there is a positive but weak correlation between refined economic values added and the excess return.

SUGGESTIONS

1. The results of the present research showed that the stock price has an important effect on the changes of REVA and stock return. Thus, it is suggested that the stock exchange should avoid changes in stocks of some companies which result in gaining unusual profits through illegal information gaining of some major stockholders without authorities' regulations. They should force companies to present transparent and in time information about the reasons for overpricing of the stocks to help investors to make more conscious decisions and avoid losses of many minor stockholders who make their livings through it and to avoid lack of knowledge among them.
2. Regarding the fact that the rate of capital cost is one of the effective factors on changes of REVA, it is suggested for the managers in companies that they should assess the costs accurately for each of the financial resources to maximize the value creation for the stockholders and integrate them optimally to minimize the cost of financing and achieving the optimal capital structure.
3. Due to the criticisms and based on the traditional performance assessment criteria done by the researchers in financial areas during the recent years and the necessity of utilizing and considering novel criteria it should be considered that these criteria are a high and effective step towards making appropriate decisions in financing, operations and investment.

SCOPE FOR FURTHER RESEARCH

1. The subject discussed here can be investigated for the different industries.
2. The comparison of the information content of market value added (MVA) and cash value added (CVA) with the risk adjusted return.
3. Studying the relationship between refined economic value added and market value added (MVA) and cash value added (CAV)
4. Studying the relationship between stockholders' economic value added and refined economic value added with EPS and DPS.

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ONLINE SHOPPING: A NEW TREND OF SHOPPING BEHAVIOUR

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ABSTRACT

It is hard to believe people were able to survive without advanced technologies that we take for granted each day. The advances in communication combined with the evolution of the IT industry has made it possible for people to do business throughout the world in real time. Improvements in IT improve our lifestyles and business by allowing computers to reduce complications and enrich possibilities. Undoubtedly, 21st century will be known for its information revolution accompanying electronic economy. A focus on building customer relationship and the explosion of e-commerce has created a new phenomenon in our lifestyles. The article focuses on online shopping a new trend of shopping behavior among new generation. For the purpose of study, online consumers of Kollam district were selected.

KEYWORDS

Credibility, online shopping, Online shopping sites, Technology, Web

INTRODUCTION

Around one hundred and fifty years ago, businesses ran their day to day operations completely different from what businesses of the modern era do to run their day to day operations. People back then worked under candle light doing math calculations on paper, the old fashion way, before electricity came about in the early 20th century. Now, most of the civilized world wouldn't know what to do with themselves without technology. Imagine not even having a calculator for math or the internet to do research. It is hard to believe people were able to survive without these advanced tools that we take for granted each day. The advances in communication combined with the evolution of the IT industry has made it possible for people to do business throughout the world in real time. Improvements in IT improve our lifestyles and business by allowing computers to reduce complications and enrich possibilities.

After the internet boom and the onset of e-commerce, it is online shopping that promises to be a huge business in India. The country over the few years has shown tremendous progress in e-commerce with the emergence of online shopping portals. One of the primary reasons for the same is that today, business persons and entrepreneurs selling various products want to expand not only regionally but also nationally as well as internationally. This results in not just greater profits but also effective social and business networking that paves the path.

Online shopping or online retailing is a form of electronic commerce allowing consumers to directly buy goods or services from a seller over the internet without an intermediary service. An online shop, e-shop, e-store, internet shop, web-shop, web-store, online store, or virtual store evokes the physical analogy of buying products or services at a bricks-and-mortar retailer or shopping center. The process is called business-to-consumer (B2C) online shopping. When a business buys from another business it is called business-to-business (B2B) online shopping

LITERATURE REVIEW

Xi Zhang (2006) states that the advent of the internet and e-commerce has brought a new way of marketing and selling many products. Ruchi Nayyar (2010) states that the highly demanding lifestyle is compelling consumers worldwide to adopt internet shopping as an alternative to traditional brick-and-mortar shopping. People, in order to save time and money, are motivated to purchase products and services online. Jun Li Zhang (2011) states that the internet is a global communication medium that is increasingly being used as a innovative tool for marketing goods and services.

OBJECTIVES OF THE STUDY

The study was undertaken with the following specific objectives:

1. To find out the mostly preferred online shopping site of the selected respondents.
2. To analyze the factors influencing online shopping behavior of consumers.
3. To identify the products that are mostly preferred through online shopping.
4. To analyse the reasons for opting online shopping.
5. To identify the mode of payment in online shopping.

SIGNIFICANCE OF THE STUDY

Modern era man is very much trapped in the technological advancement. It is nearly impossible to save some time for even shopping activities. In such a situation, online shopping is really a relief. The option of online shopping provides the customers with the opportunity to buy the items of their need without having to go to the shop itself. In this context it is significant to study the relevance of online shopping.

METHODOLOGY OF THE STUDY

The study employs primary data as well as secondary data. Primary data was collected by structured survey. The survey was created online and links were sent to the respondents using convenience sampling. The respondents who were approached through e-mail were 80. The primary data so collected were condensed in the form of tables and simple percentage method was used to analyse the results. Secondary data was collected from different published sources such as articles, newspapers, books and internet.

SCOPE OF THE STUDY

The present study is confined only to Kollam district. Samples were collected only from online buyers in which the total size of respondents is 80. In analyzing the factors, variables such as online shop's credibility, payment security, convenience, information comparison, speed and cost of delivery were selected.

DATA ANALYSIS

TABLE 1: PROFILE OF THE ONLINE CONSUMERS

Demographic Factors	Categorization	No. of respondents	Percentage
Age	Below 18 Yrs	-----	-----
	18 – 35 yrs	36	45
	35-50 yrs	32	40
	Above 50 yrs	12	15
Gender	Male	64	80
	Female	16	20
Profession	Salaried	16	20
	Business	32	40
	Profession	24	30
	Housewife	-----	-----
	Student	8	10
Monthly Income	Others	-----	-----
	Below Rs 10000	-----	-----
	10000 – 20000	8	10
	20000 - 30000	24	30
	30000 – 40000	40	50
Above	8	10	

Source: Primary Data

TABLE 2: PRODUCTS THAT ARE BOUGHT ONLINE

Products	No. of respondents	Percentage
Books	10	12.5
Toys and gifts	4	5
Consumer electronics	10	12.5
Software	12	15
Tickets	24	30
Hotel/ Travel booking	20	25
Others	-	-
Total	80	100

Source : Primary Data

TABLE 3: REASONS FOR CHOSING ONLINE SHOPPING

Reasons	No. of respondents	Percentage
Saves time	20	25
Saves money	12	15
Convenience	32	40
More easier way of shopping	16	20
Total	80	100

Source : Primary Data

TABLE 4: BUYER'S PREFERENCE OF ONLINE SHOPPING SITES

Online shopping sites	No. of respondents	Percentage
Amazon	24	30
E-bay	24	30
Flip cart	20	25
Future bazaar	12	15
Total	80	100

Source : Primary Data

TABLE 5: MODE OF PAYMENT USED FOR ONLINE SHOPPING

Mode of payment	No. of respondents	Percentage
Cash on delivery	8	10
Debit card	12	15
Credit card	20	25
Internet banking	40	50
Total	80	100

Source: Primary data

TABLE 6: OPINION OF RESPONDENTS REGARDING ONLINE SHOPPING

Opinion	Response	Percentage
Do you use the internet to search for product information before searching?	Yes 56	70
	No 24	30
Do you receive any Guarantees and Warranties?	Yes 48	60
	No 32	40
Do you receive any discount offers?	Yes 60	75
	No 20	25
Are you satisfied with online shopping?	Yes 40	50
	No 40	50
Do you intend to continue Purchasing products from the internet in the near future?	Yes 48	60
	No 32	40

Source : Primary Data

RESULTS AND DISCUSSIONS

- Ratio of male consumers is high in online shopping (80%) and they fall in the age group 18-35 years.
- Majority of the respondents (60%) belong to professional and business category.
- Income of respondents largely falls in the income bracket of Rs. 30,000 – Rs. 40,000 (50%)
- Maximum number of respondents (30%) buys tickets through online followed by hotel/travel bookings (25%).
- Main drivers of online shopping are identified as convenience factor (40%) followed by time factor (25%).
- E-bay and Amazon are equally preferred online shopping sites by online consumers.
- Privacy, simplicity of purchase procedures, cost and speed of delivery are the equally preferred reasons behind the selection of online shopping websites.
- Regarding the mode of payment, majority of the respondents (50%) prefer internet banking followed by credit card mode of payment (25%).
- Most of the respondents (70%) use the Internet to search for product information before purchasing.
- Maximum number of respondents (60%) stated they receive discount offers, Guarantees and Warranties.
- Majority of the respondents (60%) intend to continue purchasing products from the Internet in the near future.

SUGGESTIONS

- Keep operating system and browsers updated. It helps to minimize the possibility of security breach.
- Only use secured shopping sites for online shopping. A secured site starts with "HTTPS://" instead of just "HTTP://".
- Try to shop at home and don't shop publically.
- Research the website before ordering goods and services. If the site is unfamiliar, contact the company with the help of physical address.
- Read the website's privacy and security policies.
- Use filter that warn customer of suspicious websites.
- Disclose only the bare facts when ordering goods and services online.
- Be sure to understand the actual cost of the item including shipping charges, handling charges and sales tax.
- After placing an order online, always print or save copies of the entire order.

CONCLUSION

Online shopping is becoming more popular day by day with the increase in the usage of World Wide Web known as www. Understanding customer's need for online selling has become a challenge for marketers. Especially understanding the consumer's attitudes towards online shopping, making improvement in the factors that influence consumers to shop online and working on factors that affect consumers to shop online will help marketers to gain the competitive edge over others.

With nearly half of the Indian population being young and net savvy, there has been an extra ordinary rise in the numbers of online shoppers. The recent growth in the mall culture in the country has in fact made consumers more aware about different options and encouraged them to search and eventually purchase online. India has more than 100 million internet users out of which one half opts for online purchases and the number is rising sharply every year. The growth in the number of online shoppers is greater than the growth in Internet users, indicating that more Internet users are becoming comfortable to shop online.

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IMPLEMENTATION OF PCA WITH SVD TO REDUCE PRECISION LOSS**AMITPREET KOUR****STUDENT****DEPARTMENT OF COMPUTER SCIENCE****GURU NANAK DEV UNIVERSITY****AMRITSAR****RAMANDEEP KAUR****ASST. PROFESSOR****DEPARTMENT OF COMPUTER SCIENCE****GURU NANAK DEV UNIVERSITY****AMRITSAR****ABSTRACT**

The objective of data mining is to identify valid novel, potentially useful, and understandable correlations and patterns in existing data. Finding useful patterns in data is known by different names (including data mining) in different communities (e.g., knowledge extraction, information discovery, information harvesting, data archeology, and data pattern processing). The volume of electronically accessible data in warehouses and on the Internet is growing faster than the speedup in processing times predicted by Moore's Law. Consequently, classical data mining algorithms that require one or more computationally intensive passes over the entire database are becoming prohibitively slow, and this problem will only become worse in the future. The scalability of mining algorithms has therefore become a major research topic. One approach to the scalability problem is to run mining algorithms on a small subset of the data. That is, data reduction is very important issue. Data reduction techniques can be applied to obtain a reduced representation of the data set that is much smaller in volume, yet closely maintains the integrity of the original data. Various data reduction techniques are used like PCA, SVD. It is observed that PCA causes precision loss of data. So in this paper, an algorithm is proposed which leads to minimal loss in the precision by applying SVD on the eigen vectors. Then these eigen vectors are used to obtain Principal Components.

KEYWORDS

Data Mining, Eigen vectors, PCA, precision loss, SVD.

INTRODUCTION

Data mining is the process of discovering potentially valuable patterns, associations, trends, sequences and dependencies in data. It is the overall process of discovering new pattern or building models from a given dataset. There are many steps involved in Knowledge Discovery in Databases (KDD) which include data selection, data cleaning and preprocessing, data transformation and reduction, data mining task and algorithm selection, and finally post-processing and interpretation of discovered knowledge. The primary goals of data mining in practice are prediction and description. Prediction involves using some variables or fields in the database to predict unknown or future values of other variable of interest. Description focuses on finding interpretable patterns that describes the data. The sheer volume of data today and its expected increase in the next few days are some of the key challenges in data mining and knowledge discovery applications[1]. Besides a huge number of data samples that are collected and processed, the high dimensional nature of data arising in many applications causes a need to develop effective and efficient techniques that are able to deal with massive amount of data[9]. As the dimensionality of data increases, many types of data analysis and classification problems become significantly harder.

Dimensionality reduction, feature selection, numerosity reduction, and data compression are some of the techniques to reduce the attribute space.

PCA is one the data reduction technique, it reduces the high dimensional data by calculating the eigen values and eigen vectors. But the main drawback of this method is that it leads to the precision loss.

DATA REDUCTION TECHNIQUES

Dimensionality reduction is the process of reducing the number of random variables or attributes under consideration by producing the linear combination of the original data. Dimensionality reduction methods include transforms and principal components analysis which transform or project the original data onto a smaller space. The main advantage of this technique is that the size of attribute space is reduced without losing a lot of information of the original attribute space. The disadvantage is the fact that the linear combinations of the original features are usually not interpretable and the information about how much an original attribute contributes is often lost.

Feature Selection works by removing redundant or irrelevant features from the data set as they can lead to a reduction of the classification accuracy or clustering quality and to unnecessary increase in the computational cost. The advantage of feature selection is that no information about the importance of single feature is lost. On the other hand, if a small set of features is required and the original features are diverse, information may be lost as some of the features must be omitted.

Numerosity reduction techniques replace the original data volume by alternative smaller forms of data representation.

Data compression, transformations are applied so as to obtain a reduced or "compressed" representation of original data.

In this paper we will mainly deal with dimensionality reduction technique of data reduction. Data reduction can be lossless or lossy. In dimensionality reduction, reduction of the dimensionality is done by using low rank approximation techniques to create new attributes that are combinations of the old, original variables. Dimensionality reduction is also referred to as feature transformation, feature extraction or feature construction. Some of the techniques covered under this are Principal Component Analysis(PCA), Singular Value Decomposition(SVD), Pseudoinverse(also called as Moore Penrose Pseudoinverse), etc.

A. PRINCIPAL COMPONENT ANALYSIS

Principal component analysis (PCA)[2] is a standard tool in modern data analysis - in diverse fields from neuroscience to computer graphics - because it is a simple, non-parametric method for extracting relevant information from confusing data sets.

Often, the variables under study are highly correlated and as such they are effectively "saying the same thing". It may be useful to transform the original set of variables to a new set of uncorrelated variables called principal components. These new variables are linear combinations of original variables and are derived in decreasing order of importance so that the first principal component accounts for as much as possible of the variation in the original data. These new attributes (called principle components (PCs)) have to meet the following criteria: The PCs are (i) linear combinations of the original attributes, (ii) orthogonal to each other, and (iii) capture the maximum amount of variation in the data. Also, PCA is a linear dimensionality reduction technique, which identifies orthogonal directions of maximum variance in the original data, and projects the data into a lower-dimensionality space formed of a sub set of the highest variance components.

The goal of PCA is to reduce the dimensionality of the data while retaining as much as possible of the variation present in the original dataset.

Advantages and disadvantages of PCA:

PCA is a relatively simple, non-parametric, generic method that is useful for finding new, more informative, uncorrelated features and it can be used to reduce dimensionality by rejecting low variance features. Since the principal components are orthogonal [7][8] to each other, every principal component is uncorrelated to every other principal component (i. e., they do not contain any redundant information). The principal components are designed to account for the highest percentage of the variation among the variables with as few PCs as possible. Thus, often the first few PCs account for some large percentage of the total variance, allowing for a compact representation of the data with only low dimensions.

However, PCA is limited to re-expressing the data as combinations of its basis vectors. A main drawback of PCA [5] is that each PC is a linear combination of all original variables, thus leading to a potentially difficult interpretation of the PCs. On the contrary, in a system with many variables PCA may be used to project the dimension down to a reasonable number of plots, and the principal components could be rotated towards a more meaningful representation. Moreover, PCA [6] is sensitive with respect to the units of measurement. If the units and the variances of attributes vary a lot, then variables with high variance tend to dominate the first few principal components. In this case, the data need to be normalized prior to the PCA transformation. Computational complexity: From a computational point of view, the eigen value decomposition for solving the PCA transformation is rather expensive in terms of runtime, especially for a large number of attributes. There are several algorithms for solving symmetric eigen problems, but all of them are of order $O(n^3)$. So the complexity of solving PCA also revolves around the same.

B. SINGULAR VALUE DECOMPOSITION

Singular Value Decomposition [3] can be viewed from three points of view:

1. It is a method for transforming correlated variables into a set of uncorrelated ones that better expose the various relationships among the original data items.
2. SVD is a method for identifying and ordering the dimensions along which data points exhibit the most variation.
3. Once we have identified where the most variation is, it is possible to find the best approximation of the original data point using fewer dimensions. Hence SVD can be seen as a method of data reduction.

SVD [4] is based on a theorem of linear algebra which says that a rectangular matrix can be broken down into a product of three matrices:

- i. An orthogonal matrix U [i.e. $U^T U = I$] and the columns of U are orthonormal eigen vectors of $A A^T$.
- ii. A diagonal matrix S , containing the square roots of eigen values from U or V in descending order.
- iii. Transpose of an orthogonal matrix V^T [i.e. $V^T V = I$] and the columns of V are orthonormal eigen vectors of $A^T A$.

i.e. $A_{mn} = U_{mm} S_{mn} V_{nn}^T$

The truncated SVD (or reduced rank SVD) to A can be found by setting all but the first k largest singular values equal to zero and using only the first k columns of U and V .

This is usually denoted like $A_k = U_k S_k V_k^T$

or more explicitly,

$$A_k \simeq (\mathbf{u}_1, \dots, \mathbf{u}_k) \begin{pmatrix} \sigma_1 & & & \\ & \ddots & & \\ & & \sigma_k & \\ & & & \ddots \end{pmatrix} \begin{pmatrix} \mathbf{v}_1^T \\ \vdots \\ \mathbf{v}_k^T \end{pmatrix},$$

Computational complexity

In general, the computational complexity of the SVD algorithm for computing all three matrices U , S and V is $O(4m^2n + 8mn^2 + 9n^3)$, for computing only the matrices S and V it is $O(4mn^2 + 8n^3)$, making the decomposition unfeasible for large datasets. The RSVD algorithm has a complexity of $O(4m^2n + 22n^3)$ for computing all three matrices, and a complexity of $O(2mn^2 + 11n^3)$ for computing only S and V .

Relation to PCA

Calculating the SVD is equivalent of finding the eigen values and eigen vectors of AA^T and $A^T A$. The eigenvectors of AA^T make up the columns of U , the eigenvectors of $A^T A$ make up the columns of V . Moreover, the singular values in S are the square roots of eigen values from AA^T and $A^T A$. The SVD-PCA connection stems from the straightforward linear algebra calculations

$AA^T = (USV^T)(VS^T U^T) = US^2 U^T$, and

$A^T A = (VS^T U^T)(USV^T) = VS^2 V^T$

An often mentioned difference between these two approaches is that PCA removes the mean of each variable whereas SVD uses the original data (however, the mean could also be removed before computing the SVD). Especially for sparse data it is not always preferable to remove the mean of the data.

Methods

There are various methods to solve matrix equations that are specialised to particular problems. We can select between these based on the type of data. Various methods used for the same are as follows:

1. **LAPACK**: It is the default method for solving dense numerical matrices. When the matrix is square and non-singular the routines `dgesv`, `dlange`, and `dgecon` are used for real matrices and `zgesv`, `zlange`, and `zgecon` for complex matrices. When the matrix is non-square or singular `dgelss` is used for real matrices and `zgelss` for complex matrices. If the input matrix uses arbitrary-precision numbers, then LAPACK algorithms extended for arbitrary-precision computation are used.
2. **Multifrontal**: The Multifrontal method is a direct solver used by default if the input matrix is sparse. If the input matrix to the Multifrontal method is dense, it is converted to a sparse matrix. The implementation of the Multifrontal method uses the UMFPACK library.
3. **Krylov**: The Krylov method is an iterative solver that is suitable for large sparse linear systems, such as those arising from numerical solving of PDEs. Basically two Krylov methods are implemented: Conjugate Gradient (for symmetric positive definite matrices) and BiCGSTAB (for non-symmetric systems). The default method for Krylov, BiCGSTAB, is more expensive but more generally applicable. The Conjugate Gradient method is suitable for symmetric positive definite systems, always converging to a solution (though the convergence may be slow). If the matrix is not symmetric positive definite the Conjugate Gradient may not converge to a solution.
4. **Cholesky**: The Cholesky method is suitable for solving symmetric positive definite systems. This method is far more fast and stable. For dense matrices the Cholesky method uses LAPACK functions such as `dpotrf` and `dpotrs` for real matrices and `zpotrf` and `zpotrs` for complex matrices. For sparse matrices the Cholesky method uses the TAUCS library.
5. **Symbolic Methods**: There are a number of methods that are specific to symbolic and Exact computation: CofactorExpansion, DivisionFreeRowReduction, and OneStepRowReduction.

RELATED WORK

Data mining (sometimes called data or knowledge discovery) [1] is the process of analyzing data from different perspectives and summarizing it into useful information. With this increase has come the need to be able to store, transmit, and query large volumes of image data efficiently. To overcome problems associated with high dimensionality, such as high storage and retrieval times, a dimension reduction step is usually applied to the vectors to concentrate relevant information in a small number of dimensions. Principal Component Analysis (PCA) is a well-known dimension reduction scheme. PCA is sensitive to the

relative scaling of the original variables. Depending on the field of application, it is also named the discrete Karhunen–Loève transform (KLT), the Hotelling transform or proper orthogonal decomposition (POD).PCA[7] was invented in 1901 by Karl Pearson.

PCA can be done by eigen value decomposition of a data covariance matrix or singular value decomposition of a data matrix, usually after mean centering the data for each attribute.PCA finds its application in number of fields ,but the major drawback of PCA is that it leads to precision loss,i.e, the reduced data when converted back to the actual data, the difference is large.

PROPOSED ALGORITHM

As PCA suffers from the drawback of precision loss. So in this section we are proposing an algorithm that will work on this limitation. In this algorithm we are combining another data reduction technique SVD[4] with PCA .PCA is a Technique to convert data set in a form that can regenerate or found in High Dimension. Its help in compression. After compress data, reduced data is formed , also we can regenerate original data with different techniques.

Steps :

Step 1: Find Original Data in X and Y co-ordinates

Step 2: Find Mean XI and YI for X and Y Co-ordinates.

Step 3: Calculate X-XI and Y-YI and XI-X,YI-Y

Step 4: Calculate VAR (X,X)

Step 5: Calculate VAR (X,Y)

Step 6: Calculate VAR (Y,X)

Step 7: Calculate VAR (Y,Y)

Step 8: Calculate CO VAR Matrix

Step 9: Calculate EigenVector

Step 10 : Apply SVD on EigenVector As $X=U\Sigma V^T$

Step 11 :Then Eigen Value Will be $XX^T=(U\Sigma V^T)(U\Sigma V^T)^T=(U\Sigma V^T)(V\Sigma U^T)=U\Sigma^2U^T$

Step 12 : Finally we get a a Eigen Value from Vector a Singular Values.

Step 13 : Calculate Feature Matrix Using Eigen Vector And Eigen Value

Step 14 : Finally We get a PCA data with multiply Different Feature Matrix with Original Matrix.

Since the formation of Eigen Vector with Co Var Matrix causes loss of precision . In this thesis, this loss is avoided by using SVD on the Eigen vector.

EXPERIMENTAL RESULTS

The platform as used by us for the implementation of the proposed algorithm is java. The application of the above algorithm has shown that the data reduction is more accurate by using the above technique and the results we have got are more satisfactory.

Actual Data

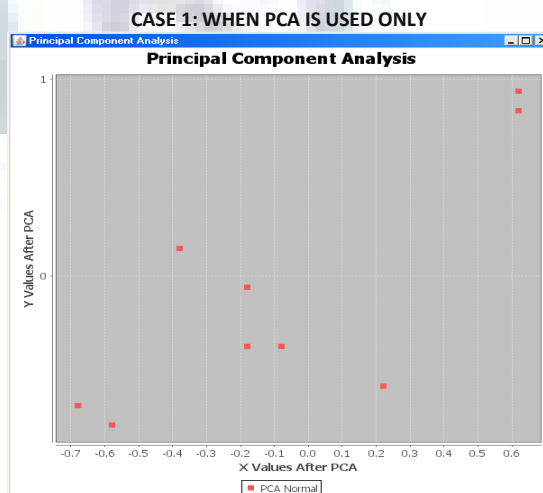
- 1.5000 1.4000
- 1.5000 1.7000
- 2.3000 2.6000
- 1.9000 1.2000
- 1.1000 1.0000
- 2.3000 2.7000
- 2.3000 2.6000
- 1.0000 1.1000
- 1.6000 1.4000
- 1.3000 1.9000

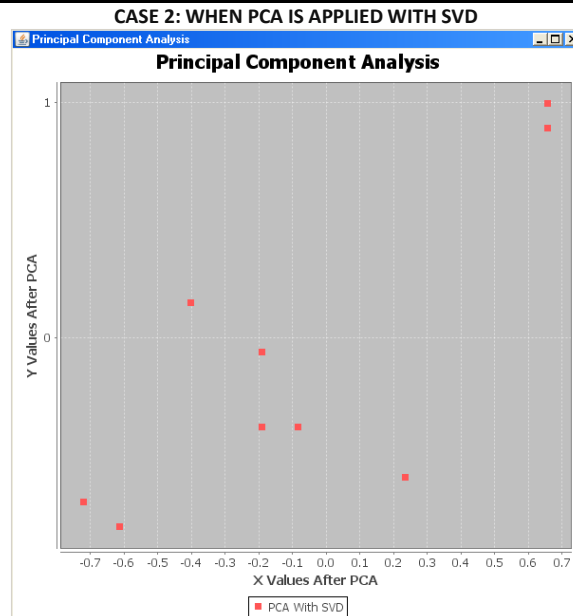
FINAL OUTPUT

Reduced data with PCA only	Reduced data when PCA is applies with SVD
-0.3976	-2.1503
-0.1533	-0.8290
1.0439	5.6449
-0.3284	-1.7761
-0.9555	-5.1671
1.1253	6.0854
1.0439	5.6449
-0.9321	-5.0404
-0.3396	-1.8365
-0.1065	-0.5757

From the table we can deduce that the second method i.e., PCA with SVD is better than the first one. As we get the data which is more closer to the actual data, thus reducing precision loss which is more in the first case

These results can be shown graphically,





From the above graphs we can see that in the second we are getting more clear data.

CONCLUSIONS

In this paper we have discussed about data reduction techniques and from them we conclude various advantages of data reduction. Principal component analysis is a powerful tool for reducing a number of observed variables into a smaller number of artificial variables that account for most of the variance in the data set. PCA finds its application in image recognition and various other fields. But the precision loss is high in PCA. Which can be reduced by applying Singular value computation technique for calculating eigen values in the PCA method. This will help to obtain more clear data i.e., more accurate data near to the actual data.

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AN ASSESSMENT OF UNIVERSITY-INDUSTRY RELATIONS FOR COLLABORATIVE TECHNOLOGY TRANSFER: THE CASE OF INSTITUTE OF TECHNOLOGY OF BAHIR DAR AND TECHNOLOGY FACULTY OF GONDAR UNIVERSITY

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ABSTRACT

University-industry technology transfer activities are increasingly important as a source of regional economic development and revenue for the university. This research is conducted to assess collaborative university industry technology transfer. Questionnaire and interview have been used as tools to collect the data. Descriptive statistics have been employed to analyze the data collected using the questionnaire and explanation building techniques were used to analyze the interview. It was possible to understand from the study that there is weak collaborative technology transfer from universities into the industry with regard to the cases selected in this study.

KEYWORDS

Collaborative Technology Transfer, Innovation, University-Industry.

INTRODUCTION

University-industry technology transfer activities are increasingly important as a source of regional economic development and revenue for the university (Friedman and Silberman, 2003). Ethiopia has very limited resources at her disposal to allocate for building up of advanced national Science and Technology (S&T) capability. Extensive and sustained development of S&T capability is required to bring about massive social, economical and technological changes, to rapidly achieve increases in agricultural and industrial productivity, to rationally conserve and use natural resources to provide for basic human necessities, to modernize communication network (Blumenthal and et al., 1996). Such long-term undertakings, with limited resources, can succeed if university-industry linkages are guided by open and collaborative partnerships. Transferring the results of university research to industry may take several forms and thus can be achieved in different ways. i.e. patenting, licensing, spin-off firms, etc. Although the transformation of academic research results into industry is widely accepted as a crucial factor for the industrial growth and competitiveness, this is not an effortless or simple linear process that flows directly from academy to industry.

REVIEW OF THE RELATED LITERATURE

University-industry linkages have long been at the centre of academic and policy attention. In spite of the copious literature on different aspects of such linkages, there is still rather inconclusive evidence on both the specific nature of the interactions between universities and businesses. In modern times, collaboration between university and industry is regarded as an important social experiment in the nation's innovation system. This suggests that joint efforts are needed to concretely enhance society's development, through technology transfer. University technology transfer has become an important mechanism for economic growth in the U.S. and much of the world. The Association of University Technology Managers (AUTM) reports that Over 65% of innovations of developed countries is licensed by universities and institutions in 2004 were granted to small businesses for commercialization purposes (AUTM, 2005). There are also efforts the developing countries to speed up technology transfer from universities to the industry. For instance in February 1994 United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the University-Industry Science Partnership (UNISPAR) Programme in Africa with the view of promoting cooperation between universities and industries in the region. These activities include conferences, dissemination of information, publications and award of grants for university-industry joint projects. The constraints to achieving effective collaboration between university and industry are however many. The ignorance on the part of scientists of the needs and characteristics of local industry are few among many (IETC, 2003, Link and Siegel, 2005, Jabar and Soosay, 2010.). At the purely academic end of the spectrum, university technology transfer can mean a faculty member's presentation of basic research at a symposium or perhaps the publication of a journal article. At the commercial end, university technology transfer may involve the licensing of university inventions to an industrial firm. University faculty and students may even be directly involved with such a firm as consultants, shareholders and employees (Bozeman, 2000).

TECHNOLOGY TRANSFER IN AFRICA

In the developed or industrialized countries, partnership between university/research institutes on one hand and industry on the other, is one of the most effective strategies for technology development and a useful tool for assuring the effective and efficient application of science and technology to the resolution of social problems. Such partnerships take many forms including the joint execution of research projects, the award of research contracts, the development of curricula and the provision of continuing engineering education for practicing engineers and scientists. In most African countries, however, partnership between local industries and universities is not very common. Therefore, the transformation of research results to products/technologies is usually left to the individual who, without the necessary institutional framework and experience, only allows the idea to collect dust in a little known journal (Trigeorgis, 1996). There are of course several reasons why such partnerships (or the enabling institutional arrangements for such partnerships) have not developed over the years. These include the weakness of the research infrastructure in some countries, which inevitably leads to a scarcity of scientific research of economic value. There is also inability to develop research results into commercial products among scientists and even brain drain (Pfeffer & Salancik, 1978)

A CONCEPTUAL MODEL OF UNIVERSITY-INDUSTRY TECHNOLOGY TRANSFER

University-Industry technology transfer relationships are one strand of activity in a larger set technological innovation processes. Technological innovation involves the successive transformation of knowledge (often derived from scientific research) into practical artifacts, tools, or practices which are subsequently deployed to users, via public dissemination or private markets (Bowen, 1980). Without going into the huge theoretical or empirical literature on technological innovation, there are a few key concepts of relevance to the topic:

- ❖ Technological Innovation involves a life cycle of stages and phases which are qualitatively distinct (e.g., research, development, technology adoption, implementation). Viewed retrospectively, this life cycle has the appearance of being quite linear (e.g., research leads to development) but usually is not during its execution.
- ❖ The processes are influenced by different levels of factors, which range from very macro (e.g., government policy, market structure) to very micro (project manning, group dynamics, organizational rewards and incentives). All levels of influence operate concurrently, and one can "explain" the success or failure of the innovation process by the influence of each, although that explanation is likely to be incomplete (Lee, 1996, Klawe, 2010).

All of this suggests a complex, context-sensitive, multi-layered, and interdependent approach to understanding university-industry technology transfer.

TYPES OF UNIVERSITY-INDUSTRY INTERACTIONS

Research relationships are a subset of many different interactions between universities and companies. Six research mechanisms can be identified for universities and industry to work together (Albert and et.al. 2005, UNESCO, 2005, Business-Higher Education Forum, 2001). These are:

- A. Sponsored research: The most frequent form of research relationship, which involves companies directly funding university research.
- B. Collaborative research: University-industry research partnerships that are encouraged through partial federal funding.
- C. Consortia: Groups of companies and universities engaged in various research efforts of common group interest.
- D. Technology licensing: Licensing of university patents (usually stemming from federally funded research) to companies for commercialization.
- E. Start-up companies: Usually involving university faculty, they often obtain licensing agreements to access university technologies.
- F. Exchange of research materials: Used to expedite the performance of research and accomplished through material transfer agreements.

WHY UNIVERSITIES AND INDUSTRY COLLABORATE

Why do universities and industry collaborate? The reasons are many, though this list is by no means exhaustive the following can taken as common reasons:

- Materials exist in industry for research and educational purposes that may not exist in institutions of higher education.
- Collaborations with industry provide research funding to universities. Universities come to rely on the generation of extramural funding as they structure their budgets. A sad reality, though, as money should not drive every decision made within universities.
- Collaborations can advance the service mission of universities.
- Collaborations provide for local and regional economic development.
- Collaborations between universities and industry often are novel to high technology areas, as opposed to low technology areas (such as basic manufacturing).
- At some universities these collaborations are part of their internal reward structure (financial incentives to faculty which are critical for research development and retention of 'star' faculty).
- Universities often have research infrastructure that industry wants.
- Industry outsourcing to universities, to reduce the costs of doing business and increase profits.

As this list illustrates, this symbiotic relationship reflects benefits to each partner. This is one strong characteristic of university-industry collaboration (James and Casey, Jr, 2010, Baba, 1988).

IMPORTANCE OF THE STUDY

Technology transfer, the accumulation of knowledge and its spill-over into production process is considered as the primary engine of economic development (Romer, 1990; Grossman and Helpman, 1991). This trend has resulted in the full recognition of the role of knowledge and technology in economic growth. Simultaneously the transition to a knowledge-based society and the application of knowledge in the production systems has changed the role of universities and industrial firms. In today's global world of knowledge, learning and innovation have become strategically important factors that foster competitiveness and economic growth of countries. Globalization, international knowledge exchange and the increasing global competition require the rapid transfer of scientific knowledge and understanding into everyday life (Ziman, 2001 in Göktepe, 2004, Tornatzky, 1990). Both universities and many firms have faced these challenges, therefore, studying university industry relation has a great significance for Ethiopia in an endeavour towards the success of the transformation plan of industrialization in the coming five years.

STATEMENT OF THE PROBLEM

Ethiopia's industrial sector is backward in its sectoral structure, employment, and technological content (World Bank, 2006). This problem further compounded due to the short supply of scientists, engineers, technicians and skilled workers in the field of science and technology. According to the 2006 World Bank report, manufacturing in Ethiopian has stagnated at about 5% of GDP over the last 20 years. Manufacturing industry is largely limited to simple agro-processing activities (sugar, grain milling, edible oil production, leather tanning) and production of basic consumer goods (beer, footwear, textiles and garment). Industries that might help accumulate technological capabilities and create dynamic inter-industry linkages – such as chemical, electrical and electronics, metal-processing and other engineering industries – are almost non-existent. Overall, the technological level of firms in Ethiopia is very low, even by regional standards; e.g. only 4% of firms use technology licensed from foreign companies, and likewise only 4% have ISO certification compared to 12% in both cases in Sub-Saharan Africa (World Bank / IFC 2006).

OBJECTIVE OF THE STUDY

The purpose of this paper is to identify the characteristics and forms of the university and industry relations, the enablers and barriers to university-industry relations as well as the role of organizational and institutional structures of universities and industries in this process. For this purpose, an empirical study on the institute of technology of Bahir Dar and the Technology Faculty of Gondar University have been conducted. This paper make an assessment on the extent and forms of the university-industry relations; enablers and disablers of this process; role of the university and industry in this process.

BASIC RESEARCH QUESTIONS

1. What are the characteristics of university-industry relations at the institute of technology of Bahir Dar and technology faculty of Gondar University?
2. What are the forms of communications practised in university-industry collaborative relations?
3. How do universities and collaborating firms evaluate their relations?
4. What differences are there between universities and firms engaged in collaboration?
5. What are the enablers and barriers in university-industry relations?

RESEARCH DESIGN AND METHODOLOGY

In light of the complex research issues and scarcity of any available material from the Ethiopian context dealing with technology transfer from universities to industries, a combination of qualitative and quantitative methods appeared the most appropriate and suitable strategy for the research by performing desk research, conducting interviews and a survey (Patton, 2002, Yin, 2003).

RESEARCH PROCEDURE AND SELECTION OF CASES

My main research interest is to investigate technology transfer from university to the industries. Thus, the aim will not be to sample for proportionality, but instead the goal will be to cover representatives of a specific group of actors. Given my aim to analyze the university-industry relations, I will focus on Technology Institute of Bahir Dar and the Technology Faculty of Gondar University and related industries that have relation with the universities in one way or the other were selected in this research. I have collected the empirical evidence through questionnaire surveys among the employees industries that have collaborated or worked with universities in one way or the other in these settings.

PRIMARY DATA COLLECTION

Questionnaire have been used for both universities and collaborating firms in order to obtain a general overview of the phenomenon and firm specific information on the conditions for technology transfer. The interviews, however, have provided deeper information on the why and how questions. Both methods are thus complementary.

DATA SOURCES AND DATA COLLECTION INSTRUMENTS

The empirical materials that have been used in this paper include both primary and secondary data sources. Primary data have been collected through a survey and interviews from both Institute of Technology (IOT) of Bahir Dar and the Technology Faculty of Gondar University and firms that have collaborative relation with these universities. A total of 80 Questionnaire were distributed to academic members of IOT of Bahir Dar university and technology faculty of Gondar university i.e. 40 questionnaires to each. However, only 67 questionnaires were filled and returned back. On the other hand, 50 questionnaires (25 questionnaires to industries in Bahir Dar and Gondar each) were distributed to industries that have some form of relationship with universities and 42 of them have been filled and returned. A total of six interviews (2 interviews in each of IOT of Bahir Dar and Technology faculty of Gondar and one interview with companies in Bahir Dar and Gondar each) have been made and analyzed using explanation building techniques. By means of triangulation of different types of data (i.e. to include documents, interviews and observations in the study), an easier construction of validity for the study will be improved. The interview group have received guidelines and an interview protocol representing a list of possible items that could be addressed in the survey questionnaire.

METHOD OF DATA ANALYSIS

The empirical evidence from the review of documents have been summarized in the review of the relate literature. Then, the data collected using the questionnaires was analyzed. Descriptive statistical analysis to measure the percentages, frequencies and mean of the responses were calculated. The interviews have been written down during the interview in the form of note writing then further elaboration have been made and rewritten. The interview data obtained during the interview have been analyzed by using explanation building techniques (Eisenhardt, 1989).

RESULTS AND DISCUSSIONS

The data obtained from both the questionnaire and interview is analyzed in this chapter. The data obtained from the questionnaire is entered in to SPSS 15.0. Then, the SPSS 15.0 is run to generate frequency table. The findings obtained from the questionnaire are interpreted by comparing the responses of both universities and the collaborating industries. The interview data is also analysed and triangulated with the information obtained from the questionnaire using explanation building techniques.

University-industry collaboration need to be based on mutual trust and understanding for effective partnership. To this effect most (more than 68%) of the respondents from both university and collaborating firms replied that they have a strong feeling of trust between them. In terms of knowing whether respondents know their organization have relationship with partners; both universities and collaborating organizations believe that they do not know about relationship activities between universities and the industry. However, the interview result shows us that there are relationships although they are uncoordinated. For example, students are sent for some kind of practical attachment works in to the industry. The finding of this study shows that employees of universities and the industry (80%) are interested to deal in an open manner with each other. Respondents were also asked whether they use knowledge, technology available from other sources. The data showed that (55%) of respondents do take knowledge available from outside sources. This implies that the parties to the partnership are more open and willing to take ideas and information from others which again are a considered as an important quality of innovativeness. In addition, both (75%) of employees of universities and the industry are willing to work for an extended period of time in collaborative activities. The data obtained from participants of the study also revealed that universities and collaborating organizations are willing to commit themselves (86%) in to relationship and have a strong desire to establish a partnership relationship that can last for more than five years (82%).

Respondent were also asked to choose specific type of communication dominantly used during the interaction, accordingly, respondents from both universities and the collaborating industry confirmed that the form of communications usually used for communication are informal communication among members ,the written communication, Telephone conversation, Email, and face to face interaction in order of their importance. This implies that universities and collaborating industries are not working well in introducing formal means of communication with the industries that is why most of the respondents (80%) from both universities and the collaborating industries responded the absence of feedback to communications. It is also possible to understand from the data that even though the collaborating organizations are aware of the importance of sharing information (76%) both the universities and collaborating industries neither agreed nor disagreed with regard to sharing of proprietary knowledge and technology. This may imply that there is no invention or technology that is protected with intellectual property rights. Universities and industries are not keeping informed each other about what is going on in them (75%). This might mean new inventions, knowledge or technology developed in universities is not being communicated to the surrounding (collaborating) industries. The industries on the other hand are reluctant to let the universities know their problems and seek for solutions as there is no formal relationship established as there is no dialogue between the two.

Respondents were asked whether the partner universities and companies were satisfied with their relationship so far, accordingly, a considerable number of the respondents (72%) from both the university and collaborating industries reported that the relationship is not effective up to their expectations.

TABLE 1: THE COLLABORATING ORGANIZATIONS AND UNIVERSITIES CARRIED OUT THEIR RESPONSIBILITIES AND COMMITMENTS WITH RESPECT TO THE RELATIONSHIP SO FAR, MEETING MY EXPECTATIONS

	University		Industry	
	Frequency	Percent	Frequency	Percent
Strongly Disagree	16	23.9	9	21.4
Disagree	35	52.2	21	50.0
Indifferent	6	9.0	3	7.1
Agree	10	14.9	9	21.4
Total	67	100	42	100

Source: Computed based on the author survey on 2012

A great majority of respondents also believe that the relationship between university and the industry as unproductive (70%). Respondents were also asked whether they are happy or not with the relationship performance, accordingly, on the average 73% them reported that they are not happy. The following items were asked to respondents in order to identify potential differences between the university and their organizations. Understanding the differences between them will help to design appropriate tools for establishing effective university industry collaborative platform. To this end, questions asking about the similarity of interests, consistency of goals and objectives and compatibility of reward system between individuals in the university and collaborating industries are included in the questionnaire and are analyzed as follows.

With regard to whether universities and collaborating industries share similar interests, the respondents replied as they have different interests. This might be because these two different organizations are established to achieve different objectives; however, they have to cooperate and collaborate to bring effectiveness and efficiency in an effort to reach to their respective goals. The above information is further strengthened with the respondents' reaction to the consistency of goals and objectives between them. As can be observed from the following table both the industry and university acknowledged the difference of their goals and objectives.

TABLE 2: OUR GOALS AND OBJECTIVES ARE CONSISTENT WITH THOSE OF THE COLLABORATING ORGANIZATIONS

Scale	University		Industry	
	Frequency	Percent	Frequency	Percent
Strongly Disagree	14	20.9	9	21.4
Disagree	43	64.2	25	59.5
Indifferent	4	6.0	4	9.5
Agree	5	7.5	4	9.5
Strongly Agree	1	1.5	-	-
Total	67	100.0	42	100.0

Source: Computed based on the author survey on 2012

In terms of encouraging employees to take initiatives to bring new ideas in to their organization, I found somewhat different views from the university respondents and that of the industry. It seems that employees of universities to have better freedom to take initiatives than that of the people in the industry. The possible reason for industries not to encourage their employees to take initiatives could be attributed for their low risk taking behaviour or for new ideas might be feared by managers for they are not tested. Respondents were asked whether they anticipate what their partners and customers would probably need in the future and seek for technologies to meet them. According to the data obtained from the respondents from the industry there is no such effort made by their company to engage in forecasting of their customers and partners need, however, a better response have been found on the side of the university on this issue.

Respondents were also asked what motivates them to engage in research activities. Accordingly university employees reported that publication and access to government funding as the main motivators while peoples from the industry identified profit making, applied research and development of technology as primary issues that motivates them to engage in research activities.

TABLE 4: WHAT MOTIVATES YOU TO ENGAGE IN CONDUCTING RESEARCH

	University		Industry	
	Frequency	Percent	Frequency	Percent
Development of technology	42	64.62	39	92.86
Generation of knowledge	51	78.46	30	71.43
Publications	56	86.15	23	54.76
Patents, licences	30	46.15	28	66.67
Profit making	7	10.77	41	97.60
Funding for future research	47	72.31	8	19.05
Access to government funding	50	76.92	5	11.90
Basic research	47	72.31	7	16.67
Applied research	32	49.23	40	95.24

Source: Computed based on the author survey on 2012

It also possible to understand from the data that employees of both universities and the industry do not seem know about the environment of the other. This may create barrier on both sides to understand and initiate what type of technology or knowledge could be transferred. Both universities and the industry need to create the platform to discuss and understand each other in order to achieve their respective objectives effectively.

INTERVIEW DATA ANALYSIS

University industry coordinators and technology transfer officers of Institute of Technology (IOT) of Bahir Dar and Gondar University have been asked to describe the characteristics of university-industry relations. Respondents replied that the relationship with the industry is beset with many problems. On the side of the university there is no coordinated effort to identify technology needs of the industry and most of the attention of the university is focused on teaching and learning activities. The relationship with the industry is usually through student placement. Students are assigned to various companies for their practical attachment. The relationship is usually initiated by universities. There are no indications where industries approach universities to get their technology and other work related problems solved. But, there are beginnings where the industries are requesting universities to come with solutions for their problems. Students are required to identify problems of the company where they are assigned for practical attachment and give solution in a scientific approach. Students are also expected to report every problem they come across and the solution given. In this regard, respondents from the industry replied that universities are not open dealing with us. They said the doors of the universities are closed. If we want to get solution for our problems we better approach individuals that the formal approach. Respondents from the industry replied that university graduate lacks practical knowledge and as a result they take longer time to work independently. Universities respondents replied that they have engaged in technology transfer activities, they identified training, graduating students, research and publication as the mechanisms through which technologies are transferred in to the industries and the society at large. They have also reported that students are actively participating in technology creation in their respective fields. However, universities reported that they do not spin-off start up companies. Universities also reported that they give consultancy services to the industry. They have cited the Bahir Dar Marine enterprise and other companies as an example.

RECOMMENDATIONS

To accelerate the cycle of university-industry partnerships, universities must adopt open minds and be receptive to mutually beneficial partnerships. One approach to initiate such contacts is to establish sabbatical programs for faculty members to spend time in industrial labs.

- Government interventions are also recommended when both industry and universities are weak.
- At the university level, the reward system needs to be realigned to encourage such partnerships.
- Encouraging national networking through national forums for young scientists and young leaders could connect problem-solvers with problem-identifiers.
- Both universities and the industry shall create the platform to discuss and understand each other in order to achieve their respective objectives effectively.

CONCLUSIONS

- Both university and collaborating firms replied that they have a strong feeling of trust between them.
- Both universities and collaborating organizations believe that they do not know about relationship activities between universities and the industry.
- The finding of this study shows that employees of universities and the industry (80%) are interested to deal in an open manner with each other.
- Universities and collaborating industries are not working well in introducing formal means of communication with the industries
- There is limited instances where new ideas been brought in to universities and collaborating industries. This means they are busy of their daily routines and no extra effort is paid to try out new ideas
- Employees of universities to have better freedom to take initiatives than that of the people in the industry. The possible reason for industries not to encourage their employees to take initiatives could be attributed for their low risk taking behaviour or for new ideas might be feared by managers for they are not tested.

- Universities and collaborating industries take immediate corrective actions when partners are unhappy with the quality of service provided by the other party to the relationship.
- Employees of universities do research mostly with the intent of satisfying their need for publication and access to government funding while industries are doing research with the purpose of profit making, applied research, and development of technology.

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DEMARKETING: A CREATIVE THINKING**ANITA KUMARI PANIGRAHI****LECTURER****DEPARTMENT OF HUMANITIES****GANDHI ACADEMY OF TECHNOLOGY & ENGINEERING****BERHAMPUR****ABSTRACT**

No doubt Marketing is the essence of all management activities, still the importance of demarketing can't be ignored as it is core part of societal marketing concept. The significance of demarketing lies in the well being and the safe health of society. Demarketing is the part of marketing functions which dissuades customers in general or a certain class of customers towards consumption of a product or service on a temporary or permanent basis. But, generally it discourages the consumption of scarce materials and harmful products. Hence, considering the changing natural environment, effective implementations of demarketing strategy is necessary in all organisations for meeting the objective. The present article aims at finding out what actually demarketing is all about and how can a business firm be more competitive by using demarketing strategy and puts forth a few cases of this strategy.

KEYWORDS

Demarketing, Societal marketing, scarce materials, Demarketing strategy.

INTRODUCTION

Demarketing is considered to be the reverse of marketing. Because, the term 'Marketing' has been associated with the creation and satisfaction of customers. The consumer can only be satisfied when the goods are delivered at the right time, place and quantity. Whereas, demarketing involves the use of marketing functions and operations for discouraging or dissuading customers in general for the use of a specific product or service on a temporary or permanent basis. Usually, demarketing may be intended to decrease demand either for a shorter period or forever. It may be due to scarce materials, harmful products, high costs of distribution or promotion or deleting product benefits.

Although many firms may find this stream of demarketing useless because of missing customers, there have always been companies which are face to face excess demand. These companies have to discourage customers, however, they should act with the respect and not to forget about the long-run aim of developing satisfied clients. This attempt can led to an outcome of excessive demand which may have some effects on the objectives of an organization.

In demarketing, most or oftentimes marketers are encountered with the social change that is, the shifting of social values and attitudes away from the excessive consumption to the limited consumption. It is aimed at limiting growth; practiced, for example, by governments to conserve natural resources, or by companies unable to serve adequately the needs of all potential customers. It can also be advertising, which urges the public to limit the consumption of a product, as at a time of shortage. It could also be viewed as strategy for pruning the marginal markets and can be used to maintain customer goodwill in times of shortages. Demarketing is considered to be an integral component of general marketing and needs to be positioned from a very wider prospect instead of a limited point of view. Demarketing not vanish companies product demand but it temporary reduce or shift the demand to balance the things out. From the company's point of view, the role of demarketing is to make sure that the demand is at the same stage and composition which favors the long term goals of the company.

REVIEW OF LITERATURE

The concept of de-marketing was initially proposed by Kotler and Levy in 1971, they defined it as "Attempts to discourage customers in general or a certain class of customers in particular for consumption of a specific product on either a temporary or a permanent basis." The functions of marketing have characteristically emphasized the task of creating and maintaining demand in an environment of abundance. However, recent changes in the business environment have focused attention on a wider range of marketing tasks which include that of reducing overfull demand, or de-marketing (Philip Kotler and Sidney J. Levy, 1971). (Lawther, 1997), In other word de-marketing is perceived as a method of controlling demand as well as generating and satisfying it there is need to reduce or control demand and the tool for doing this is known as de-marketing. (Crompton and Howard, 1980), stated that demarketing is not a negative concept as "a decrease in visitor numbers can lead to an increase in clientele satisfaction, through preserving a higher quality experience". One problem with de-marketing is that it is has received relatively little attention from the marketing profession itself. (Annabelle Mark and Ross Brennan 1995). (Beeton and Benfield, 2003), who claimed demarketing to be an intrinsic aspect of marketing management. (Wearing and Neil, 1999) make mention of demarketing as a potential ecotourism tool in the management of a scarce resource. They nominate pricing, restricting access through queuing, and various negative promotional strategies or persuasion as methods of demarketing, which leaves one with an overall negative impression of the concept. However, the use of demarketing need not be seen as applying purely punitive measures. When used as part of the marketing mix, it has the potential to demonstrate positive, powerful outcomes.

DEMARKETING STRATEGIES

Marketing is to deal with the dilemma of expanding need or demand. This concept is related with the rising period of items that are oversupply. Thus, the major functions of marketing have characteristically emphasized the task of creating and maintaining demand in an environment of abundance (Kotler, P. 1974, & Stanton, W. J. 1971). But, the recent changes in the business environment have focused attention on a wider range of marketing tasks which include that of reducing the overfull demand or demarketing (Kotler and Levy, 1971).

Demarketing strategy has been focused toward maintaining customer goodwill at the times when the demands of the customer do not match appropriately. On the other hand, demarketing strategy may probably lead to improved revenues in the long run. (Cullwick, 1975) mentioned two different types of demarketing strategies. "A demarketing strategy will either ration demand or reduced demand. When rationing demand, the marketer attempts to spread limited supply of products throughout the market. When reducing demand, active efforts are made to lower the overall demand for the product." There are various demarketing strategies which can be implemented depending on the situation. These strategies also include a wide range of applications. This strategy may be targeting all or a certain set of customers. The ultimate objective of a de-marketing strategy is to ensure that the demand of the product suits the objectives and goals of the company. Marketing strategy needs to accommodate changing environmental and internal influences. A demarketing strategy quite often has been referred to as a reaction to actual or threatened shortages of raw materials. In order to coincide or match with supply, the marketer is required to reduce or ration demand with barriers and higher prices for a number of reasons, like

- The marketer cannot meet all the demand
- Social causes (e.g., demarketing drugs, tanning salons)
- Protecting your brand and customer mix

(Groff, 1998) identified three different circumstances where a protected area agency may utilize demarketing strategies:

- Temporary shortages: - due to either lack of supply or underestimation by management of demand for particular settings or programs;
- Chronic over popularity: - can seriously threaten the quality of the visitor experience and also damage the natural resource that attracts the visitors; and

- **Conflicting use:** - encompasses issues of visitor safety, compatibility of use with the available resources, and the different uses and programs demanded by the public.

As supply of resources becomes increasingly strained, the growth and development of the market expansion especially for the strategies seemed to be a major difficulty to implement. A de-marketing program will prove to be effective only when a large segment of consumers are receptive to such programs and ready to alter their behavior. De-marketing as a strategy strongly emphasizes on decreasing or rationing demand. Philips, Kodak HP, Wilkinson, Nokia etc are some of the companies that used ways of de-marketing for various reasons.

CASES

EXAMPLES IN INDIAN MARKET

- **INDIA, IPCL SELLS ITS PRODUCTS AND AT THE SAME TIME IT PROMOTES 'SAVE OIL, SAVE INDIA'.**

De-marketing is the methods which attempts to lower the demand for a product or service in a particular market. This attempt can led to an outcome of excessive demand which may have some effects on the objectives of an organization. Therefore, demarketing is able to be applied to affect lesser demand when it is bigger than an organization can or able to tackle the situation to set goals. Oftentimes, de-marketing methods involve raising prices, reducing advertising and promotion expenditures, or deleting product benefits.



The impetus here is not to stave away the consumers, it is the fact that oil being a finite resource product should be used carefully to maximize its utility. Thus, IPCL sells its product and simultaneously reducing its advertising and promotion expenditure.

- **DEMARKETING OF THE PRODUCT TATA NANO**

Governments in many countries are experimenting with alternative methods for reducing car use, including congestion charges, increased fuel taxation, and improved public transport. In India Tata Nano had used the demarketing strategy when they were short of supply of Nano. While the demand for the product was increasing day by day. Hence they applied the demarketing strategy by promoting/ advertising other Tata products and by completely stopping Nano's promotion.



- **DEMARKETING EFFORTS FOR TOBACCO CONTROL IN INDIA**

India is 3rd largest grower of tobacco in world. India's anti-tobacco legislation, first passed at national level in 1975, but it was largely limited to health warnings and so proved to be insufficient. A new legislation was proposed in 2001. It includes the measures like outlawing smoking in public places, forbidding sale of tobacco to minors, more prominent health warning labels, ban advertising at sports & cultural events. From the last decade, there is a change of tobacco related policies in many countries. Indian parliament has recently introduced Tobacco Control Bill 2001 (Tobacco products (prohibition of advertisement and regulation of trade and commerce, production, supply and distribution)). There is a continuous consumption of tobacco in India at 2-3% per annum and by 2020, it is estimated that it will account for 13% of all deaths in India. With the enforcement of National Legislation, direct advertisement of tobacco products has been prohibited. Smokeless tobacco is the cause of cancers of mouth, lip, tongue and pharynx. The oral cancer incidents have been estimated as high as 10 per 1,00,000 males per annum.

Demarketing is the most effective strategy for reducing the demand for tobacco products. This strategy include measures like increase taxes on tobacco products, publishing information about adverse effects, health warning labels on these products, bans on advertising and promotion, restrict smoking in public places. Pro-tobacco legislation with Tobacco Board Act was introduced in 1975, to develop Tobacco industry. Similarly, Tobacco Cess Act of 1975 was introduced to collect duty on tobacco to develop tobacco industry through loose export policies. To preserve environment, smoking was included in Prevention & Control of Pollution Act 1981. Violating the Acts of Smoking in public places such as streets, parks or governments complexes will be fined up to Rs. 200. Same fine is applied to vendors who sell tobacco to minors. If the offence is repeated, it will result in fine or Rs. 1,00,000 and imprisonment of up to 3 years. Ban on smoking was first imposed by Delhi Government, with the help of Delhi Prohibition of Smoking and Non-smokers Health Protection Act 1996, followed by Kerala High Court in 1999, also introduced anti-tobacco legislation in 1999. Tamil Nadu and Andhra Pradesh have banned the marketing and sales of *guthka*.

EXAMPLES IN GLOBALISED MARKET

- **DEMARKETING MANAGES VISITOR DEMAND IN THE BLUE MOUNTAINS NATIONAL PARK IN AUSTRALIA**

Nature-based tourism is a significant feature of the Australian tourism industry and relies heavily on protected areas. The Blue Mountains National Park is an important draw card for domestic and international tourists but is recognised as suffering from excess demand. This research investigated the use of demarketing in addressing excess tourist demand in the park. No holistic or systematically planned demarketing strategy was found and the demarketing

measures that are employed are not consciously used as such. A more conscious and holistic application of demarketing measures may help to proactively manage visitor demand for park experiences and ensure that the resource remains for future generations.



(Blue Mountains National Park in Australia)

- **'DEMARKETING' CANADA'S FRIENDLY OIL, FUNDED BY AMERICAN FOUNDATIONS**

Demarketing is reducing or shifting demand away. The demarketing of Canadian oil appears to be funded as a small part of a large, well-financed marketing campaign to sway market share and investment capital towards so-called "clean energy." Indeed, it wouldn't be easy to create demand for "clean energy" while singing the praises of oil and coal. It would be much easier to create demand for "clean energy" with a negative foil of bad press about "dirty oil," and "tar sands" - which is precisely what environmental organizations are providing.



American charity would be better directed towards reducing poverty and advancing education, rather than forcing America to rely on oil imports from countries that are far less friendly to the U.S., than Canada. At the present rate, American foundations are on track to spend half a billion dollars (roughly \$50 million per year) funding the environmental movement in Canada, over the next ten years. This money could be better spent in other places that are far needier than Canada.

- **U.S. CASH AGAINST 'ALBERTA OIL' AND 'DEMARKETING ALBERTA' PUBLISHED IN THE FINANCIAL POST**



Published in the Financial Post, the American funding and the U.S. interests behind the campaign to ban oil tanker traffic along the B.C. coast, and thereby block Canadian oil exports to Asia. This would continue the U.S.'s virtual monopoly on Canadian oil exports - all in the name of protecting the environment. If the campaign against oil tankers were to succeed in Vancouver, overseas exports of Canadian oil would be blocked and Canada would be stuck with only one major customer for Alberta oil:

the United States. The campaign against Alberta's oil sands also seems to rise out of the people, but the interesting thing is that there are very few roots under that grass. Money comes in from a small core of U.S. charitable groups. One of those groups — the U.S. Tides Foundation of California (Tides U.S.) and its Canadian counterpart have paid millions to at least 36 campaign organizations. All the money, at least US\$6-million, comes from a single, foreign charity. The Tides U.S. campaign against Alberta oil is a campaign against one of Canada's most important industries. It's fair for Canadians to inquire about who's funding this campaign and why. But Tides U.S. is not alone. U.S. tax returns and public records show that Tides U.S. and charities based in California and New York have granted US\$15-million since 2003 specifically for campaigns against Alberta oil and against oil tanker traffic and pipelines through British Columbia.

- DEMARKETING OF THE PLACE BALI



Also the authorities in Bali had to cut the flow of tourists. As they did not want to share a vision of overcrowded Bali, they reduced middle-income tourists while maintaining or increasing its appeal to high-income tourists. The Bali authorities prefer fewer higher-spending tourists instead of a larger number of lower-spending tourists. Thanks to this access many luxury hotels and restaurants are built.

- DEMARKETING OF SMOKING

Governments use various de-marketing strategies and tools in parallel to control smoking (rising taxes, clean indoor regulations, banning advertising). The de-marketing of smoking has primarily occurred along three fronts: mass media (i.e., the use of antismoking advertisements), regulatory measures (i.e., taxes and smoking bans), and public opinion (i.e., normative behavior). The goal of mass media efforts of governments and some cigarette manufacturers has been to discourage and prevent smoking behavior (Logan & Longo, 1999). The goal of many of these social marketing campaigns has been to prevent adolescents from starting to smoke cigarettes (Bauman, LaPrelle, Brown, 1992). The targeting of adolescents is due to the majority of smokers taking up the habit before age of 18 years, even though tobacco sales to minors are illegal. Findings concerning antismoking advertising have shown that exposure of students to these ads has contributed to the enhancement of school-based prevention programs (Flynn, 1992), resulting in decreased smoking rates, the formation of less favorable evaluations of peers who smoke (Pechmann & Ratneshwar, 1994), and the recall and use of negative smoker stereotype (Pechmann & Knight, 2002).

The first message which tobacco packages delivered in 1964 was general: CAUTION – CIGARETTE SMOKING IS A HEALTHHAZARD. Food and Drug Administration (FDA) in USA nowadays insists on bigger and more colourful advertisements on tobacco packages. By June 22, 2011 There should be 9 different colourful adverts chosen to the warnings, which touch more concrete areas of health and also involve words “you” or “your”, so the warnings are more personal and compel smokers to think more about their health condition. E.g. Warning: Tobacco smoke can harm your children; Warning: Smoking can kill you.



(Proposed images as it would appear on a cigarette package, Source: U. S. Department of Health and Human Service, 2011, online).

What is more, FDA wants to equip every cigarette package by black texts on white background – as it is used already. (U. S. Department of Health and Human Services, 2011, online) On the other hand, legislation in Australia passed the law about plain cigarette packaging in 2012. This step was recommended by the Preventative Health Taskforce report. Plain packing should reduce attracting smokers and should partly interrupt the important communication with smokers or potential consumers. (Australian Council on Smoking and Health, 2011, online)

CONCLUSION

To conclude this issue of demarketing, it is difficult to express that demarketing is only marketing in the opposite situation that includes product, price, place, and promotion policies which can be used to discourage demand. However, there is the danger of excessive reducing short run demand rather than increasing the demand excessively. Demarketing has been used to manage virtually all imaginable inadequate supply or unwanted demand problems. Because demarketing is the only marketing strategy to decrease rather than increase consumption and effect advertising, packaging, distribution, pricing, product design, public education and addiction assistance. It has a tremendous potential, which many marketers still need to focus on. Though successful implementation of demarketing is a challenging task, but if placed with unusual ideas it can woo the customers and at the same time help businessman to achieve their target.

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A REVIEW OF ISLAMIC BANKING AND CURRENT ISSUES AND CHALLENGES FACED BY ISLAMIC BANKS ON THE WAY TO GLOBALIZATION

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ABSTRACT

Islamic banking is a classical concept that plays a vital role in the economic development of any country Islamic or non- Islamic country. During the last three decades Islamic banking system has appeared as a possible substitute and a competition for the conventional banking system. Transactions of Islamic banking are governed by the codes of the shariah, which excludes interest and normalizes that income, must be resulting as return from capitalist investment. Operations of Islamic banking are currently practiced in Global banking system. There is need to Educate and aware the Muslim community about Islamic financial instruments; create awareness about the terminologies that are used in Islamic banking ,service providers of Islamic banking need to improve the information system within the Islamic banking institutions and communities. Islamic banking needs to work hard for competition with conventional banking in sector of supervision and regulation. This paper include what instruments are used in Islamic banking , what issues and challenges are facing Islamic banking in global world as well as is Pakistan, brief difference between Islamic and conventional banking, SWOT analysis of Islamic banks ,evolution of Islamic banking etc . At the end of this paper some suggestions and recommendation for improvement of Islamic banking has been given.

KEYWORDS

Islamic banking, Islamic Finance, Riba, common instruments, challenges in Pakistan, challenges in Global worlds.

1. INTRODUCTION

Bank plays important role as mediator between the depositors and investors. Banks work as a backbone for the development of economy in the country. Development of a country truly based on the banking system of that country. Finance plays the role of life blood for the economy of a country. Islamic Banking system is at the heart of the economic system and provides equal opportunities to take advantage of the resources evenly on the market to create a balance between the various sectors of the society.

The Islamic Financial Law came into existence when Islam spread all over the world. But Islamic banking came into existence when Egypt's Mit Ghamr saving banks in 1963 started profit & loss sharing investment. After that Islamic banking begin to spread all over the world in Islamic countries as well as in other

countries, in the field of banking, finance and asset management business with the yearly growth rate of 10 to 15%. According to Steward (2008) the real functioning of Islamic banking started with latest investment techniques and strategies in 1970. The first Islamic bank was founded in Dubai in 1975 named as Dubai Islamic Bank (DIB).

At present Islamic banking make progress to 135 trillion with the annual growth rate of more than 20% all over the world. 430 Islamic banks are working and 191 conventional banks that are offering some services of the Islamic banking in more than 75 countries (Global Islamic Finance Report, 2012).

Pakistan is the first largest Muslim populated country in the world. But still people are unaware about the principles of Islamic banking. In Pakistan only 6 Islamic banks are working. Islamic banking share in Pakistan has grown to 8.9% in deposits that were 8.2 % before that (Country Head of Al-Baraka Islamic Bank).

Investment financing has now glimpsed into Islamic banking. Islamic banks are now investing in the large projects. But if we compare it with other countries we are too far away from Malaysia and other Islamic countries in which Islamic banks are working. Islamic banking deep rooted its credibility during the 2012 global financial crisis because Islamic transactions were truly based on assets while the global financial crisis caused because of paper based assets that were swapped many times by different parties.

Islamic banking is not only useful industry for Muslims but also for Non-Muslims as well. The growth rate of Islamic banking is continuously increasing. Islamic banking & finance provided the important and new financial techniques to the banking industry. Islamic financial system is truly depends on the real economic activity not on the paper based transactions where assets are transacted on paper. Islamic banking created innovation in the banking world by considering ethical and moral values in making investment decisions. The core objectives of this paper are:

- Understanding of Islamic banking and what is need of Islamic Banking.
- Importance of Islamic banking and evolution of Islamic banking.
- To identify the challenges and issues of Islamic banking.

2. LITERATURE REVIEW

2.1 WHAT IS ISLAMIC BANKING?

According to (W. Ahmad, 2008) Islamic banking is interest free banking because interest (Riba) is totally forbidden in Islam. Islamic banking is based on Islamic Sha'riah law that provide basics about investing and financing. While considered to meet the specific religious needs of the Muslim customers, Islamic banking is not limited to Muslims: both the financial services provider and the customer can be Muslim as well as Non-Muslim. Islamic banking manages risk by the principles of Islamic Shariah. Interest free banking is not a broader term indicating a number of banking instruments or operations, which avoid interest. While Islamic banking, is broader concept that not only to avoid interest-based transactions, also prohibited unethical practices and play role actively in attaining the goals and objectives of an Islamic economy.

2.2 WHAT IS ISLAMIC FINANCE?

According to Shakeel (2009) the base of Islamic Finance eliminates interest, termed as riba (Riba is the borrowing of money at excessive rates). The idea is more exactly that currency has no intrinsic value – it is only a measure of value, and since itself currency has no value, there should be no change in use of money. Therefore, asset based finance is called Islamic finance it is not currency based. In Islamic finance investment is structured on ownership or exchange of assets, and money is simply used for payment of transactions. Elements of Shariah are the basic framework of an Islamic Financial System is based on, which heads Islamic societies. Shariah means the law of Islam, initiates from two principal sources: one is Holy Quran, the Holy Book of the Muslims and its practices of Holy Quran; and the second is Sunnah, the way of life prescribed of Prophet Muhammad (PBUH), based on the teachings and practices, as normative in Islam.

2.3 WHAT IS RIBA?

According to Wikipedia A Riba mean interest. Riba is considered as a major sin and is prohibited in Islamic banking jurisprudence (fiqh).

There are two types of riba.

- Rise in capital without any services provided which is prohibited by the Quran.
- Exchange of Commodity in unequal quantities, also prohibited in the Quran.

2.4 EVOLUTION OF ISLAMIC BANKING

At the period of Muslim khilafat there were capitalistic form of markets were available. That era was known as the name of golden Islamic age. The mercantilism emergence was from the 19th century and 20th century. Islamic banks, Islamic windows, Islamic financial institutions, Islamic insurance, Islamic capital markets and fund management institutions were included in the Islamic financial sector. Pilgrims Savings Corporation was first time set up in Malaysia in 1963. Ahmed El Najjar in the Egyptians of MitGham took first experimentation in Islamic banking in 1963. The first interest free commercial bank was established in Egypt named as Nasir Social Bank in 1971. OIC (Organization of Islamic Countries) took step in 1974 for the incorporation of Islamic development bank. Interest free banking concept came into existence due to increase in prices of petroleum in Arab countries in 1970. These countries used sharia's principles for interest free banking. Dubai Islamic bank is the first example of the Islamic banks in Gulf countries. Many other banks like faisal Islamic bank in Sudan, Bahrain Islamic bank and the Philippine amanah bank were also incorporated in different years (Ahamed, 2011).

2.5 WHAT IS SHARIAH BOARD?

According to Shakeel, (2009) A board consists of 3 Muslim scholars working as advisory board. They give their opinions which are in accordance with the principles of Islam. This board provides the guidelines for the investment and overlook whether these investment are halal (means permissible). Different scholars work for different companies and these scholars are completely knowledgeable in with the principles of shariah. These board members will also be the accounting and auditing of Islamic financial institutions board members which is available in Saudi Arabia.

2.6 WHY WOULD NON-MUSLIMS USE ISLAMIC FINANCE?

No doubt Muslims are the customers of the Islamic banking but now this trend is also increasing in non Muslim who are going to take part in the business of Islamic banking and also becoming the customers of Islamic banking. The most surprising thing is that in UK first takaful company with the name of salaam insurance has been incorporated by non Muslims. Due to the emergence of this company the customers of Islamic banks are increasing rapidly who are non Muslims. Because Islamic banks use ethics in their business which is being liked by the non Muslims that are why there trust on Islamic banks has been increased. Islamic banks are using Islamic principles along with the western approach due which the Islamic finance would emerge significantly in coming years. Now the public government and the financial institutions are also working and looking the betterment of Islamic finance due to the fairer distribution of wealth and the management of money (Shakeel, 2009).

2.7 WHAT ARE THE MORE COMMON INSTRUMENTS OFFERED BY ISLAMIC FINANCE?

Islamic financial system has several ways of financing; Musharaka (Joint Venture) Mudarabah (Profit Sharing) Ijarah (Leasing) Murabaha (Cost Plus Financing) Istisna (Construction Financing) Qarhd(Non Profit Loan) Kafala (Guarantees) Al Rahn (Short Term Financing) Salam(Forward Purchasing) . Ahmad, (2012)

In Musharaka the bank and investors jointly contributed the capital for a project to earn the profit. If on that particular project bank earns profit than that profit is distributed among the parties on agreed ratio of profit and according to the conditions of the contract. In case of loss same phenomena applied to both parties. Ahmad, (2012)

In Mudaraba the capital is provided by the bank and the other party contributed in the form of commercial efforts, professional skills and experiences. As a result if bank earns profit then the profit is divided according to the predetermined ratio. In the situation of loss the other party remains unrewarded and all the loss will be bear by the bank. Ahmad, (2012) In this contract the acquisition cost of goods is informed by the bank to the industrialist and profit margin is agreed with him. It is most popular interest free transaction mode of Islamic banking that is vastly used in different countries. Ahmad, (2012) This is the form of loan which is provided to the persons who are facing the financial crises without any interest (Peter, 1992). The real example of Qarhd Hasna is "Akhawat" in Pakistan. Ahmad, (2012) Salam is another agreement between two parties where the seller or buyer made a contract for purchasing specific quantity of commodity for a specific price at a given period. In this contract currently goods are not available but at some future time period commodities are given to the purchaser. Salam contract is used for non manufacturing commodities but Istisna is used for the manufactured commodities. Ahmad, (2012) Istisna is an

obligation between the parties to give the manufactured commodities upon completion. There is an agreement between the parties to pay the price of the commodity at a specific price. The difference between Salam and Istisna is that, in Salam contracts price is given on spot agreement and in Istisna price is settled upon agreement. The second reason of difference is that Salam is mostly used for agriculture or non-manufacturing commodities where as Istisna is used for manufactured goods. Ahmad, (2012) In Ijarah ownership is transferred between the two parties for a certain period of time. In Islamic banking employment consulting and some other transactions are used by considering Ijarah. For example if you want a chair and the wood for that chair is provided by the buyer then the buyer is rented the skill of the seller so it is called Ijarah. If the wood is provided by the seller then this transaction is called Istisna. Ahmad, (2012) Al Rahn means that achieve the specific objectives through rules and principles that are made by the Shariah in Islam. The main motive of the Al Rahn is to protect and preserve the wealth of the creditors during the case of nonpayment of the debt. Ahmad, (2012) So this means if we fail to mature the debt then Al Rahn fails to achieve the specific objectives. Relatively this will lead to un-fulfillment of Shariah Laws. So it is the responsibility of the Al Rahn is to protect the wealth of the persons in case of nonpayment of debts. Ahmad, (2012) Kafalah is guarantee which is provided to the third party in case of lack of confidence and knowledge about one other. The particular person makes assure to conduct transaction own his own guarantee. Islam allows the Kafalah in transactions and encourages such type of transactions. But the particular person charged some money on behalf of that transaction. Ahmad, (2012)

2.8 SCOPE OF ISLAMIC BANKING IN PAKISTAN

Pakistan is the first largest Muslim populated country in the world but only six Islamic banks are working in Pakistan. Khan (2008) stated that founder of the nation Quaid Azam Muhammad Ali Jinnah at the inauguration of State Bank of Pakistan said that I want to run an Islamic banking system in Pakistan through which we eliminate the Riba. According to the author that Pakistan is amongst first three Muslim countries where at national level they want to start interest free banking. Various steps were taken to start the interest free banking in Pakistan. First of all some amendments were made to mobilize the interest free banking like Islamic recovery laws introduced, Federal Shariat Courts were established and State Bank of Pakistan etc.

During 1980's the main steps were taken for the development of Islamic banking. But in 1991 the Federal Shariat Court made decisions that the all the transactions are un-Islamic and these things were challenged in Federal Shariat Court. But according the Federal Shariat Court they made decisions that State Bank of Pakistan should take the bold steps to promote the Islamic banking in the country. It is the responsibility of the State Bank of Pakistan to facilitate the other banks towards Islamic banking which should be purely interest free.

Three institutional steps were taken by the State Bank of Pakistan in view of the Federal Shariat Court decisions.

1. For conducting Shariah Compliant transactions the State Bank of Pakistan setting up new subsidiary banks.
2. Specific banks that are setting up by the State Bank of Pakistan will purely deal with the Islamic banking system and ensure that these banks are the custodian or safeguards to promote the interest free banking in the particular region.
3. The banks that are setting up by the State Bank of Pakistan should have the full pledged authority to conduct a purely Islamic business in the country based on the Islamic Shariah.

The steps that were taken by the State Bank of Pakistan were not on the basis of previous judgmental basis but also based on the experiences of the other Muslim countries like Bahrain, Malaysia and Saudi Arabia.

The Pakistan Bar Council was given the task of implementing the Islamic banking in the country. The Pakistan Bar Council was considered as the "Superior Force" of experts in the country regarding Islamic banking. According to Pakistan Bar Council major changes were made in Banking Companies Ordinance 1962 to promote the Mudarabah in the corporate sector. Few other changes were made in order to facilitate the interest free banking in the country. Lord Keynes in his book explained that the interest should be eliminated means there should be no interest on the capital. Nations can only progress if the interest free economy exists in the truly based Islamic principles. He also said that interest causes the unemployment in the country and increase poverty. So Islam says that the best financial system is that which earns profit and make transactions by considering Social, Moral and Ethical values in the society which has no economic problems with the conformity of Shariah Laws. (Khan and Bhatti, 2008)

3. METHODOLOGY

Our paper based on qualitative research and proposed a conceptual framework. The objective of this study is to find out the issues and challenges of Islamic banking. Reviewing and studying multiple published papers had been used to find out issues and challenges of Islamic banking in Pakistan and all over the world. The studies and published papers are based on a few strategies such as Empirical study and Review paper that used to find out issues and challenges of Islamic banking. The conclusion of the study will be from the literature review acquired from the previous studies and article.

4. DISCUSSION AND CONCLUSION

4.1 SWOT ANALYSIS

After reviewing the SWOT analysis of Islamic banking, it is confirmed that Islamic banking has highest strength in Pakistan as compared to the weaknesses. Following are the details of the SWOT analysis.

TABLE 1: SWOT ANALYSIS OF CURRENT ISLAMIC BANKING PRACTICES

<p>Strengths</p> <ul style="list-style-type: none"> ❖ Religiously satisfaction on Islamic banking ❖ More deposit due to Muslims satisfaction ❖ Decrease the poverty ❖ Equal distribution of wealth ❖ Financial transactions are based on real economic activity. 	<p>Weaknesses</p> <ul style="list-style-type: none"> ❖ Little awareness about the Islamic banking. ❖ Shortage of experts. ❖ Differences in opinions among scholars.
<p>Opportunities</p> <ul style="list-style-type: none"> ❖ Inflow of funds in Pakistan's economy. ❖ Real growth in economy. ❖ More flow of customers due to Shariah laws. ❖ Transactions between Islamic countries should be on Shariah laws. 	<p>Threats</p> <ul style="list-style-type: none"> ❖ Global implementation of conventional banking. ❖ High distribution capacity of conventional banking. ❖ Political behavior in the country.

4.2 ISLAMIC BANKING ISSUES AND CHALLENGES OF GLOBAL WORLD

Here are some issues and challenges which Islamic banking faces.

4.2.1 STANDARDIZATION

According to (Tahir, 2003) In the following respects standardization is urgently needed:

1. Islamic financing vocabulary.
2. Financial instruments and documentation and
3. Pricing formulas for Islamic financial products.

4.2.1.1 VOCABULARY OF ISLAMIC BANKING:

There is no proper method which is used for the Islamic banking. One difference found interbank in the use of terms and with the above addition, selective interpretation of Arabic terms creates the great confusion among the bank clients and among the public. For example, *initially* means of istisna is Manufacturing and delivery against the some advance payment (Tahir, 2003).

4.2.1.2 FINANCIAL INSTRUMENTS AND THEIR DOCUMENTATION:

According to Tahir, (2003) The process of documentation is much difficult for all the Islamic financial institutions as compare to other financial institution.

- ❖ Practically it concerns vary from institution to institution.
- ❖ It does not need to always same.
- ❖ Opportunities for financial innovation and development in growing situations will always avail.

So measures of regulation in financial instruments for vastly migration to Islamic financial structure in the Muslim world. This is almost a must for monitoring purposes.

4.2.2.1.3PRICING FORMULAS FOR ISLAMIC FINANCIAL PRODUCTS:

Islamic banking involves in financial operations and determines the prices of the products according to standard pricing formula under the law of Shariah (Tahir, 2003).

4.2.2. PUBLIC AWARENESS

It is another issue in Islamic banking is to develop awareness in peoples toward the following ways(Tahir, 2003):

- ❖ Public education campaigns.
- ❖ Making Islamic financing course as a part of business supervision program.
- ❖ Islamic banking system offer fully fledged degree programs.

4.2.3. TRAINING OF BANKING EMPLOYEES PROFESSIONALS IN THE USE OF ISLAMIC FINANCIAL PRODUCTS.

It is another issue so create awareness in banking experts that how to use Islamic financial products also aware the procedures and principles of Islam according to the Shariah (Tahir, 2003).

4.2.3.1 LACK OF QUALIFIED MANPOWER

There is no institute to fulfill the need of Manpower for existing and future Islamic bank. Following are some reasons.

- ❖ Lack of Consent means there is no structure and details of Islamic financial instrument and absence of reporting and accounting procedure of Islamic banking.
- ❖ Develop evaluation criteria for the process of funding requests and security provisions in agreements with clients, because financial institutions interested in safe recovery of their principal along with a return In Islamic banking industry, the nature of financial instruments will affect banking in two ways:
- ✓ Islamic bankers will be forced to adopt an outreach approach in pursuit of economic applications of funds in the marketplace.
- ✓ Development of financing, such as delivery difficulties in trade-based financing or monitoring in Musharakah financing.

4.2.4. EMPHASIS ON SHARIAH AUDIT INSTEAD OF RELIANCE ON SHARIAH SUPERVISION

According to (Tahir, 2003) In the early stage of Islamic banking, professional bankers achieve the top. But they were not familiar in the Shariah. Islamic banking model appeared as "banking under Shariah management". Shariah Boards have the authority to impose their perspective. But logistic concerns do not certificate timely examining or monitoring of all banking operations.

4.2.5. REDUCTION IN FINANCING COSTS

In the first step, financial appliances need to be developed such that the number of hands-on step at bank level is reduced to bare minimum essential by the Shariah (Tahir, 2003).

4.2.6. ESTABLISHMENT OF REAL MARKET LINKS

According to Tahir, (2003) Trading ways of financing require contact with suppliers in the situation of Murabah financing and marketing channels for disposing of merchandize produced in the name of financial institutions under Salam financing. Stand-up arrangements with suppliers and marketing agencies can significantly reduce transaction costs and financial risks for Islamic banks.

4.2.7. INSTITUTIONALIZATION OF RECOVERY OF DEBT

Timely recovery of debt is the critical for the success of Islamic banking .In general; debt is created with actualization of obligations of a client. Payment defaults as compare to some installment or the principal, can adversely affect business plans of Islamic banks, their working and, above all, settlement with different groups of depositors (Tahir, 2003).

4.2.8. RISK MANAGEMENT

According to Tahir, (2003) Other issues of Islamic banking are following.

- Traditional commercial credit risk of their customer.
- Risk related with the instruments.
- Islamic bank can overcome these risks by following ways.
- Innovative collateral arrangements, third-party guarantees and credit rating of clients by specialized institutions
- Choice of an appropriate financial instrument available in the Islamic setup
- Pricing of Islamic financial products Islamic banks are likely to have advantage in risk management.

4.2.9. ACCOUNTING.

Accounting represents by far the biggest challenge in the implementation of the Islamic financial pattern. At present, efforts at AAOIFI are leading toward standard accounting norms for Islamic banks Tahir, (2003).

4.2.10. FINANCIAL PRODUCTS YIELDING STABLE INCOME FLOWS

These are needed for seniors, widows, orphans and similar other vulnerably groups in the society that trusts on fixed income arrangements. This is a challenge that Islamic banking has to answer Tahir, (2003).

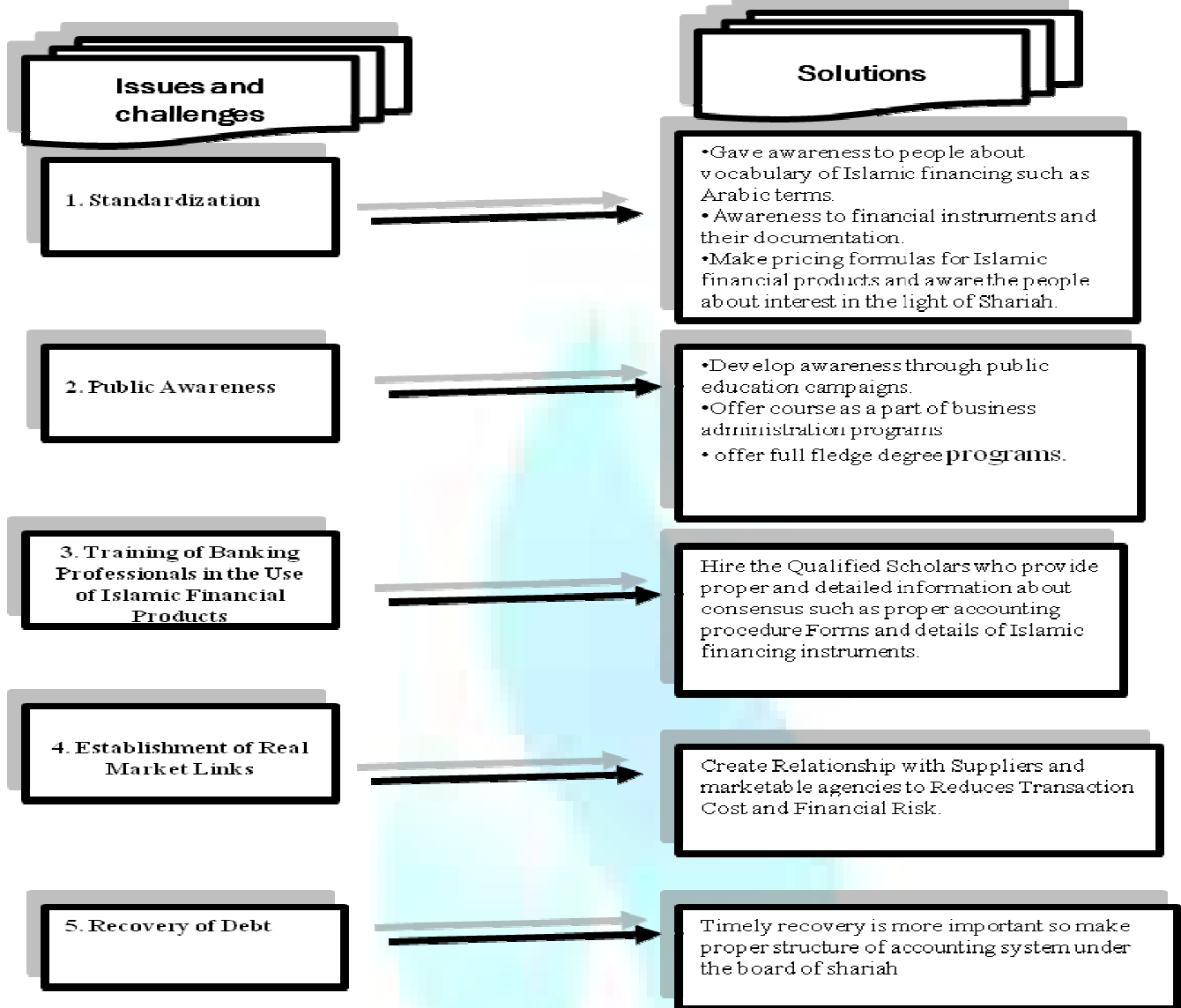
4.2.11. DIVISIBLE AND TRADABLE FINANCIAL INSTRUMENT FOR GOVERNMENT AND INDUSTRY NEEDS

According to Tahir, (2003) Government is the largest user of credit in any financial institute. The situation is risky in the Muslim countries where tax revenues are gradually increased by government expenses for different purposes. The problem of increasing public debt has made the condition poorer. This situation highlights the need for Shariah-compliant divisible and tradable financial instruments for meeting government wants. These can be used for large-scale investments in the private sector.

4.2.12. MIGRATION FROM RIBA-BASED TO RIBA-FREE BANKING

Muslim countries have accepted a dual banking system in the hope of slowly shifting to riba-free banking. This process need to be carefully handled so that the interests of those opting for Islamic investments of their funds are protected Tahir, (2003)

FIG. 4.1: CRUX OF ALL ISSUES AND CHALLENGES FACED BY ISLAMIC BANKS AND THEIR SOLUTIONS



5. CONCLUSION

Islamic banking is better than the conventional banking in terms of liquidity, business growth, and profit and operation efficiency. Growth rate of Islamic banking is still more than twice the as compared to conventional banking worldwide. Islamic banking has proved vital potential as a better substitute and competitive against conventional banking system in many countries of the world. While elimination of "Riba" or interest in all its forms is an important feature of the Islamic banking. Nowadays, Islamic banking is accepted by not only Muslim countries but also in other Non-Muslim countries.

Islamic banking services are more humanized as compared to conventional banks and offer more justice to the clients as compared to the conventional banking. When they took conventional loans when customers took conventional loans they have suffered loss during the global financial crisis. As a result, many customers have switched to Islamic banking during the crisis and this has led to the growth of the Islamic banking business. Islamic banking offers many products e.g saving and Current accounts (Wadiah and Mudarabah) which is similar to the conventional banking. But in this dividend is given to the customers instead of interest and profit sharing deposits.

Islamic banking faces many challenges and issues at different level like vocabulary, financial instruments and their documentation, pricing formulas, training of banking professionals, financing cost, real market links, recovery of debt, risk management, accounting, and migration from riba based to riba free banking and other challenges, should identify different challenges that a country faced.

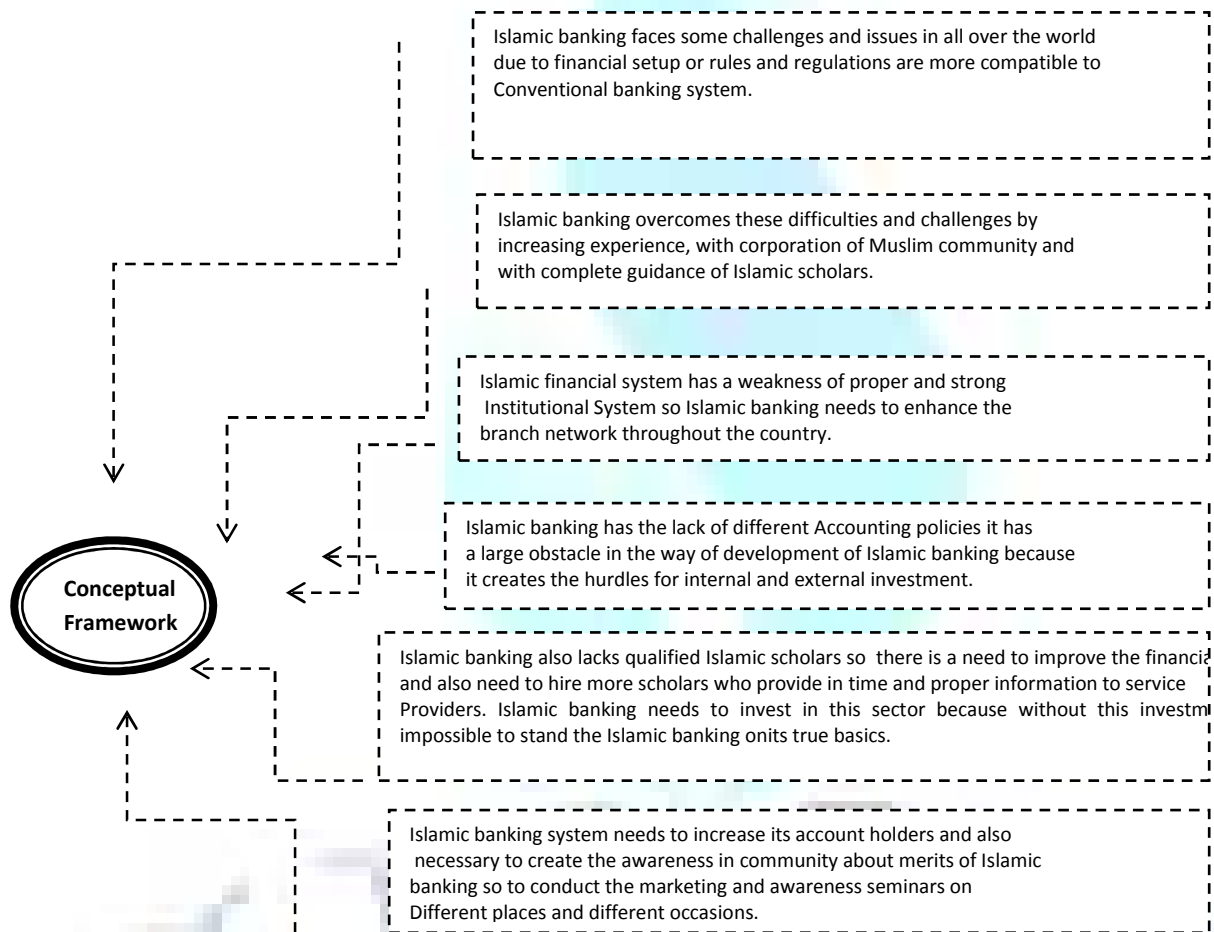
At present, Islamic banking is making progress in the financial system. Expansion of Islamic banks proved the feasibility and viability of non interest based operations with the fast process of globalization, Islamic banking is also important to create a bridged trade between countries either Islamic or non-Islamic countries. Islamic Banking may be viewed as a form of moral and ethical practice of investing, or moral lending; just interest-free loans are achievable. Its practitioners and customer need not be Muslims, but they must accept the ethical Islamic values. From the review it anticipated that Islamic banks will grow, sustain and be accepted by others in the future.

6. RECOMMENDATIONS

1. Research provides a clear understanding of financing modes of Islamic banking, shortcoming of interest on economy and settlement of investment through Islamic financial system.
2. The area of Islamic banking growth and improvement can be directly affected by Government participation and involvement in providing necessary planning for legislation and legal framework. According to my opinion the research in this sector will be very useful for development of Islamic banking as well as to enhance the Country economy.
3. Islamic banking having the lack of experienced scholars and skilled workers so I suggest that Islamic banking institution overcomes this issue through research it provides the indicators of growth of Islamic banking in all over the world significantly evaluation of challenges of Islamic banking in foreign countries.
4. In research it is also found that the best option is qualitative approach if we want to check the views of the community and banking authorities in detail.

5. In research it is also found that through Research critical analyzes the sector of Training and Development because it will really helpful to promote Islamic banking in all over the world.
6. These areas of research can be comprehensive on geographically basis so the analysis can be more helpful if it is extended up to all over the world.
7. Islamic Banking institutions (IBIs) significant need to address small medium enterprises (SMEs) and divert their financing to this sector so that employment generation takes place, industrial output increases and poverty is tackled and alleviated in the short run and finally eliminated in the long-run.
8. IBIs can exploit untapped market having the need of shelter policy so it may provide useful service of diverting their funds to this area and thus help meet one the basic needs of the common man. Islamic banking faces some challenges and issues in all over the world due to financial setup or rules and regulations are more compatible to conventional banking system.
9. Islamic banking overcomes these difficulties and challenges by increasing experience, with corporation of Muslim community and with complete guidance of Islamic scholars.
10. Islamic financial system has a weakness of proper and strong institutional system so Islamic banking needs to enhance the branch network throughout the country.
11. Islamic banking has the lack of different Accounting policies it has a large obstacle in the way of development of Islamic banking because it creates the hurdles for internal and external investment.
12. Islamic banking has also the lack of qualified Islamic scholars so it has a need to improve the financial system and also need to hire more scholars who provide in time and proper information to service providers. Islamic banking needs to invest in this sector because without this investment it is impossible to stand the Islamic banking on its true basics.
13. Islamic banking system needs to increase its account holders and also necessary to create the awareness in community about merits of Islamic banking so to conduct the marketing and awareness seminars on different places and different occasion.

FIG. 6: CONCEPTUAL FRAMEWORK FOR IMPROVING EFFICIENCY OF ISLAMIC BANKING



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THE IMPACTS OF PRODUCTIVE MARKETING COMMUNICATION ON EMERGING MARKET**LOO LAE SYEE****STUDENT****CENTER OF SOTHERN NEW HAMPSHIRE UNIVERSITY PROGRAMS
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HELP COLLEGE OF ARTS AND TECHNOLOGY
KUALA LUMPUR****ABSTRACT**

In this competitive market, emerging market has been popular among the international franchiser due to its high market flexibility and high potential of growth. This is an advantage for major companies to maximize their profitability and increase their market shares. Other than that, it also able to improve the emerging countries condition to be wealthier. There are several issues such as the culture value in the emerging market, that the investors and franchisor should aware of, by ensure the countries effects will benefits the investors and franchisors in applying their marketing communication strategies. Applying the accurate productive marketing communication strategies may help the investor and franchisor to have a lead in the market shares and benefits them in all the profitable ways. Emerging market is a place that provides profitable opportunities for investors and franchisors.

KEYWORDS

Emerging country, emerging market, market communication, productive strategy.

1. INTRODUCTION

According to Millward Brown, in 2006, there are less brands that from emerging countries. The emerging countries brands that manage to lay on the top 100 will be specifically from China and therefore there are only two brands from emerging countries. Furthermore, in 2011, there were 19 from the BRIC (Brazil, Russia, India and China) countries and other emerging countries. Emerging market brands currently represent nearly one-fifth of the top 100 global brands (as cited Mobius, 2012). Emerging economies are expected to grow two to three times faster than a developed country because of their low development that needed new needs or wants in the markets and this presents opportunities for new businesses to enter. In emerging countries, the rising of household incomes enables them to have more purchasing power such as Indonesia and the Philippines are examples of countries with strong domestic economies and growing consumer classes (Gibley, 2013). Therefore, marketing communications plays an important role in this situation because it can help international franchisor or new investors to connect with consumers in the emerging market. Consumers tend to act differently in their purchasing behavior with the influence of marketing communication. Marketing communication such as sponsorship, sales promotion, internet and infomercials are productive in emerging market. Marketing communication is one of the promotion tools that can help to enhance a company image. Other than that, international franchisor or investor needed marketing communication to help them to build up awareness and attract the target consumers in emerging markets. This paper will illustrate the impacts of productive marketing communication on emerging markets.

2. MARKETING COMMUNICATION

Marketing communications is defined as a set of collective term in various types of planned messages to build a brand-advertising, public relations, sales promotion, direct marketing, personal selling, packaging, infomercials, internet, events and sponsorship, product placement and customer service included (Ouwensloot & Duncan, 2008). In short, marketing communications is the voice of the company and can also be known as representative to its brands. It is an essential activity in the marketing department for company as it coordinates various activities to have a complete task performed in time and effectively. Marketers nowadays are using marketing communications mix in their business to reach out to more potential buyers as well capture the existing customers heart in continuing purchasing their products. Marketing communication mix elements such as sales promotion offers information and consultation which are important components to add value to a product or services (Kola & Akinyele, 2010). Advertising, brochures, sales promotion and personal selling are from the traditional marketing communication in which are labeled as planned marketing communication as the company can control the content of the message (Finne & Strandvik, 2012). On top of that, choosing the right target audience is important as it gives huge impact to the sales performance for the brands and products. Therefore, marketing communication plays a significant role in arousing the consumer's attention (Mahyari, 2010).

3. ADVANTAGE OF MARKETING COMMUNICATION

Marketing is a process of manipulating the marketing mix to closer the bond between a producer and consumer in several ways (McCole, 2004). Thus, communication is the process of an interaction that people exchange or shares to achieve mutual understanding in a common set of symbols (Mcdaniel, Lamb, & Hair, 2012). Furthermore, marketing strategies are closely related with communication process because in all the strategies, the main goals are to inform, persuade, or reminding their target audience. This both elements combines bring a huge advantage for an organization. According to Lagrosen (2005) the authors of "Effects of the internet on the marketing communication of service companies", Journal of Services and Marketing, marketing communication process are having a profound impact on an organization. It help an organization to provide innovative ways to targeting, focusing on benefits such as product strategy emphasizing authenticity and promotion based on well-managed websites and it also can help to create higher awareness on international competition (Aldridge, Forcht, & Pierson, 1997).

(A) SPONSORSHIP

Sponsorship is a part of promotion method and it can be defined as a support of an event, activity or even an organization by providing money or other resources regarding to the sponsor event (Skinner & Rukavina, 2002). The key to have a successful sponsorship programs is to have and match the correct products or services itself with people in the society. Sponsorship has been an increasingly popular medium in corporation communication especially in among of companies that are operating for consumer markets (Olkkonen, Tikkanen, & Alajoutsijarvi, 2000). According to Richard (2003), sponsorship may be the tool to create image of organizations in emerging markets. There is an increase in sponsorships, as sales and merchandising opportunities are being used in as well provides sponsors with highly effective in the sales promotion vehicle (Meenaghan, 1991). There are many forms of sponsorship in marketing such as sport sponsorship, cultural sponsorship and media sponsorship to capture any potential customers in the market.

For sport sponsorship, it is an effective way to associate a brand with the values presented by a particular sport. As such in Malaysia, Spritzer Company uses sponsorship method to the McDonalds marathon event in encouraging people to be healthy while consuming its mineral water. Besides, for cultural sponsorship, Yayasan Sime Darby Malaysia sponsored Yao Lee "The Legendary Rose Musical" in showing support of preserving and loving the arts and culture that existed in many years ago. Meanwhile for media sponsorship, Astro Malaysia does involved in sponsoring to Malaysian football league which is known as Persatuan Bola Sepak Malaysia (FAM) to created more viewers to subscribe sports channel and as well enjoying the matches. Usually, sponsorship is presented as one element in process of sending a set of stimuli to various types of target groups to evoke a desired set of response (Olkkonen et al., 2000).

(B) SALES PROMOTION

Sales promotions define as promotional methods using in a short-term techniques to persuade the target market to respond. The main purpose is to create public acceptance or stimulate greater purchase of a products or services through contests, discounts, exhibitions, games, giveaways, special offers, and similar activities (Kotler, 2013). There are two strategies in sales promotions which are push and pull strategies (Adebisi, 2006).

Push promotional strategy purpose is to create customer demand for the products or services through promotion (Banda, 2007). Price-oriented promotions such as rebates, coupons, and price discounts are widely used to gain more profits. Nowadays, coupons can also be redeems through online. It is an ease for consumer as they just need to pay the amount by credit cards then the goods will be delivery to consumer's door step or consumers can print the coupon or show the QR code of the coupon to pick the goods at the stated outlet. As technology is getting advance mobile phone can also use as a sales promotion tools. When consumers receive a coupon message, they just need to show it to the salesperson for redemption or consumer can also insert the code that they receive from the message into the link provided for redemption (Mellens, Dekimpe, & Steenkamp, 1996).

Pull promotional strategy means customer seeking out the products or services from advertising through printed media such as brochure or social media sites such as YouTube and Facebooks (Adebisi, 2006). Pull strategy requires high investment to build up customers' demands compare to push strategies. By organizing a campaign can also increase customer's excitement towards the products and services (Banda, 2007). Non-price promotions such as sweepstakes or loyalty card to redeem gift by collecting point every time they purchase to increase the excitement of the brands. Sampling can be easily seen in supermarket especially in the weekend. Consumers could get the first trial for free such as can food or carbonated drink, after their first try they can decide whether to purchase or not (Mellens et al., 1996).

Sales promotions are difficult to standardize because all countries have its economic and cultural. Multinational firms should observe the way customers respond to sales promotions as it is different between countries or states.

(C) INTERNET

Nowadays, technology has been improving rapidly and the world is gradually moving to the gadget world. One of the technologies that have been makes a huge difference in everyone's life will be internet. Internet did have a huge impact on all kinds of business activities including the marketing mix (Lagrosen, 2005). According to Zinkhan (2002), the network boundaries provide new opportunities internally and externally for an organization. The impact on internet is enormous and believed that it will bring a tremendous impact to an individual and to the business world. Furthermore, internet can bring a huge advantage to the business world, a web is a mass medium nowadays and by using it, it can help an organization to engage with their consumers and suppliers (Mcdaniel, Lamb, & Hair, 2012). Other than that, internet can brings a huge convenience to an individual and to a corporate because it manage to handles the transport of data and internet protocols performs routing and addressing (Watson et al., 2000). This gadget has become crucial for the corporate world that conducted their business online because they are enjoying a lot of advantage such as low cost production and it also secure the transmission of credit card number, provides encryption and enables electronic fund transfers (Zinkhan, 2002).

Implementing the internet strategy in advertising can lead to increase the consumer traffic too. Consumers nowadays are active in the internet and social network, all of the organization can try to manage Web 2.0 tools such as blogs, podcasting and social networks to help them create a higher awareness and to increase their consumers traffic (Sigala, 2009). Nowadays, a huge percentage of company are started to include matrix bar code (QR code) in their brochures or poster. This can convenience the consumers that owned a smart phone because they can get the most update information or promotion by just scanned the code. So that, the consumers does not need to check it step by steps (Horowitz, 2010).

(D) INFOMERCIAL

Infomercial is a television program that can be described as an extended advertisement that often include a demonstration or discussion (Lawrence, 2013) Psychological pressure is used by marketers to include testimonials from satisfied users, celebrity and attractive presenters or well known people in creating appeals to people's needs (Hurst, 2009). Infomercial can be time-consuming as finding the right and suitable testimonials are not an easy task as it dependence in many factors such as perceptions of the testimonials and the how effective it is to be considerate upon it. Infomercial is known and represent as a form of advertising as considerable to be a commercial significance (Agee & Martin, 2001). Usually, infomercial was used to break up the half-hour show to avoid being too lengthy. It is interesting as it also provides a call to action at the end of each segment in every few minutes to create impulses and be as reminder to the viewer to buy their product. In terms of pre-purchases in thinking part, the more buyers think about the content of its infomercial they have seen, the higher chances for buyers to make a decision to purchase its products (Agee & Martin, 2001).

For example there is one of the successful infomercials that managed to do well, which is Snuggie. Snuggie has earned approximately \$400 million in sales for successfully using a funny infomercials concept to target viewers and it is known as blanket with sleeves. However, infomercials need to be avoided from any potential deceptive or misleading messages as it can create anger and disappointment to the audience. A research shows that it is important to understand infomercial well before sending out in preventing of the broadcasting to have any misleading messages to the viewer (Lawrence, 2013). Hence, it is important that infomercial transmitted the right message to the audience through music, color, images and associates them with emotional attributes.

4. PRODUCTIVE MARKETING COMMUNICATION

Applying a marketing communication strategy productively may create first mover advantage for an organization (Shankar, Carpenter, & Farley, 2012). In addition, each element that fall in marketing communication has their own benefits that provide huge opportunities to the companies. Furthermore, marketing communications has been proven as a productive tool in:

(A) SPONSORSHIP

Sponsorship provides opportunities to create and enhance products or services credibility and the image of a company. Sponsorship events are more likely to shape customers purchasing attitudes and able to create a positive image of a company. As sponsorship will have high exposure to the public in both electronic and printed media. This makes them to have the competitive advantage among its competitors. For example, Coca Cola, occasionally act as a sponsorship in different types of event which can generate a positive influence toward consumers perceptions of Coca Cola (Amoako, Dartey-Baah, Dzugbenuku, & Junior, 2012). Its logo that include in printed media, websites and tickets will also create consumers brand awareness toward sponsorship companies.

(B) SALES PROMOTION

Consumers will recognize a brand through marketing communication. When they have the impulses to buy the products or services, sales promotion gives them an extra intention to take action whereas advertising focuses on educates customers about qualities of the product (Blattberg & Neslin, 1990) A survey has been conducted and it shown that consumer response to sales promotions strategy. Researchers have found promotions to be associated with brand switching. Sales promotion strategy seems to be successful to household for brand switching as they have lower levels of brand loyalty (Mellens et al., 1996).

For example Nestle Malaysia has held campaigns with the aimed of creating customers awareness about the important of maintaining a good cholesterol level for healthy heart. It is a challenge for public to lower their blood cholesterol levels within 30 days with Nestle Omega Plus (Nahumudeen, 2012). Although it is a high expenditure to hire those professionals to provide customers a free checkup and consults them by purchasing Omega Plus but it built up the brand recognition and when there is a combination of push and pull strategies, which having campaign at the same time providing sample or promotional price, it could attract customers for brand switching.

(C) INTERNET

Internet is a place for customers to obtain useful informative of a goods and services when they are considering to purchase it. It is part of the marketing communications to communicate with generation Y, as emerging country have younger working-age populations. This younger generation could help emerging countries to increase economic growth such as Mexico and Brazil. These two countries have high numbers of young labor forces (Ernst & Young, 2011). Other than that, through internet, a business can have its own websites. Therefore, Internet is a great place for an organization to communicate with consumers through live chat especially when consumers want to enquiry anything of the goods or services of a business. It could provide a discussion forum for the existing users to voice up their opinions of the goods and services. When negative comments is more than positive comment, then the managers of the company have to take action to increase customer satisfaction but when positive comments is more than negative comments, it will help to boost the additional users of trust towards the goods and services of a business. Thus, this may affected the customers to make their first try of the goods. Forum itself is not enough for existing customer to create brand loyalty so a business has to always update their latest activities through Internet or social media. By using the current data, companies can email the latest activities to them which are also a great way to connect with customers frequently (Jobson, 2013).

(D) INFOMERCIAL

It is an essential for a new business to advertise by marketing communication when it initially steps into an emerging market because emerging market consumers are status conscious consumers. They tend to prefer brands that they think are valuable and perceive as leaders. Consumers of emerging markets live close to friends and family and they often view local television channels, such as China which has about 3,000 mostly local television stations and they often read local newspapers rather than national ones (Atsmon, Kuentz, & Seong, 2012). Infomercials has been view as an advertisement to generate the sales of retailing stores average retail sales increasing anywhere from two to five times the sales generated directly over television. Infomercials directly educate consumers the features and usage of its goods. It makes it different and better than its competitors. Facts and figures could make consumers feel the guarantee of the goods especially hearing positive feedback from existing customers. It gives the perception to consumers that they are the best or the only one in market (Shaina, 2011).

Explaining the usage and features of the goods alone is not sufficient. Companies also need to connect with these consumers with tagline that delivers a simple and clear message according to local market favorites and concerns so that it will be more likely to be trusted such as when Acer's change its message to "great value for money" to emphasize reliability rather than simplicity and productivity boosted its market share less than two years. It has also built a trusted image, by gaining more consumers to increase the sales of their products (Atsmon et al., 2012).

5. EMERGING MARKET

Emerging markets are defined as low and middle-income countries that most people have lower standards of living with the access to fewer goods and services compare to the people who live in high-income countries (Haley & Haley, 2006). Furthermore, emerging markets are known as some of the fastest growing economies in the market world and these countries represents on undergoing to substantial economic transformations (Baena, 2012). Emerging market can be classified as the countries that have not considered fully developed yet. It is best to define emerging markets in a broader term to those countries that have not yet to reach a mature stage of development whereby there is a significant potential for economic or political instability given with these considerations (Pearson, 2011). The rise of emerging markets provides new opportunities for established firms to seek new markets, access to specialist skills and cut costs through the relocation of activities (Enderwick, 2009). The factor in terms of degree of openness in the economy and there is a requirement of a minimum level of Gross Domestic Product (GDP) to be taken into the consideration. For example, lately, United Arab Emirates (UAE) and Qatar have been moved to be as emerging markets by global index complier MSCI (HSBC). MSCI is known as Morgan Stanley Capital Investment and acts as a benchmark by having index for the total international stock market.

Other than that, BRIC countries are refers to a selection of group in four emerging countries that consists of Brazil, Russia, India and China. For the last twenty years, China and India have been progressing consistently in developing their own countries while Brazil was still on the way to improve even there was a slow growth in their country due to the poor growth, rising inflation and street protests (Schmitz, 2006). BRIC is struggling as BRIC government bonds lost an average of 0.6 percent and their currencies also fell to 4.1 percent against dollar money (Farzad, 2013). Despite that, Russia was label as the world largest energy producer with 75 percent of exports are oil and natural gas, Russia` economy has not yet gone to achieve much diversification in the growth of international competitiveness (Azzarello & Putnam, 2012). Despite of undergoing some growth recovery, major Chinese companies have built considerable scale by focusing on their home market and to developed economies such as China's Huawei. It has become the world's second largest telecommunications company before US and European markets established (Chan, 2013). In addition, India has help the rupee from a low record in liquidity by raising two interest rates which escalates a tightening in liquidity across most of the biggest emerging markets (Goyal & Krishnan, 2013). India strives to have a consistent growth-inflation dynamics and macroeconomic stability and they have monitoring the market closely (Agrawal, 2013).

6. ADVANTAGE OF EMERGING MARKETING

There are great potential for growth in emerging market because there are still major development occurring. According to April 2012 International Monetary Fund estimates, emerging economies are expected to grow two to three times faster than a developed country (Deloitte, 2012). Emerging markets usually come with new needs or wants which presents opportunities for new businesses to enter. Therefore, in emerging market, there will be more opportunities for small companies looking to operate new business too. Meanwhile, companies doing business in emerging markets have first-mover advantages. If a company able to set up their brand in an emerging market and build early success, it brands can be recognized. Successful first mover able to build local partnerships and has an advantage over competitors that come along later (Kokemuller, 2013).

The other benefits of emerging marketing are diversification of an organization portfolio. The upper-class population in emerging market is increasing. These consumers are occasionally interested in purchasing luxury goods which not available in the region (Pendleton, 2013). Thus, by building up a brand by using marketing communication in emerging markets can perform differently than developed markets (Gibley, 2012). Besides, if a business only operates in one place, it will be hard to survive when the local economy is slopping down. However, if a business can operate in different countries, it will have the ability to overcome

the unpredictable reason that affect the economy. When one of branches profits is negative, the other branches of the company may build up for those losses. Further, a business may benefit from the fluctuations of the value due to different currencies (Pendleton, 2013).

For example, Nissan, one of Japan's world famous automobiles, has re-launched its iconic Datsun brand and has expanded its markets into high-population emerging economies. India is the world's biggest market for small cars; thence Nissan is expecting the new Datsun could expand its business in India. The populations in India are at 1.2 billion, and car owners represent only 15 out of every 1,000 people. Nissan have seen the greatest potential of its business to grow in India. Nissan chairman and chief executive Carlos Ghosn also said that the mini-car would be sold in emerging economies like Russia, South Africa and Indonesia in the next couple of years. He was sure that the Datsun would give Nissan a "meaningful presence in high-growth markets" (Hofilena, 2013).

7. PRODUCTIVE MARKETING COMMUNICATION IN EMERGING MARKET

Emerging market is the most potential and progressing market for international franchiser and new investors (Alon, 2006). Due to the developing country such as United States of America, their market is gradually turning into saturated and the competition in the market is fierce. According to Alon and Welsh (2001), cited in "Executive insight: evaluating the market size for service franchising in emerging markets", International Journal of Emerging Markets that in the coming next decade, 75% of the expected growth in world trade will be coming from emerging markets (Alon, 2006). Furthermore, due to its possibilities of high growth in emerging market has attracts a huge of international franchiser and investors to enter. To fully utilize the potential of growth in the emerging market, the franchiser should apply productive marketing communication strategy in their marketing plans. By applying the promotion tools of internet, infomercials, sponsorship and sales promotion in their marketing plan will enhance the chances of their success in the markets. As mention in the review that emerging country consumers are more status conscious consumers, they tend to prefer brands that they think are valuable and they will perceive it as the brand leaders. This proven that effective or productive marketing communication plays an important role in this situation because a productive marketing communication can provides the franchiser to have competitive advantage and can help them to lead in the markets. It can help them to ensure their path in the market. Other than that, it also helps to improve the company image, develops a dialogue and helps to nurtures their relationship with customers. Furthermore, all of the corporate main objectives are to build up their relationship with consumers and achieve long term profits and customer retention (Chong, Shafaghi, Woollaston, & Lui, 2010). In facts, if an organization can manage to ensure their promotion tools has been fully utilize such as applying the internet strategy; succeed to build up consumer relationship and provide convenience, sales promotion able to create high awareness and attract consumers to buy more, infomercial able to provide brand recognition and brand image in consumer minds and lastly sponsorship can build up brand image and company reputation then the company is succeeding in their business. If all of this elements of marketing communication has been fully utilized then the success of the organization in the emerging market is guarantee. In addition, applying trivial attributes in the marketing communication can help to obtain sustainable competitive advantage in the emerging markets too (Sun, 2010).

8. DISCUSSION

As observed by Papadopoulos, (1993); Verlegh and Steenkamp, (1999) cited in "Asymmetric effects of brand origin confusion", Journal of International Marketing Review stated that high probability that consumers in least developed countries or region are more prefer to buy foreign products that are from high developed countries such as United States. This is because they tend to believe the products or brand in this specific countries are represent the highest quality and the most fashionable styles. Furthermore, China has been progressing rapidly in the market nowadays and their country consumers tend to believe that foreign brands from developed countries are representing high status, cosmopolitanism and modernity (Zhuang, Wang, Zhou, & Zhou, 2008). High developed countries company can market their products or brand in the emerging country, this tend to bring high profits for the company because the consumers in emerging countries are more prefer in foreign products. By, injecting the accurate productive marketing communication strategy, the companies might able to attract the consumers of the emerging countries. China and India have a high population rate and investors tend to be more interest in this two emerging countries because it will be the most accurate places to expand their business (Alon, 2006). Marketing communication plays a crucial role in this expansion because it might be the tools to lead the investor and franchisor to be success. Productive marketing communication helps to enhance the brand image in consumers mind and help an organization to build up their reputation (Horowitz, 2010). Greater success always comes from the innovators that provide innovation in their products and services. If the inventors and franchisor able to create the accurate innovation from the helps of marketing communication in the emerging market, they might gain market leads and competitive advantage in this situation (Vilaseca-Requena, Torrent-Sellens, & Jimenez-Zarco, 2007).

9. CONCLUSION

Marketing communication has been a promotion tools to build up consumer awareness, increase corporate reputation, maximize profits and build brand image. It can lead a company to success if the strategy has been applied wisely, but at the same time it will bring failures if the company misused the strategy. In other hand, marketing communication can help to add value to the company. Injecting marketing communication elements to develop a foreign company in the emerging markets may increase their internal and external opportunities. This may bring a positive growth in the company. Furthermore, a consistent growth of the company may increase the economic growth of the emerging countries too. This may create a win-win situation for the company and the emerging countries itself.

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HP SUSTAINABILITY AS COMPETITIVE ADVANTAGE

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ABSTRACT

Sustainability means long term commitment towards society and environment. This study is about HP commitment towards sustainability which provides HP an opportunity to lead in market and gives HP a competitive advantage. HP translates its dreams regarding credentials into some successful ventures and tries to improve the functions of its existing business. For the purpose of building sustainability a global sustainable program is developed by HP which is based upon some rigorous standards of both profitability and accountability. In this paper researcher discuss both standards. HP strategy related to sustainability and CSR gives HP an opportunity to work with many NGO'S , government agencies and other industries which is very helpful for HP to make clear policies for all which includes all things starting from using such material in products which is environmental friendly to treat employees with respect and dignity. HP makes its culture to do better for their workers and company. It becomes successful in making such type of relationship with suppliers that they do not want to leave HP. So Supplier and employees turnover at HP is very low as compare to other organization. HP main emphasis is on expanding by starting new business and with the main intention of retaining its existing business. Now sustainability strategy of HP is very helpful to increase profitability. This is possible by various efforts; - firstly at HP efforts are made to make necessary adjustments in shipping and logistics cost, reduce the requirement of virgin material. Two things which provide HP competitive advantage is first mover advantage and second is relationship with suppliers, employees and partners. So through this study researcher discuss all points which provide HP competitive advantage as compare to others.

KEYWORDS

Sustainability, Competitive advantage, Emission, profitability, longevity, consistency.

1.0 INTRODUCTION

In this paper the main task is to know about the advantages that HP got from adopting the sustainability strategy, two things which run simultaneously for sustainability strategy are :- first is efficiency and second is profitability. Various things which give HP a competitive advantage are as follows:-first one is deep respect for business values, second is Hp combines technology, strategies of business and environment in order to decrease carbon footprints for the purpose of providing solution to its customers and helps to protect environment which ultimately give HP a competitive advantage. There is a team working in Hp known as Social and Environmental responsibility team it performs the task of managing relationship with NGO's. HP never promotes its business through NGO's (Biedenweg & Oxarart, 2013). But after sometime its team realizes that issues like climate change as well as global supply responsibility requires awareness i.e. there is a need to make people aware about these issues which is also gives HP a competitive edge. In order to maintain sustainability HP focuses on three areas which are as follows (Newport & Lindner, 2003): First one is to raise standards related to social and environmental nature in the supply chain. Second is to improve the energy efficiency related to its operations as well as products for the purpose of reducing level of carbon emissions. Third is to promote reuse of product and concept of recycling. This shows the commitment of HP to make balance between values as well as goals of business which is a good sign for business and having positive impact on society and environment. In order to maintain sustainability as its gives HP competitive advantage there is a need to organize team of sustainability which includes working on following areas which are as follows: First is ethics and compliance, second is responsibility towards social and environment which ultimately creates sustainability. Third is a practice of labour and rights of human beings. Fourth is privacy and last is social investment.

1.1 POINTS WHICH SHOWS SUSTAINABILITY AS COMPETITIVE ADVANTAGE FOR HP

In order to get competitive advantage there is a need to apply high performance business model which includes five different areas which are as follows:-

a. Growth: - which is expressed in terms of revenue. For the purpose of growth HP is focusing on its sustainability strategy. HP main emphasis is on expanding by starting new business and with the main intention of retaining its existing business. For the purpose of increasing its revenue HP tries to expand its distribution operation in Europe, for this take the help of its sustainable strategy. As HP make only energy efficient products so its charges premium price from its customers, if we take the example of energy efficient PC's and Notebooks, it charges approximately \$10 to \$20 as compared to products who are non energy star rated which is again a sign of getting competitive advantage as compare to its competitors. Sustainability strategy of HP is also very essential to get new distribution channel in Europe. In order to enter into new market HP came into solar technology license agreement with Xtreme Energetics which is a developer for solar energy system for the purpose of developing transparent technology related to transistors. In order to develop transparent transistor technology HP and Oregon State University came into joint venture and these transistors include a thin film having low cost made from Zinc and tin. Material used for these transistors does not create any type of environmental issue, better stability of chemical and manufacturing is also very easy. HP motivated other organization to make energy efficient products. Through license agreement licensing fees and royalty will become the main source of revenue for HP for lifelong.

b. Profitability: - It shows relationship between return and cost of capital invested. Now sustainability strategy of HP is very helpful to increase profitability. This is possible by various efforts; - firstly at HP efforts are made to make necessary adjustments in shipping and logistics cost, reduce the requirement of virgin material. This point can be explained. For the purpose of reducing cost of logistics wooden shipping pallet is replaced by environmentally friendlier plastic pallets which save around 700 tons of CO2 emission per year. In order to reduce freight cost air freight is replaced by ocean freight, road by rail freight. The main reason behind this replacement is transportations by ocean are less expensive as compare to transportation by air and it is very helpful in order to reduce CO2 emission. Let us take an example for this each cargo consists of notebook PC's sent through ocean saves GHG emissions which is equivalent around driving car to 1,00,000 km. But it is both time consuming and longer time in inventory during time of shipping. For the purpose of reducing impact of Hp products on environment main task performed by HP is to know about the material with the help of which this product is made and information is available from suppliers and both of them should work together in order to reduce the impact of HP products on environment. Second step for the purpose of enhancing profitability is to make their data centers efficient. Main task of HP for this is to reduce no of datacenters. For this HP just completed a three year program, result of this is just superb, through this 85 data centers are now consolidated in six high efficiency data centres in US. This results in to saving of 350 million kilowatt hour's electricity as well as result in reducing cost of energy around \$30 million. For this there is a verdict of some top personnel, if you waste energy then you will not fire but is site shut down sue to shortage of power then you will get fire, now another step taken by HP to enhance profitability is to reduce energy consume in cooling and cost incurred in this. For this dynamic smart cooling system is designed in order to reduce cost and energy. In order to reduce energy and cost to larger extent a new centre will be established through this it is possible to save around 7500 MWh electricity annually. Now main motive of HP is to cut the cost of energy of their data centres (Palma & Viacava, 2011). Cost of energy is such a big amount now a days that companies show this as a separate cost and charged from IT department because IT Dept is responsible for occurrence of this cost but in past electricity cost is allocate among all centres. In order to reduce energy HP look at various issues such as how much energy is consumed in extracting material, in manufacturing. Second point is to look after life cycle; through this it is possible to compute the actual cost. On the basis of this HP build such type of data centres which provides low cost and lower energy products to its customers with better quality of services. In this way all these steps are taken by HP in order to gain competitive advantage.

Another step taken by HP is to reduce carbon footprints by substituting this with telepresence (videoconferencing), for this Halo studio is built by HP, the main benefit of Halo studio is that it brings several attendees from all over the world together in such type of environment that they feel that they are meeting in the same room. It includes various features which is very helpful in saving of energy is its displays and lights turns off automatically when these are not in use (Wolfson & Mark, 2013). Currently HP has 34 Halo studios located in 14 countries all over the world which results into saving of at least 22000 tons of CO2 emissions per year which cost around \$40 per ton. Through this it is also possible to reduce the travel cost. To promote this concept HP is working with two major hotels for the purpose of creating virtual rooms which are used just like conference room.

c. Consistency: - Measured in terms of no of years. For the purpose of assessing and revising the strategy of company, a sustainable and corporate social responsibility team is made by HP. HP also adopted various processes in order to assess and check its strategy regularly which provides HP a long term advantage (Stubbs & Schapper, 2011). One of the important thing for HP in order to main the position of market leader is to continuously invest in research and development so that such products came into existence that someone never think of making such products.

1. Positioning for future: - it is represented by portion of market share covered in future there is no need to explain this with current earnings of the organization. With the help of sustainability strategy it is possible for HP to make leader in market. Two things which provide HP competitive advantage is first mover advantage and second is relationship with suppliers, employees and partners. According to a report by WWF which shows IT industries increases global warming by 2%. But HP point of view is very unique it believes that IT industry abilities are very unique and it plays an important role in reducing carbon emissions. It believes that it should be considered as an opportunity for IT to play an important role in making energy efficient product, uses that processes which results in low carbon emissions. So by looking at this concept it will be said to be low carbon economy opportunity for HP. It is also possible to reduce consumption of energy and carbon emissions by changing behavior of people and making adjustment in their pattern of consumption. There are two sources of energy consumption at HP first is in performing internal operations and second energy is consumed in making products of HP. There is target fixed by HP to reduce energy consumption by around 25% in which 16% will come from operational side. So energy consumption is reduced by reducing their consumption in both operational sides as well as by product side (Wolfson & Mark, 2013).

2. Become leader in low carbon economy:- HP wants to become leader in low carbon economy and it is possible through dematerialization of datacenters for the purpose of eliminating the need for production of heat, in order to improve the processes speed as well as for the purpose of reducing the cost of band width intensive copper cabling is used by HP. So all these steps are performed by Hp in order to make itself a market leader, HP strategy related to sustainability and CSR gives HP an opportunity to work with many NGO'S, government agencies as well as other industries which is very helpful for HP to make clear policies for all which includes all things starting from using such material in products which is environmental friendly to treat employees with respect and dignity. There is vision set by HP and in order to accomplish it ten years is estimated by HP that if you touch any product of HP then one thing that automatically comes in your mind is that it is made in a socially as well as environmentally responsible manner. HP makes it mandatory for all of its suppliers is to meet the requirements of EICC, but some of them did not agree, then there is a verdict by HP CEO, it is due to law and you should meet these requirements and if you want to work with HP in future also then fulfill all these requirements as this is the main part of our contract. It is not an easy task to become the supplier of HP but once you get an opportunity to become supplier of HPO then it is one of the very difficult tasks to terminate the contract with HP. There is an Advisory Council of HP known as HP Stakeholder Advisory Council which is very helpful to maintain the current sustainability strategy related to HP. Networks of NGO'S called Electronics Network started a campaign in 2007 known as "High Tech- No rights", in this rating is giving to top five IT companies and HP gets first position in this which gives HP as a competitive edge and it is possible only by the sustainability strategy adopted by HP. Now HP pavilion came into existence. IN 2008 Wal-Mart named Hp as the winner of its Home Entertainment Design Challenge as its got success in making such computers which are energy efficient and having less impact on the environment. Now A new radically redesigned product named HP pavilion dv6929 also termed as Entertainment Notebook is launched by HP for the purpose of targeting premium segment. It is an innovative product made by innovative design which reduces the cost of packaging by 97%, save fuel and decrease carbon emission. For the purpose of packaging Conventional protective shipping materials as well as boxes are replaced by HP protect MESSENGER Bag which is made from hundred percent recycled materials. This lead to reduce in content and size of packaging, Due to the environmental appeal of its products HP makes Notebook as an Energy Star Product which uses 100% of recycled materials and it is termed as HP greenest Consumer computer (Wright, 2003)

d. Longevity: - it is expressed in terms of continuation of creation of values over industry eras and during life cycle of an organization. HP always shows its competency related to make long term plans as well as set vision for long term; it also designs additional product and innovation in marketing strategy for the purpose of achieving long term goal of the company. It makes such type of strategy which plays an essential role in making HP a market leader. It is possible by performing various actions:-

a) To achieve long term gains by investing in suppliers and partnerships

HP makes its culture to do better for their workers and company. It becomes successful in making such type of relationship with suppliers that they do not want to leave HP. So Supplier and employees turnover at HP is very low as compare to other organization. For the purpose of inspecting the work regularly 70 auditors are appointed who performs the tasks of checking the accounts of suppliers regularly.

b) Staying ahead of sustainability curve

For the purpose of maintain the position of market leader HP is using threefold approach which becomes a part of strategy of sustainability, first to ensure whether suppliers works on the basis of code of conduct or not, second is to check the changes in environment regularly for the purpose of making necessary adjustment whenever required. Third is to educate employees about what is expected from them.

c) Building a culture of responsibility

HP shows its ability to sustain for longer term by maintain such culture which is based upon values of CSR, by making investment in suppliers and partners (Stubbs, 2013).

CONCLUSION

So from all it is concluded that HP believes in sustainability which gives HP a competitive advantage which is cleared from various points, it's beliefs of having deep respect for business values, and using combination of technology, strategies of business and environment in order to decrease carbon footprints for the purpose of providing solution to its customers. For the purpose of growth HP is focusing on its sustainability strategy. Sustainability strategy of HP is also very essential to get new distribution channel in Europe. HP motivated other organization to make energy efficient products. Now sustainability strategy of HP is very helpful to increase profitability. This is possible by various efforts; - firstly at HP efforts are made to make necessary adjustments in shipping and logistics cost, reduce the requirement of virgin material. Second step for the purpose of enhancing profitability is to make their data centers efficient. Main task of HP for this is to reduce no of datacenters. For this HP just completed a three year program, result of this is just superb, through this 85 data centers are now consolidated in six high efficiency datacenters in US. For the purpose of assessing and revising the strategy of company, a sustainable and corporate social responsibility team is made by HP. HP also adopted various processes in order to assess and check its strategy regularly which provides HP a long term advantage. . Energy consumption is reduced by reducing their consumption in both operational sides as well as by product side. HP always shows its competency related to make long term plans as well as set vision for long term; it also designs additional product and innovation in marketing strategy for the purpose of achieving long term goal of the company. HP wants to become leader in low carbon economy and it is possible through dematerialization of data centres for the purpose of eliminating the need for production of heat, in order to improve the processes speed as well as for the purpose of reducing the cost of band width intensive copper cabling is used by HP. So all these steps are performed by HPA in order to make itself a market leader, so in this way sustainability strategy of HP gives HP as competitive advantage

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ELECTRONIC HEALTH RECORD IMPLEMENTATIONS AROUND THE WORLD

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ABSTRACT

The United States Congress is promoting the use of electronic health record systems by almost every health care provider. The main reason is the access, sharing and exchange of health information between health-related information technology systems and devices. Other countries are also moving on the same direction. Therefore, a systematic review for an exploratory study was made to find similarities and differences between six countries (United States, Canada, European Union, Australia, Japan, and Kuwait). The most common barrier among countries was the training and learning required. Access to information and reduction of errors was the most common benefit identified. Finally, a comparison is made on the interoperability vision of those countries.

KEYWORDS

healthcare, electronic health record, interoperability, benefits EHR.

INTRODUCTION

There were some changes in information technology during 1980's, which lead to an increase in the level of interest in policies and lately helped in the development of electronic medical record (Berner, Detmer, & Simborg, 2005). Approximately two decades later, the United States Congress approved a new legislation that seeks to computerize medical records by 2014 and later on they identify some incentives to healthcare providers with the purpose of taking the challenge of migrating from a paper-based record to an electronic record system (Hoffman & Podgurski, 2011). On 2008, the National Alliance for Health Information Technology (NAHIT April 2008), defined key terms in this new technology systems so that people know what they are talking about. Definitions were given as follows: an EMR (electronic medical record) is an electronic record of health-related information on an individual that can be created, managed, and consulted by authorized clinicians and staff within one health care organization. An EHR (electronic health record) is basically the same as an EMR, but also has the ability to exchange information interoperably between many healthcare organizations. In addition to the new legislation, in the United States there is a Privacy Rule in regards to a patient's record that healthcare providers must follow. Some concerns regarding HIPAA Privacy Rules are related to patient's privacy rights which will be affected by the implementation of an EHR and for research purpose there may be a concern for what can they do with data available in such systems (Fetter, 2009). At the same time, other countries like Canada, United Kingdom, Spain, Japan, Australia, Denmark and New Zealand has also been pursuing the goal of implementing an EHR by legislations on each of them with the same purpose. The focus on this paper will be to evaluate different countries experiences on the implementation of such systems and relate those experiences with the legislation and the interoperability vision available in each country.

LITERATURE REVIEW

Different terms have been used for the same concept for a patient's electronic record, such as Electronic Care Record, Patient Care Record, Electronic Medical Record, Electronic Health Record, among others. In respect to this paper, the term used from this point and beyond will be EHR, as defined in the introduction section as a patient's electronic record with the ability to exchange information interoperable between many healthcare organizations. The Institute of Electrical and Electronic Engineers (IEEE) defined interoperability as "the ability of two or more systems or components to exchange information and to use information that has been exchanged". From the definition, it is known that an EHR possess the ability to exchange information interoperable with other systems. On one side, complexities of the U. S. health care system had been addressed by Hollar (2009). He stated that electronic health records promise to improve industry standards on health care, at least in countries who seek for a nationally-accepted system. One study presented that accessibility is a factor which negatively influences the use of systems like EHR. This is caused by the thought that you need to have many computers available at all times in order to have access to the patient's records (Ilie, Slike, Parikh & Courtney, 2009). For the purpose of comparing healthcare industry in regards to electronic health records on different countries, we will present each of the countries' legislations, regulations, standards and interoperability status on each of them. In the results section we will summarize our findings.

EUROPEAN UNION (EU)

In Europe governmental bodies have been the driving force behind the development and implementation of EHRs (Durmortier and Verhenneman, 2011). The EHR initiative in United Kingdom (UK) was referred as United Kingdom's National Programme for Information Technology (NPfIT) for the National Health Service (NHS), a \$10 billion project to develop the infrastructure for the national electronic health record over a ten-year period. The NPfIT receives its funding from Department of Health (DoH), not from the businesses it serves (Currie and Guah 2006). The development of the Web services architecture will provide an IT platform to facilitate inter and intra organizational data networks. It can provide universal interoperability of geographical location, system hardware, operating systems, or programming languages (Currie and Guah 2006). The main implementation issues were: Quality of technology and Cultural issues. Among the cultural issues are differences in political objectives, poor communication, issues of security and confidentiality, time lag between technology implementation and user training and the Top Down approach for IT adoption and diffusion (Currie and Guah 2006).

The automation of physician's offices in Denmark commenced early as the mid 1980s. By 1990 began the MedCom project. It was a nonprofit company and the sole provider of all healthcare related electronic services in Denmark. The mission of MedCom is to contribute to the development, testing, dissemination and quality assurance of electronic communication and information in the healthcare sector with a view to support coherent treatment, nursing and care. MedCom develops messaging software as well as infrastructure and services to facilitate the secure exchange of healthcare messages (Protti, 2008; D'Agostino and Woodward, 2010). At European level, the epSOS project (European Patient Smart Open Services) develops an interoperability framework for exchanging Patient Summary, ePrescription and eDispensation for mobile patient. It received 122 million in funding from E.U. over three years with the goal of enhancing the safety and quality of care for citizens who require assistance while traveling or living in another E.U. country, (Brosky, 2008). No matter how ahead is Europe,

the international and European standards are not yet widely adopted. They still have issues to pay attention such as: Quality savers issue- the roles, responsibilities and obligations of suppliers and healthcare providers have to be clarified (Digital agenda, Work Program 2011- ICT).

AUSTRALIA

In Australia the national EHR system was initiated following the House of Representatives 'Health On-Line' report (Slipper & Forrest 1997). Australia's health ministers established the Health Information Management Advisory Committee (NHIMAC) in 1998. The National Electronic Health Records Taskforce was established as a subcommittee of NHIMAC in 1999. The Taskforce produced 'A Health Information Network for Australia' (2000), which included a recommendation for a national approach to the implementation of EHRs. Responsibility for the development of the national EHR was assigned to the National e-Health Transition Authority (NEHTA), which had been established by Australian Federal, State and Territory governments to develop essential foundations for eHealth, (Showell, 2011). In 2009, Commonwealth, state and territory health ministers announced the introduction of an individual health identifier for all Australians. In 2010 Federal Budget included an allocation of \$446.7 million over two years as initial funding for the introduction of a personally controlled electronic health record (PCEHR), which is to include a patient summary, (Showell, 2011). The Draft Concept of Operations (DoHA & NEHTA 2011), released as a discussion document, include the description of what is intended for the PCEHR. It also provides details of the policy direction for the development and implementation of Australia's national PCEHR. Extensive safeguards are provided for patient privacy. Patients can control the addition of information to the record, and selectively allow or deny access by healthcare providers and provider organizations. The Menzies Centre for Health Policy and The Nous Group (2008) conducted a survey of the attitudes of 1,200 Australians to the health system. The vast majority (90%) preferred the option of health providers having direct access to their health information, while 65% believed that confidential access to the record without specific consent was acceptable. A vast majority believed that the health record should be available to the treating doctor (99%), to other health professionals providing care (97%) and to the patient (95%). The policy as described appears to match these expectations, (Showell, 2011).

CANADA

The EHR initiative in Canada was referred as pan-Canadian Interoperable Electronic Health Information System. The implementation of the EHR was administered centrally by Canada Health Infoway. Infoway was created in 2001 to lead the development and implementation of electronic health projects across Canada to support a safer, more efficient healthcare system. It is federally-funded, not-for-profit Corporation, whose members are federal, provincial and territorial Deputy Ministers of Health (Canada NewsWire, 2002; Canada NewsWire, 2007). The mandate of Infoway was to "...accelerate the development and adoption of modern systems of health information, and to define and promote standards governing the health infrastructure to ensure interoperability" (Canada Health Infoway, 2015).

Canada had lack of standardized health information-specific legislation applicable nation-wide (D'Agostino and Woodward, 2010). By 2009 the Auditor General of Canada reports problems with the enforcement of standards in Electronic Health Records. The findings reveals that the enforcement of standards was not achieved and testing and processes to address policy breaches were not in place. (D'Agostino and Woodward, 2010). By 2011 an electronic health record was available for almost 50% of Canadians. In order to Canada obtain a nationwide interoperable EHR system by 2015, needs harmonization of privacy legislation nation-wide, clarification of ownership, control and access issues, and to adopt a governance model vigilant of the ownership and privacy questions concerning health record in Canada in order to gain the interoperability of EHR systems. (D'Agostino and Woodward, 2010).

JAPAN

The Ministry of Health, Labour and Welfare in December 2001, in coordination with the e-Japan strategy of the Japanese Government issued the Grand Design toward Computerization in the Medical Field, which specified healthcare information technology programs planned up to 2006. Thus, the spread of EHRs became a national policy, after one year before, that the Ministry of Health and Welfare in 2000 issued a directive that permitted the storage of medical data in electronic media as long as three criteria, authenticity, visual readability, and storage property, (Hiroshi, 2007). An electronic health record (EHR) system was launched at Kyoto University Hospital in January 2005. The EHR system was introduced with the primary aim of collecting clinical information, constructing databases, and enabling extraction of data for hospital management, analysis of hospital affairs and clinical studies. A possible secondary use of EHRs is the storage of data for clinical and outcomes studies, which might yield financial savings an improvement in data quality relative to use of paper-based records, (Yamamoto, Matsumoto, Tada, Yanagihara, Teramukai, Takemura and Fukushima, 2008). The 2001 supplementary budget provided for a project of Medical Networking Promotion with Advanced Information Technology by the Ministry of Economy, Trade and Industry. Following the Grand Design, the Ministry of Health, Labour and Welfare implemented a project for the improvement of medical facilities equipped with EHRs (budgetary help for 249 medical facilities) in 2002 and 2003, (Yamamoto, Matsumoto, Tada, Yanagihara, Teramukai, Takemura and Fukushima, 2008). By 2006, the estimated adoption of EHR systems was 25 – 27%. The Grand Design achieved only about 50% of its goal.

KUWAIT

In Kuwait the expenditures and funding source for the development and implementation of EHRs as part of the National eGovernment policy and the National eHealth policy, had been from the governmental bodies. In 1999-2003, under the Ministry's computerization program, one of the objectives of the Ministry of Health in Kuwait was to establish an EMR system in all primary healthcare centers. The Ministry aims to improve the quality of healthcare by establishing a modern information technology system in all related processes and extending the system to various levels of healthcare (Ministry of Health 2004). This program, consistent with the Kuwait government's overall plan to have an "electronic government", will improve health professionals' performance, and hence the qualities of patient care. At present, EMR has been implemented in all primary healthcare centers, (Saadoun, Naser and Rafiq, 2009). During the late 1980s and early 1990s, the Gulf Cooperation Council (GCC) revolutionized the entire healthcare delivery system and Kuwait was ahead among the GCC Countries, integrated by Kuwait, Saudi Arabia, Bahrain, Qatar, UAE and Oman, (Mogli, 2009). In Kuwait the factors needed to accelerate the use of EHRs and interoperability of EHRs include legislation on: personal and health related data, for sharing health-related data between health care staff through EMR/EHR, and for internet pharmacies; and Quality assurance approaches to health-related Internet content among others.

UNITED STATES

The United States Congress approved the Health Insurance and Portability and Accountability Act of 1996 (HIPAA Privacy Rules). HIPAA gives federal protections for information of a patient's health record and states it must be protected from unauthorized access. It also provides patients different rights with respect to the information that a health care provider may obtain to provide them with specific services (US Department of Health & Human Services, 1996). The privacy rules stated on this act are not defined only to a paper-based record but it cover all information that is exchanged to different entities as the case of billing the health insurance for a services given to a patient. In April 2004, an Executive Order was signed 13335 by the United States' President to create the Office of the National Coordinator (ONC) for Health Information Technology (National Alliance for Health Information Technology, 2008). The objective of this executive order is to further provide the electronic health record to most Americans by 2014 (White House Portal, 2012). From 2004 and beyond, the United States government and different agencies in the healthcare industry had been pursuing the goal and many efforts had been done. Recently, incentives had been allocated by the United States President Barack Obama by signing the American Recovery and Reinvestment Act of 2009 (ARRA). On 2009, Fetter concluded there is a concern for what can health providers do with data available in such systems. Not all risks presented are caused by information exchange to external entities. Kin Than (2005) documented in a study that a possible risk presented by a breach of confidentiality may be the result of an authorized users who abuse of their privileges. In this respect, ethical responsibilities of the users of the information stored on EHR systems must also be taken into account (Kin Than, 2005).

The Health Information Technology for Economic and Clinical Health Act of 2009 (also known as HITECH Act), establishes that agencies shall utilize health information technology systems which meets standards certifying the system. The important aspect that United States providers must follow is the need of information exchange. This term, information exchange, has been defined as an electronic movement of health-related information among organizations according to nationally recognized standards (NAHIT, 2008). There is no cohesive medical data privacy policy in the United States and laws that protect the privacy and confidentiality of the information on a patient's record may vary from state to state and within specialties (D'Agostino and Woodward, 2010).

CHINA

In January 2009 China's government announced a \$124 billion stimulus package to reform the nation's health care sector over three years (2009-2011), Beijing's \$124 billion stimulus package will fundamentally upgrade healthcare services including a Electronic Health Record (EHR) and Regional Health Information Networks (RHIN), (Zita,2009). The stimulus plan seeks to address five policy objectives: Increase the number and quality of healthcare facilities; Establish universal healthcare insurance; Reform pharmaceutical and drugs distribution; Improve public healthcare and Hospital reform. They plan to adopt Regional Healthcare Information Networks (RHIN) which will provide data centers and telecommunications networks to share data and clinical services among geographically dispersed communities. The EHR/RHIN vision purpose is to enable the next generation of "tele-medicine" services: powerful telecom networks, shared applications and data centers that allow patients in poor areas to obtain clinical services "virtually", using advanced information and communications technologies. Tele-radiology, video diagnosis, drugs databases, public health disease surveillance, and proved management of medical emergencies are part of the few applications that plan to be provided electronically to remote regions. The lack of standardization complicates the implementation and adoption of unified e-healthcare solutions. It promotes the adoption of multiple unique or customized technical systems, with limited interoperability and portability, encouraging decentralized hospital capital spending, and fragmented competition in the HIT market. From a technical perspective, the challenge is defining the data vocabulary and structure that can capture the different approaches to data reporting already in use by hospitals and health administrators. The challenge of the EHR/RHIN, is the adoption of a national standards and the creation of a new standard for EMR, (Zita, 2009).

NEW ZEALAND

In 1992 the New Zealand government initiated three key strategies that set the stage for the development of its EHR infrastructure. The strategies included the creation of a national health identifier database, the development of health information privacy code, and an agreement with private sector organizations to develop and deliver information services to the sector. Six years later, the New Zealand government provided general practitioner (GP) offices with a onetime grant of approximately \$NZ 5000 to purchase computers, and mandated that electronic billing be compulsory. The New Zealand's monetary incentive motivates healthcare providers to participate in the initiative, (Protti, 2008; D'Agostino and Woodward, 2010). HealhLink, a privately owned company, is the sole provider of all healthcare related electronic services in New Zealand. Any additional services provided by HealthLink are paid for by the healthcare providers that utilize them such as laboratories, hospitals and general practitioners. Its sole provider model facilitates the coordination and uniform policies necessary to ensure consistent data standards versus competing company services that needs more policy oriented decision making, (Protti, 2008; D'Agostino and Woodward, 2010). In New Zealand, HealhLink was an example of health System Integrator (HSI) that facilitates the uptake of national data communications standards, to ensure interoperability with other HSIs and to defer to a national governance framework. These standards are essential to the efficient and effective operation of the health system in New Zealand, (Protti, 2008; D'Agostino and Woodward, 2010).

METHODOLOGY

To conduct this exploratory study, a systematic review was performed to provide a comprehensive summary of literature to combine results from different published articles related to EHR implementation on different countries. For this study, countries selected for the study were United States, European Union, Canada, Australia, Japan and Kuwait. Two additional countries were included for the interoperability comparison discussed later on this article. Articles were collected from professional databases, like ProQuest and EBSCOhost. For the purpose of conducting the study, the analysis performed on the articles founded after the search on the databases was divided in two sections. The first section was about identifying similarities and differences in the factors that influence adoption and implementation of EHR system. To accomplish this, articles selected were from previous studies performed on implementation of an electronic health record in different countries and what benefits and barriers were described in those studies. This includes facilitators, benefits, barriers, limitations and risks. For the selection of articles on this part, we established a date range from 2000 to 2012 as the publication date of the article. Any other article beyond that date range was excluded from the review. The second section focused on legislation and government perspective on health care industry and interoperability of the systems where the main goal was to determine if countries are pursuing the goal of an international health system, able to interact between different countries or just within their own country. Because literature on regulations and legislation about healthcare may be started before 2000's, there was no date range on this regard. Articles used for the second part of the data collection process had no specific requirement in regards to methodology of the study.

FINAL SAMPLE AND REVIEW METHOD

There was a final list of 150 potential articles which can represent the national perspective of the implementation of EHR systems. From those potential articles, only 21 articles were used for the first purpose of the analysis. Articles selected performed a qualitative or quantitative study to identify risks, benefits, barriers and limitations before and after the implementation of electronic health record systems. The studies were conducted on any healthcare specialties, within single offices or within hospital institutions from different physicians. The critical factor for selecting the article for the study was that, at least, they must clearly state the methodology, sample and setting of their study. The results and discussion section of each article was completely analyzed and each factor was looked at the article, in order to see which one identified which factors. An iterative analytical method for saturation was performed, searching for any possible factor mentioned in the article until no more was found on each of them. After all the articles were completely analyzed and no more different article was found from a different country, then all factors were grouped by country. Those groups were used for the analysis and for the comparison between countries.

RESULTS AND DISCUSSION

After the data collection process was completed for the 21 articles selected for the first part of the study, all data was transferred to SPSS Statistics software (version 17). Descriptive statistics and frequency of the factors was retrieved for the first part of the study, which corresponds to the comparison of similarities and differences between countries. There was no correlation analysis performed with the data. The software was used just for frequencies of each factor and frequencies were identified as a whole and also divided by countries. For the purpose of the second part of the study, which is about the government regulations and the interoperability vision among the countries, data will be used based on the literature review on this article. From the 21 articles used as sample for this study, 42.9% of the articles were from the United States (9 of 21) having the highest quantity of articles published and accessible from the databases used for the study. A 28.6% represented European Union (6 out of 21), 14.3% from Canada (3 of 21). Other countries were represented with a 4.8% each one, having only one article in the sample for this study, which are Australia, Japan and Kuwait.

From the articles reviewed in this study, some barriers were identified by the majority (more than 50%) of the articles. First, the training and learning required for using the system represents a clearly majority of the studies with 81.0%. If we compared the results from the individual countries, we also see it was identified in all 6 countries having a high percent of articles in each country. Computer skills needed to use the system was also a significant barrier with 71.4%, which corresponds to 5 of 6 countries identifying it as a barrier where only Kuwait did not mentioned it on their results. The privacy, security, and confidentiality concerns for the records and the time constraints representing longer period of time were both identified with 52.4%. In respect to the individual countries, privacy and security concerns was of high concern on the European Union, Japan and the United States (3 of 6), and time constraints was mentioned on Australia, European Union and Japan (3 of 6).

Other significant barriers identified were the immaturity of the architecture or the system implemented. Loss of productivity and/or efficiency was mentioned in 38.1% of the articles as a barrier, corresponding to Canada, European Union and the United States (3 of 6). Computer and technical errors or problems presented when using an electronic health record was identified in 38.1% corresponding to the European Union and the United States (2 of 6). Resistance to change or to use the system as also identified in 2 of 6 countries with 38.1% corresponding to Australia and the United States.. Among less common barriers mentioned between the countries are the practice size and quantity of physicians, identified only in the United States, user's age was only mentioned in Kuwait and the ownership of the record was only mentioned in Canada. Each of these three barriers ended with 4.8% of the overall articles. Table 1 summarizes the distribution of the barriers identified in general by all countries represented on the study, which shows results by country and the last column of the table shows the percent represented as a whole.

As opposed to barriers, each country presented different benefits and facilitators. Only two of the benefits were common in 4 of 6 countries compared. Table 2 summarizes benefits/ facilitators identified in the articles. Most of the articles, representing an 81.0%, agreed that the access and availability of the patient's information is a benefit of the electronic health record. The second similar benefit among countries was reduction and identification of errors, which was identified in 4 of 6 countries representing 42.9%. Validation of data input in technology is an important benefit as many simple typing errors are not permitted at the time the health professional is giving the information to the system. Besides those two similar benefits, the benefits identified in each country vary significantly from those identified in other countries. Additional benefits highlighted in the articles are the access to reports, statistics and study reports from the system with a 47.6%, identified in Japan and the United States. Increased safety standards which results in a better quality treatment for the patient represents 47.6% of the overall articles, identified in Japan and the European Union. Those are highly related because physicians, nurses and other professional may access the patient's record and reports summarizing the treatment progress and giving recommendations to their treatments, so they may give the patients what they need in order to continue improving their health. Quality treatment will be the result of such information availability. Overall patient satisfaction was identified in 42.9% as increasing after the use of an EHR. The patients rely more on the accuracy on the electronic record than to a paper-based record.

TABLE 1: BARRIERS IDENTIFIED BY COUNTRY

BARRIERS	AUSTRALIA (%)	CANADA (%)	EU (%)	JAPAN (%)	KUWAIT (%)	US (%)	ALL (%)
1-LOSS OF PRODUCTIVITY/ EFFICIENCY	-	33.3	33.3	-	-	55.6	38.1%
2-PRACTICE SIZE/ QUANTITY OF PHYSICIANS	-	-	-	-	-	11.1	4.8%
3-USER'S AGE (PHYSICIANS, SECRETARY)	-	-	-	-	100	-	4.8%
4-PRIVACY/ SECURITY/ CONFIDENTIALITY	-	33.3	66.7	100	-	55.6	52.4%
5-IMPLEMENTATION/ MAINTAINING COSTS	-	33.3	16.7	100	-	22.2	23.8%
6-COMPUTER SKILLS NEEDED	100	66.7	66.7	100	-	77.8	71.4%
7-LACK OF STANDARDS (WITHIN INDUSTRY)	-	-	16.7	-	-	22.2	14.3%
8-TRAINING/ LEARNING REQUIRED	100	66.7	83.3	100	100	77.8	81.0%
9-COMPUTER/ TECHNICAL OR PROBLEMS	-	-	50	-	-	44.4	38.1%
10-TRIANGULACION	-	33.3	33.3	100	-	11.1	23.8%
11-LOW CUSTOMIZATION	100	-	33.3	-	-	11.1	19.0%
12-IMMATURITY OF ARCHITECTURE OR SYSTEM	100	-	33.3	100	-	55.6	42.9%
13-LACK OF ACCESABILITY	100	33.3	16.7	-	-	22.2	23.8%
14-TIME CONSTRAINTS	100	33.3	66.7	100	-	44.4	52.4%
15-SCEPTICISM/ RESISTANCE TO CHANGE	100	-	33.3	-	-	55.6	38.1%
16-INDIVIDUAL/ ORGANIZATIONAL CULTURE	-	33.3	-	-	-	44.4	23.8%
17-OWNERSHIP/ CUSTODIAN OF THE RECORD	-	33.3	-	-	-	-	4.8%

TABLE 2: BENEFITS AND FACILITATORS IDENTIFIED BY COUNTRY

BENEFITS	AUSTRALIA (%)	CANADA (%)	EU (%)	JAPAN (%)	KUWAIT (%)	US (%)	ALL (%)
1-ACCESS/ AVAILABILITY OF INFORMATION	-	100	100	100	-	77.8	81.0%
2-FLEXIBILITY OF THE SYSTEM (CUSTOMIZE)	-	-	-	-	100	-	4.8%
3-EASY TO USE (USER FRIENDLY)	-	66.7	16.7	-	100	33.3	33.3%
4-TYPING ABILITIES FROM THE USERS	-	33.3	-	-	100	22.2	19.0%
5-TECHNICAL PERFORMANCE FROM THE USERS	-	33.3	33.3	-	-	33.3	28.6%
6-FAVORABLE ORGANIZATIONAL CULTURE	-	-	16.7	-	-	22.2	14.3%
7-EXPERT HUMAN RESOURCE	-	-	33.3	-	-	33.3	23.8%
8-MULTIDISCIPLINARY TEAMS	-	-	16.7	-	-	11.1	9.5%
9-REGULAR ASSESSMENT	-	-	16.7	-	-	22.2	14.3%
10-STANDARIZATION OF DOCUMENTATION	-	33.3	-	-	-	22.2	14.3%
11-ENHANCE COMMUNICATION	100	33.3	33.3	-	-	77.8	52.4%
12-COMPLETENESS OF RECORD	-	66.7	33.3	-	-	77.8	52.4%
13-OPTIMIZE PATIENT SCHEDULE	-	-	16.7	100	100	11.1	14.3%
14-ACCESS TO REPORTS/ STATISTICS/ RESULTS	-	33.3	33.3	100	-	66.7	47.6%
15-SEARCHABLE CAPABILITIES OF THE SYSTEM	-	-	50	-	-	33.3	28.6%
16-SAVES TIME (BILLING, SEARCH RECORD)	100	33.3	16.7	100	-	44.4	38.1%
17-INCREASED SAFETY STANDARDS (QUALITY)	-	33.3	66.7	100	-	44.4	47.6%
18-REDUCTION/ IDENTIFICATION OF ERRORS	-	66.7	50	100	100	22.2	42.9%
19-COST SAVINGS (LONG RUN BENEFIT)	-	-	-	-	-	11.1	4.8%
20-INCREASE PATIENT SATISFACTION	-	33.3	83.3	-	100	22.2	42.9%
21-FLAGS/ WARNINGS PROVIDED	-	-	16.7	-	-	22.2	14.3%
22-INCENTIVES/ GRANTS/ FUNDS	-	-	-	-	-	22.2	9.5%

Table 3 presents the results of interoperability status in different countries measured by five variables. An electronic health record is required in 100% of the countries used for this study, meaning that all of these countries have been pursuing the successful implementation of electronic health records. All countries in this analysis have also assigned some funds and/or monetary incentives to physicians in order to implement such systems. From the eight countries included in this analysis, 75.0% have adopted legislation (6 of 8) and 25.0% have not (2 of 8). In respect to standards, none of the countries (0.0%) was found that have adopted successfully national standards, 12.5% has partially adopted national standards (as the case of the European Union where 12 of 27 countries had partially implemented EHR) and the majority of the countries has not adopted successfully national standards on their implementation of EHR systems for a 87.5% (7 of 8). In the implementation, 50.0% administer the implementation of EHR systems centrally (4 of 8) and 50.0% have decentralized administration of the systems (4 of 8).

TABLE 3: INTEROPERABILITY STATUS AMONG THE COUNTRIES

Country	Required (Y/N)	Assigned Funds and/or Monetary Incentives (Y/N)	Adopted Legislation (Y/N)	Adoption of National Standards (Y/P/N)	Implementation Administered Centrally (Y/N)	Punctuation (Max 5.0)
E.U.	Y	Y	Y	p*	Y	4.5
Australia	Y	Y	Y	N	Y	4.0
Canada	Y	Y	Y	N	Y	4.0
Japan	Y	Y	Y	N	N	3.0
Kuwait	Y	Y	N	N	N	2.0
U.S.	Y	Y	Y	N	N	3.0
China	Y	Y	N	N	N	2.0
New Zealand	Y	Y	Y	N	Y	4.0

*Partially implemented (Implemented in 12 European Countries).

CONCLUSIONS

Our study provides a specific contribution to the emerging electronic information exchange in the healthcare industry and also in the international business area. The top management and administrative personnel in the government and private organizations need to know the current trends in different countries so they can compare and know the future on this nationally-adopted health technology. More works need to be done in respect to the implementation of electronic health record systems to document recent facts on the adoption of this technology. This review highlights specific similar and different trends in the adoption of a nationally-accepted electronic health system. It may provide a useful foundation for further comparisons between countries and somehow guide future works about interoperability of health systems among countries.

After finding similarities and differences on implementation of electronic health records among countries, we may conclude that there are more common barriers within the countries on the process of transition from a paper-based record to an electronic record. The more common barriers were training and learning required using the system and computer skills needed by the users. Privacy, security and confidentiality were also identified in 3 of 6 countries used for the study. At the same time, some benefits were common among countries like reduction and identification of errors and access and availability of the information. Those benefits were identified in 4 of 6 countries. However, additional benefits and facilitators were quite different on each country which was common only in 2 of 6 countries. Among these benefits are that electronic health records enhance communication between providers and patients, it also increases overall patient satisfaction, saves time and are perceived as easy to use, among others. Besides the two main benefits, others were not similar within countries.

Future work may include additional countries for a more complete comparison on the implementation and interoperability of electronic health records around the world. This study was limited to only six countries in the comparison on the implementation of EHRs and eight countries in the comparison of the status of interoperability, and may be of quite interest if more countries are added on both analyses. In addition to finding similarities and differences on the implementation of EHR, more factors and variables for the analysis of interoperability of electronic health records in a national perspective may be useful for a more comprehensive comparison. More countries and variables may extend and enhance our analysis on this regard.

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FOREIGN DIRECT INVESTMENT (FDI): AN OBSERVATION ABOUT TOURISM INDUSTRY IN INDIA

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ABSTRACT

Many countries make changes to their economic policies in order to attract foreign investors and India is no exception. Foreign direct investment (FDI) is defined as foreign investors stirring their assets into another country where they have control over the management of assets and profits (Graham & Spaulding, 2005). It is commonly observed that the more FDI a country acquires, the more local economic growth and transformation can develop. Foreign companies often bring to the country large sum of funds and new technologies, as well as advanced management skills which allow local industries and regions to gain a lot of experience (OECD, 2003). India's liberalization and deregulation policies have attracted a huge amount of foreign direct investment (FDI) into India. Globalization, liberalization and privatization aimed at making the Indian economy a faster growing economic, globally competitive. The new world due to junction of communication and technology has created a virtual borderless world. Every country has to pay heavy opportunity cost if left isolated. Foreign Direct Investment is a central element of an open and successful global economic system which helps in the development of a country in various sectors including tourism industry. The tourism industry is diverse in nature. Tourism industry is one of the largest and fastest growing sectors in world. Tourism industry plays an important role in the economy of India. This paper tries to determine the factors affecting FDI in Tourism sector, its flow in Indian tourism industry, examines the benefits of FDI in the growth of Tourism sector.

KEYWORDS

Foreign Direct Investment (FDI), benefits, tourism.

INTRODUCTION

The early nineties was a stage when the Indian economy faced a brutal balance of payment crisis. Exports began to face serious difficulties. The crippling exterior debts were putting pressure on the economy. In case of all these situations there was a serious hazard of the economy defaulting due to external payments liability. On the base of such adverse situations the policy makers determined to adopt a more moderate and global approach thereby, opening its door to FDI inflows in order to restore the confidence of foreign investors. FDI provides a situation where in both the host and the home nations derive some benefit. The home countries want to obtain the benefit of the huge markets opened by industrial growth. Whereas the host countries get to attain resources ranging from technological financial, capital and entrepreneurship know-how and management skills which aid it in supplementing its domestic savings and foreign exchange.

Most of the developing countries today are looking to tourism as a potentially promising opportunity for trade and industry and human development. This observation is comparatively new for some of them, and reflects the speedy increase in tourism arrivals, numbers and revenues for many developing countries in recent years. Before some decades, tourism has been given minor priority than agriculture or manufacturing since it has not been considered a major or appropriate source of development. Increasingly, however, the sector is being valued as a source of earning export revenues, generating jobs, promoting economic diversification and a more services-oriented economy, helping to revitalize declining urban areas and cultural activities, and opening up far-off rural regions. Foreign direct investment (FDI) is one of the vehicles through which developing countries can develop their tourism sector.

Tourism is one of the third largest revenue generators of foreign exchange for India and also employs one of the highest numbers of manpower. A positive point is India has been ranked as the second most favoured FDI destination, just behind China in developing country among neighbor countries. Policy makers in many countries including India believe that FDI will escort their country's overall development, including the tourism industry. For a developing nation like India, FDI could play an important role in its economic development in common and to the tourism sector in particular by improving India's infrastructure such as international airports, highways, hotels and modern technologies which are the keystones to tourism development.

The National Tourism Policy was introduced in the year 2002, with the definite aim of promoting the tourism industry as it was believed that increased tourism would lead to growth and overall development through employment generation and poverty reduction. New emerging areas like rural tourism, heritage tourism, eco-tourism, health tourism, adventure tourism and wildlife tourism have been given priority.

The Indian government is concern to stimulate domestic and international investments in tourism sector. In this view 100% FDI under the automatic route is now permitted in all construction development projects including hotels and resorts, recreational facilities and city and regional level infrastructure. Apart from this 100% FDI is now permitted in all airport development projects subjects to restrictions that FDI for up gradation of exiting airport requires FIPB approval beyond 74%. In case of tax concession Indian government facilitate a five year tax holiday has been extended to companies that set up hotels resorts and convention centers at specified destinations, subject to compliance with the prescribed conditions.

OBJECTIVES OF THE STUDY

- To understand the need for FDI in Indian tourism.
- To exhibit the sector-wise & year-wise analysis of FDI's in India.

- To study the determinants of FDI flow in tourism sector in India.
- To examine the benefits of FDI in the growth of Tourism sector.

RESEARCH METHODOLOGY

This research is a descriptive study in nature. The secondary data was collected from various journals, magazines, and websites particularly from the Department of Industrial Policy & Promotion, Ministry of Commerce and Industry etc. The study is based on the time period from 2000-2012. Graphs and tables have also been used where ever required to depict statistical data of FDI during the study period. We used secondary data:

- ✓ Government websites
- ✓ Journal relates with FDI and tourism
- ✓ Magazines and books related to FDI inflow in different sectors.
- ✓ Publications and reports related to various departments and organizations.
- ✓ Historical documents and other sources of published information.

LITERATURE REVIEW

Krugman and Obstfeld's (2007) study defines, foreign direct investment as international capital flow from a firm in one country, which creates a subsidiary of the parent company in other country or which allows the firm to obtain a controlling interest in a foreign firm. FDI is distinguished from other forms of international capital flows in that it goes beyond a transfer of resources; also it involves the acquisition of control of assets in other country.

World Trade Organization's study, defines, foreign direct investment as, when an investor based in one country (the home country) acquires an asset in a country (the host country) with an intend to manage the assets. However, according to the Organization for Economic Cooperation and Development (OECD) definition in 1996, mean that, foreign direct investment as reflecting the objective of obtaining a lasting interest by a resident entity in one economy (direct investor) in an entity resident in an economy other than that of the investor (direct investment enterprise). Foreign Direct Investment is the process of investing in other country's economy for long run with the purpose of acquiring the assets and managing it as well as to transfer resources such as technology, human resources, skills etc..

According to A.T. Kearney's Annual Global Retail Development Index (GRDI) for the year 2012, India has been placed at fifth rank (after Brazil, Chile, China and Uruguay) on the basis of retail investment attractiveness. The growing Indian market has attracted a number of foreign retailers and domestic corporate to invest in this sector. Being encouraged by India's growing retail boom many multinational companies also started to enter India's retail market. According to the Investment Commission of India, the retail sector is expected to grow almost three times its current levels to \$660 billion by 2015. FDI in the retail sector can expand markets by reducing transaction and transformation costs of business through adoption of advanced supply chain and benefit consumers, and suppliers (farmers). Opposition to liberalizing FDI in this sector raises concerns about employment losses, promotion of unhealthy competition among organized domestic retailers resulting in exit of small domestic retailers from the market and distortion of urban cultural development.

FDI IN INDIA

Tourism is an activity where capital, infrastructure, knowledge and access to global marketing and distribution chains are critical. FDI is often considered one of the most effective engines for harnessing these elements. Hence most developing countries place a high priority – often the highest priority – on attracting such investment, some by experimenting with a variety of policies. However, the role of FDI in tourism is more nuanced than it is in some other sectors of the economy, and most countries approach it with a combination of hope and fear. It is valued because of what it can provide, but it is also feared for its impact upon economic and cultural independence, and its potential damage to the communities and the environment.

The (table-1) indicates that Mauritius is on top investor in India with 38% share in FDI, it is followed by Singapore, U. K., Japan, and U.S.A respectively. Thus there is a great scope to motivate various developed countries to invest in India

TABLE 1 - FDI INFLOW IN INDIA FROM VARIOUS COUNTRIES

Rank	Country	2010-11 (April - March)	2011-12 (April - March)	2012-13 (April – Jan.)	Cumulative Inflows (April 2000 - Jan. 13)	%age to total Inflows (in terms of US \$)
1	MAURITIUS	31,855 (6,987)	46,710 (9,942)	44,508 (8,175)	333,979 (72,343)	38 %
2	SINGAPORE	7,730 (1,705)	24,712 (5,257)	9,968 (1,823)	87,556 (18,976)	10 %
3	U.K.	12,235 (2,711)	36,428 (7,874)	5,625 (1,048)	80,286 (17,517)	9 %
4	JAPAN	7,063 (1,562)	14,089 (2,972)	9,308 (1,693)	67,159 (14,006)	7 %
5	U.S.A.	5,353 (1,170)	5,347 (1,115)	2,726 (500)	50,615 (11,064)	6 %
6	NETHERLAND	5,501 (1,213)	6,698 (1,409)	8,219 (1,517)	40,544 (8,626)	5 %
7	CYPRUS	4,171 (913)	7,722 (1,587)	2,365 (435)	32,035 (6,835)	4 %
8	GERMANY	908 (200)	7,452 (1,622)	3,204 (587)	24,032 (5,208)	3 %
9	FRANCE	3,349 (734)	3,110 (663)	3,159 (585)	16,536 (3,512)	2 %
10	U.A.E.	1,569 (341)	1,728 (353)	940 (171)	11,260 (2,414)	1 %
TOTAL FDI INFLOWS FROM ALL COUNTRIES *		97,320 (21,383)	165,146 (35,121)	103,956 (19,103)	878,962 (190,083)	

*Includes inflows under NRI Schemes of RBI.

Note:

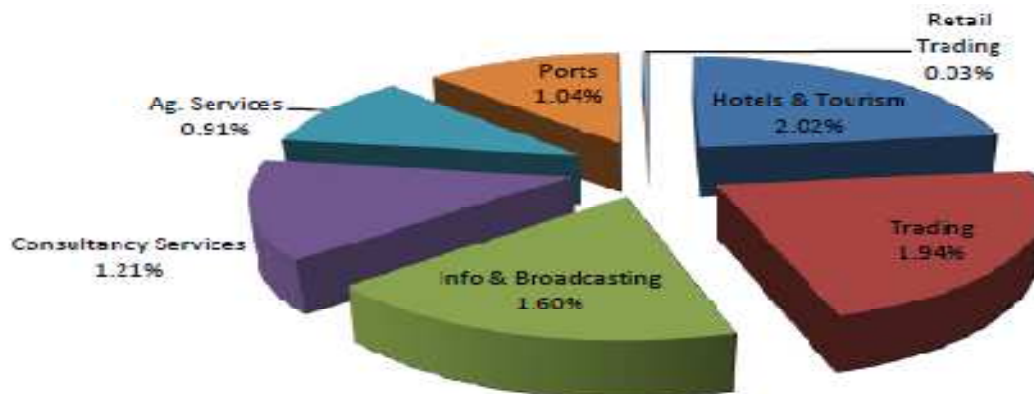
(i) Cumulative country-wise FDI equity inflows (from April, 2000 to January, 2013) are at – Annex-A.

(ii) %age worked out in US\$ terms & FDI inflows received through FIPB/SIA+ RBI Automatic Route + acquisition of existing shares only.

FDI GROWTH IN VARIOUS SERVICE SECTORS

The share of services in FDI inflows increases to 48.4% if the shares of some other services like Hotels, tourism, trading, information and broadcasting, consultancy services, agricultural services, ports, retail trading etc are included then the total share of cumulative FDI inflows to the service sector would be 58.4%. It can be better understood by the following figure:

FIGURE-1: SHARE OF EACH SUBSECTOR IN GROWTH OF FDI



(Source: Compiled from Economic Survey of India 2011-12)

(Figure 1) shows the share of various sub sectors in the growth of FDI in India where Hotel and Tourism prove to be biggest gainer owing to its multifaceted variables. Trading sector come a close second given by the ever increasing demand, followed by Information and broadcasting, consultancy services, ports and agricultural services in the end.

TABLE 2 - SERVICES ATTRACTING HIGHEST FDI EQUITY INFLOW

Sector	2009-10(Rs crores)	2010-11(Rs crores)	2011-12(Rs crores)
Service sector (Financial and non-Financial)	19945	15053	24656
Telecommunication	12270	7542	9012
Computer software and hardware	4127	3551	3804
Construction	13459	4979	15236

(Source: Compiled from Department of Policy & Promotion Data)

The above table shows that the prominence of service sector which has grown exponentially over the other sectors in the year 2011-12 followed by minor lag in the previous year. Telecommunication and computer software and hardware too have had similar run over these years. Lastly construction sector has proved to most unpredictable of all where it saw the tremendous downfall in the year 2010-11 followed by quantum jump as no other in size in the preceding year.

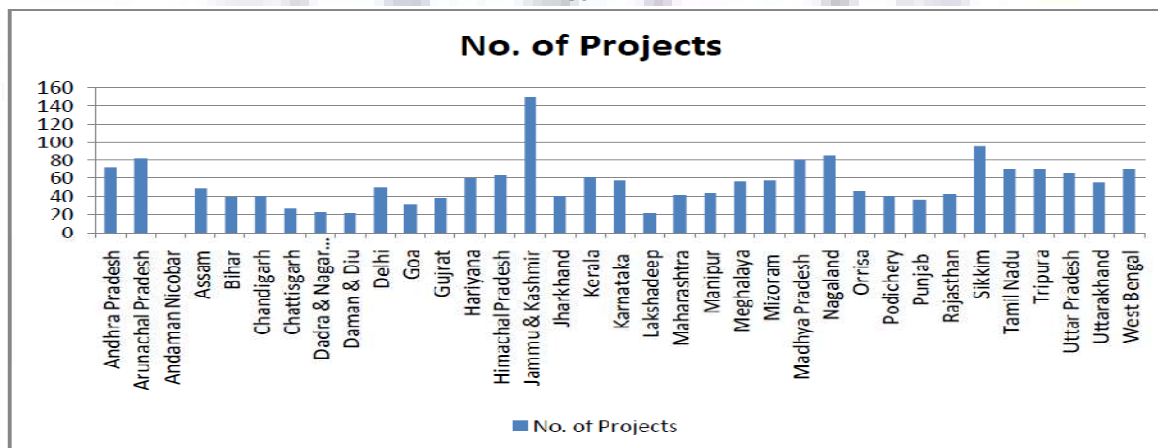
FDI IN TOURISM

Private sector drives the tourism industry in India, and the public sector contributes significantly through infrastructures provision, directly or through PPP i.e. Public Private Partnership in its projects. The Hotel and Tourism industry has been given high priority and up to 100% of FDI (Foreign Direct Investment). 1.97% of the total FDI inflows into India are due to the total investment of 15,867.72 crores in hospitality sector, from April 2000 to June 2012. India is second after China as a preferred investment spot, according to UNCTAD (United Nations Conference on Trade & Development).

With a view to stimulate domestic and international investments in this sector, the government has permitted 100 percent FDI in the automatic route –allowing full FDI into all construction development projects including construction of hotels and resorts, recreational facilities, and city and regional level infrastructure. 100 percent FDI is now allowed in all airport expansion projects subject to the condition that FDI for up gradation of existing airports requires Foreign Investment Promotion Board (FIPB) approval beyond 74 percent. A five year tax holiday has been given to organizations that set up hotels, resorts and convention centers at specific destinations, subject to fulfillment with the agreed conditions. Some international hospitality majors such as Hilton, Accor, Marriott International, Berggruen Hotels, Cabana Hotels, Premier Travel Inn (PTI) and InterContinental Hotels group have already announced major venture plans in India in recent years.

For the development and promotion of the infrastructure and tourism all across India, Government of India has sanctioned a total of 1,226 projects in the 11th Five year plan, which costs around INR 40, 90.31 crores. Jammu and Kashmir had the maximum numbers of projects, which were followed by Sikkim, Nagaland, Arunachal Pradesh and Madhya Pradesh. The projects are under the financial assistance of the Ministry of Tourism.

FIGURE 2



Source: ministry of tourism

Hotel and Tourism sector is declared as high priority sector and Foreign Direct Investment (FDI) upto 100%, under the automatic route is permitted in 'Hotels & Tourism Sector', subject to applicable laws/regulations, security and other conditionalities. As per report received from Department of Industrial Policy & Promotion, the details of the FDI equity flows from April 2008 to January 2012 in the hotel and tourism sector is as follows:

TABLE 3 - FDI EQUITY FLOWS

S.No.	Year (Apr-Mar)	Hotel & Tourism Projects	FDI (` in crore)
1.	2008-09	489	2,098.23
2	2009-10	552	3566.32
3	2010-11	403	1,405.15
4	2011-12 (Apr-Jan)	427	4,041.28
Grand total		1901	11,110,98

(Press information bureau, Government of India)

TABLE 4 - INDIAN HOTEL INDUSTRY: ANNUAL GROWTH RATE (%)

Year	Segment	Annual growth rate (%)
2005-06	Hotel and restaurant	17.5
2006-07	Hotel and restaurant	14.4
2007-08	Hotel and restaurant	13.1
2008-09	Hotel and restaurant	-3.4
2009-10	Hotel and restaurant	2.2

Source: Economic Survey 2010-11

The above table shows that the annual growth rate (%) is highest in 2005-06 with 17.5 which is followed by 2006-07 and 2007-08 with 14.4 and 13.1 respectively. In 2008-09 hotel industry growth rate was in negative which was -3.4%.

REASONS FOR LOW FOREIGN INVESTMENT IN TOURISM IN INDIA

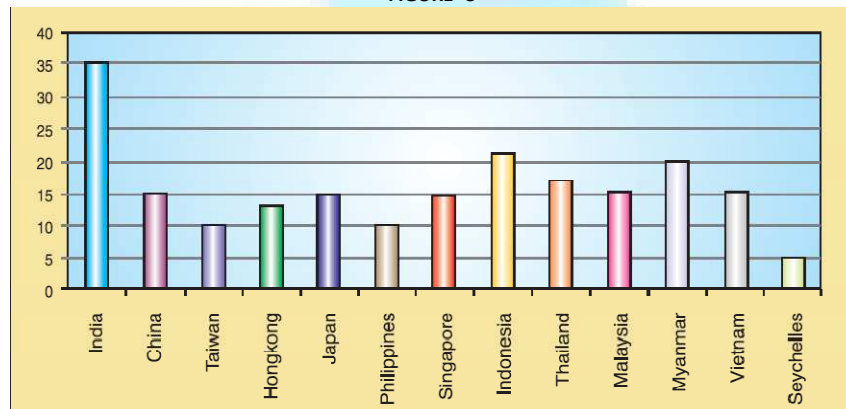
MULTITUDE OF TAXES

Indian tax structure is highest on tourism projects in the Asia Pacific region. Massive amount of central and state taxes is the basic problem plaguing the tourism and hospitality industry. Expenditure Tax of 10% is charged in hotels 'wherein room charges for any unit of residential accommodation are Rs.3000 or more per day' while, simultaneously, States levy Luxury Tax ranging from 5% to 25% on the hotel tariff.

HIGH TAXES

One of the original problems neglecting the Indian tourism sector is a massive amount of Central and State level taxes, which lead to an increased cost to the tourists in India than other world destinations. The table below indicates a comparison of the corporate tax level in India, which affects the tourism and hospitality sector. It indicates India is on Poor competitive position in comparison with our neighbor country which is a negative sign for tourism sector.

FIGURE- 3



IMPEDIMENT IN FDI APPROVALS & GOVT. POLICIES

Huge delay in Foreign Direct Investment approvals in Hotel & Tourism sector due to delay in approvals and lack of guidelines and clearance in the tourism policy. Besides it there are various political and other reasons for this delay.

UPPERMOST IMPORT DUTY ON IMPORTED LIQUOR USED IN HOTELS

Under the WTO Negotiations for Market Access under the Agreement of Agriculture (AoA), India had bound its tariffs at 100% for primary products, 150% for processed products (this is the relevant category for liquor) and 300% for edible oils, except for certain items (comprising about 119 tariff lines), which were historically bound at a lower level in the earlier negotiations.

SERVICE TAX ON TOUR OPERATORS AND TRAVEL AGENTS

The services provided by a tour operator typically includes a wide range of services covering transportation, boarding and lodging arrangements, local sight-seeing and guide services, etc. which are procured through sub-agencies. Even though 60% abatement is provided, taxation of the gross service amount leads to double taxation and increases the burden for the tourists.

SOME PERCEPTION ON FDI IN TOURISM

For example, a background note summarised the broad tone of the literature as follows: "many analysts argue that tourism, driven by foreign private sector interests, is not an activity suited to poverty elimination. They argue that economic benefits are not maximised because of the high level of foreign ownership, high leakages and the relative absence of local economic linkages" (UNCTAD 2001). Similarly, there is the sense that tourism in developing countries is characterised by "high dependence on foreign capital and foreign management..." (UNCTAD).

Much of the critical literature was written in the 1970s and 1980s, although recent writers are still rather negative in their assessment of the role of MNCs. For example, Brohman (1996) states that the problems of dependency, internal disarticulation and foreign exchange leakages usually associated with underdeveloped economies dominated by foreign-owned export enclaves, and he also argues that foreign domination and external dependency often seriously reduce tourism's potential for generating broadly based growth, as well as the net financial advantages that the industry brings to developing countries. Irrespective of the veracity of such views, developing countries need to devote attention to strengthening the participation of the domestic economy in the tourism industry, and in part this includes ensuring net positive linkages with MNCs and FDI.

REASONS TO INVEST IN INDIAN TOURISM

- Economic liberalization has given a new force to the hospitality industry.
- The Indian hospitality industry is increasing at a rate of 15 percent yearly.
- The current gap between supply and demand is predicted to grow as the economy opens and grows.

- The government predicted an additional requirement of 200,000 rooms in the next five years.
- Due to stable political and social conditions in India, there will be an increase in the number of tourist arrivals. India is ranked fourth among the world's must see countries
- The present government in its process has taken a few projects like opening of the partial sky policy. This allows private domestic airline operators to fly on the Indian skies
- An increasingly growing middle class group, the arrival of corporate incentive travel and the multinational companies into India has bright prospects for tourism. India's easy visa rules, public freedoms and its many attractions as an ancient civilization makes tourism development easier than in many other countries
- The 5 star hotel sector has increased the fastest during the last five years at a CAGR of 12 percent. In the coming years, this sector can be divided into three sub-segments Luxury, Business and Leisure. The growth in this segment shows that segment of travelers coming into India. In the last few years India has seen a large inflow of business travelers in the country courtesy to relaxation of the government's stand on FDI for most of the sectors in the country.

In India, the global financial crisis badly impacted the Indian tourism and hotel sector that resulted in decline in the number of foreign tourists, decline of Foreign Direct Investment Inflows and affected the gross domestic product of India.

CONCLUSION

One of the most notable features of economic globalization has been the increased importance of foreign direct investment around the World. Some view it as an engine of economic growth and development while others look upon it as a panacea for all ills. It is, however, important to weigh the costs and the benefits of FDI to gauge whether FDI has positive impact on economic development. FDI has the potential to generate employment, raise productivity, enhancing competitiveness of the domestic economy through transfer skills and technology, strengthening infrastructure, enhance exports and contribute to the long-term economic development of the world's developing countries. More than ever, countries at all levels of development seek to leverage FDI for development. We in India see FDI as a developmental tool in all sectors and tourism has no exceptions.

FDI in the hotel sector towards developing countries has increased substantially in the past decades, reflecting the rising importance of services in total international investments. But despite its substantial international growth, the major hotel chains remain relatively modest in size and their degree of internationalization is also low compared to other industry sectors (Endo, 2006). For example, none of the major hotel multinationals is included in the top 100 of non-financial MNEs, and most employment in the hotel sector is still created at domestically-owned accommodations: foreign-owned firms account for only 10 per cent of worldwide employment in the hotel and restaurants sector in the 1990s – a low proportion compared to most other industry sectors (UNCTAD, 2007).

However, the limited proportion of hotel FDI is slightly misleading since hotels primarily internationalize through non-equity modes, particularly in developing countries (Endo, 2006). The most popular non-equity mode is the management service agreement, under which the business is controlled and managed by a foreign firm, who is not the owner. The alternative non-equity mode is the franchising agreement, which awards a local firm the right to do business in a prescribed manner under an existing brand name. This is a less common mode in least developed countries, because of the limited skills and experiences available in these countries (UNCTAD, 2007).

As per objectives of this study, first is to determine the factors affecting FDI in India. (a) Some of the factors observed are market, cost, political and legal environment, socio cultural, geographical location plays vital role in FDI inflow. Lack of infrastructure is a major reason for poor performance in the investment under tourism sector. (b) Availability of labor and raw materials become another important factor to attract FDI in tourism sector but large investors which form the majority of world investment normally avoid investment in developing countries where markets are typically small and operation cost is very heavy. The non-inclusive FDI policy is found to be another reason for failing to attract FDI in the country. (c) The unique culture and preserved social conditions are important factors to develop a new tourist destination. To attract FDI, a cautious approach like capitalizing on external economic conditions, economic reforms, and private sector development is necessary. (d) Despite having land locked location and market constraints, India has made success in attracting foreign investments in tourism sector due to its favorable climatic conditions, terrain and topography.

India is said to be one of the most potential markets in the world for tourism. It is a multi billion industry in India. Tourism can also be stated as the most vibrant activity. India has been always known for its historical, cultural dimensions. Tourism today in India is highlighted for its immense business opportunities. Tourism industry has a lucrative linkage, with transport and Hotel industry. Indian tourism needs to be measured in terms of socio economic magnitudes. The entire taxation system in hospitality, as such need to be more streamlined for it would encourage more private players to invest here in India. Lesser procedural hurdles coupled with incentives like tax holiday would be great deal in the solution. Moreover, better marketing approaches should be applied in order to cater to the ever changing scenario in the market.

Most countries need to approach it with caution. It is valued because of what it can provide, but it is also feared for its impact upon economic and cultural independence, and its potential damage to the communities and the environment. In some countries, efforts to attract FDI in tourism sit uneasily alongside complaints that there is already too much FDI, or that foreign investors dominate the sector and do not pass the benefits of tourism on to the domestic economy (UNCTAD)

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A SYSTEMATIC APPROACH FOR DETECTION AND COST ESTIMATION OF CLONING IN VARIOUS PROGRAMMING LANGUAGES

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ABSTRACT

Real-world software systems contain substantial amounts of cloned code. While the negative impact of cloning on software maintenance has been shown in principle, we currently cannot quantify it in terms of increased maintenance costs. However, as long as its economic impact cannot be quantified, control of cloning is probable to be neglected in practice. This thesis presents an analytical cost model to estimate the maintenance effort increase caused by code cloning. The cost model can be used to assess the economic impact of cloning in a system and to evaluate investments in clone management tool support. To show its applicability, we report on a case study that instantiates the cost model for open source code for java programs. To fine out the cloning in the code. We identify the limitations of clone detection and control. Through a controlled experiment, we show that clone detection approaches are unsuited to detect behaviorally similar code that has been developed independently and is thus not the result of copy & paste. Finally, We implemented the clone cost model on some sample code to find out the cloning in similar code. And ConQat are useful tool to implement the clone cost model.

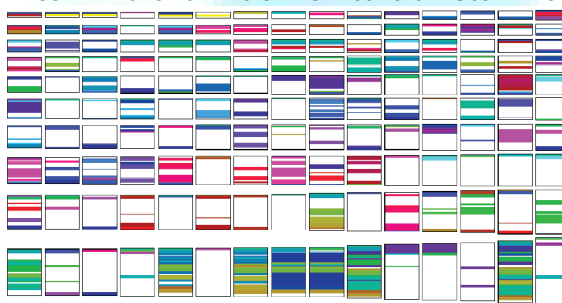
KEYWORDS

ConQat, Eclipse, clone, apache common collection.

INTRODUCTION

Software maintenance accounts for the majority of the total life cycle costs of successful software systems. Half of the maintenance effort is not spent on bug fixing or adaptations to changes of the technical environment, but on evolving and new functionality. Maintenance thus pre-serves and increases the value that software provides to its users. Reducing the number of changes that get performed during maintenance threatens to reduce this value. Instead, to lower the total life cycle costs of software systems, the individual changes need to be made simpler. An important goal of software engineering is thus to facilitate the construction of systems that are easy—and thus more economic—to maintain. Software comprises a variety of artifacts, including requirements specifications, models and source code. During maintenance, all of them are affected by change. In practice, these artifacts often contain substantial amounts of duplicated content. Such duplication is referred to as cloning.

FIGURE 1.1: SHOWS THE CLONING IN USE CASE DOCUMENTS



Cloning hampers maintenance of software artifacts in several ways. First, it increases their size and thus effort for all size-related activities such as inspections—inspectors simply have to work through more content. Second, changes that are performed to an artifact often also need to be performed to its clones, causing effort for their location and consistent modification. If, e. g., different use case documents contain duplicated interaction steps for system login, they all have to be adapted if authentication is changed from password to keycard entry. Moreover, if not all clones of an artifact are modified consistently, inconsistencies can occur that can result in faults in deployed software. If, e. g., a developer fixes a fault in a piece of code but is unaware of its clones, the fault fails to be removed from the system. Each of these effects of cloning contributes to increased software lifecycle costs. Cloning is, hence, a quality defect.

FIGURE 1.2: CLONING THREATENS PROGRAM CORRECTNESS

<pre> // Utilities for arrays of elements public String showElements(ModelElement[] elements, String nomsg) { boolean found = false; StringBuffer res = new StringBuffer(); if (elements != null) { Index.getInstance().setCurrentRenderer(FlatReferenceRenderer.getInstance()); for (int i = 0; i < elements.length; i++) { ModelElement el = elements[i]; res.append(showElementLink(el)).append(HTML_LINE_BREAK); found = true; } Index.getInstance().resetCurrentRenderer(); } if ((found && nomsg == null) && elements.length > 0) { res.append(HTML_ITALICS(nomsg)); } return res.toString(); } </pre>	<pre> // Utilities for arrays of elements public String showElements(ModelElement[] elements, String nomsg) { boolean found = false; StringBuffer res = new StringBuffer(); if (elements != null) { Index.getInstance().setCurrentRenderer(FlatReferenceRenderer.getInstance()); for (int i = 0; i < elements.length; i++) { ModelElement el = elements[i]; res.append(showElementLink(el)).append(HTML_LINE_BREAK); found = true; } Index.getInstance().resetCurrentRenderer(); } if ((found && nomsg != null) && elements.length > 0) { res.append(HTML_ITALICS(nomsg)); } return res.toString(); } </pre>
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The negative impact of cloning becomes tangible through examples from real-world software. We studied inspection effort increase due to cloning in 28 industrial requirements specifications. For the largest specification, the estimated inspection effort increase is 110 person hours, or almost 14 person days. For a second specification, it even doubles due to cloning. The effort increase due to the necessity to perform multiple modifications is illustrated in Figure 1.1, which depicts cloning in 150 use cases from an industrial business information system. Each black rectangle represents a use case, its height corresponding to the length of the use case in lines. Each colored stripe depicts a specification clone; stripes with the same color indicate clones with similar text. If a change is made to a colored region, it may need to be performed multiple times—increasing modification effort accordingly.

Finally, Figure 1.2 illustrates the consequences of inconsistent modifications to cloned code for program correctness²: a missing null check has only been fixed in one clone, the other still contains the defect and can crash the system at runtime.

2. LITERATURE SURVEY

Elmar Juergens proposed a **How Much is a Clone?** In this paper[1] Real-world software systems contain substantial amounts of cloned code. While the negative impact of cloning on software maintenance has been shown in principle, we currently cannot quantify it in terms of increased maintenance costs. However, as long as its economic impact cannot be quantified, control of cloning is probable to be neglected in practice. This paper presents an analytical cost model to estimate the maintenance effort increase caused by code cloning. The cost model can be used to assess the economic impact of cloning in a system and to evaluate investments in clone management tool -support. To show its applicability, we report on a case study that instantiates the cost model for 11 industrial software systems.

Lerina Aversano, Luigi Cerulo proposed a **How Clones are Maintained: An Empirical Study** in this paper the author suggest the clone maintenance, in this paper [2] Despite the conventional wisdom concerning the risks related to the use of source code cloning as a software development strategy, several studies appeared in literature indicated that this is not true. In most cases clones are properly maintained and, when this does not happen, is because cloned code evolves independently.

Benjamin Hummel proposed [5] **"The Index-Based Code Clone Detection: Incremental, Distributed, Scalable"** in this Although numerous different clone detection approaches have been proposed to date, not a single one is both incremental and scalable to very large code bases. They thus cannot provide real-time cloning information for clone management of very large systems. We present a novel, index-based clone detection algorithm for type 1 and 2 clones that is both incremental and scalable. It enables a new generation of clone management tools that provide real-time cloning information for very large software. We report on several case studies that show both its suitability for real-time clone detection and its scalability: on 42 MLOC of Eclipse code, average time to retrieve all clones for a file was below 1 second; on 100 machines, detection of all clones in 73 MLOC was completed in 36 minutes.

3. OBJECTIVE OF THE WORK

1. The investigation of cloning has grown into an active area in the software engineering research community yielding, e. g., numerous detection approaches and a better understanding of the origin and evolution of cloning in source code.
2. The main objective of this work is to find out the cloning in various programming language source code.
3. Using ConQat tool, we can find out the cost of cloning and comparison of cost for different languages.

4. PROPOSED WORK: CLONE COST MODEL

A thorough understanding of the costs caused by cloning is a necessary foundation to evaluate alternative clone management strategies. Do expected maintenance cost reductions justify the effort required for clone removal? How large are the potential savings that clone management tools can provide? We need a clone cost model to answer these questions.

This chapter presents an analytical cost model that quantifies the impact of cloning in source code on maintenance efforts and field faults. Furthermore, it presents the results from a case study that instantiates the cost model for various programming languages and estimates maintenance effort increase and potential benefits achievable through clone management tool support.

DETAILED COST MODEL

This section introduces a detailed version of the clone cost model. Its first section introduces cost models for the individual process activities. The following sections employ them to construct models for maintenance effort and remaining fault count increase and the possible benefits of clone management tool support. We initially assume that no clone management tools are employed.

4.1 ACTIVITY COSTS

The activities Analysis, Design, and Other are not impacted by cloning. Their cloning induced effort overhead, e_c , is thus zero. Their total efforts hence equal their inherent efforts.

Location effort depends on code size. Cloning increases code size. We assume that, on average, increase of the amount of code that needs to be inspected during location is proportional to the cloning induced size increase of the entire code base. Size increase is captured by overhead:

$$e_L^c = e_L^i \cdot overhead$$

Impact analysis effort depends on the number of change points that need to be determined. Cloning increases the number of change points. This increase is captured by overhead:

$$e_{IA}^c = e_{IA}^i \cdot overhead$$

Implementation effort comprises both addition and modification effort:

$$e_{Impl} = e_{Impl_{Mod}} + e_{Impl_{Add}}$$

We assume that effort required for additions is unaffected by cloning in existing source code. We assume that the effort required for modification is proportional to the amount of code that gets modified, i. e., the number of source locations determined by impact analysis.

The modification ratio mod captures the modification-related part of the inherent implementation effort:

$$e_{Impl}^c = e_{Impl}^i \cdot mod \cdot overhead$$

Quality Assurance effort depends on the amount of code on which quality assurance gets performed. Both modifications and additions need to be quality assured. Since the measure overhead captures size increase of both additions and modifications, we do not need to differentiate between them, if we assume that cloning is, on average, similar in modified and added code. The increase in quality assurance effort is hence captured by the overhead measure:

$$e_{QA}^c = e_{QA}^i \cdot overhead$$

4.2 MAINTENANCE EFFORT INCREASE

Based on the models for the individual activities, we model cloning induced maintenance effort e^c for a single change request like this:

$$e^c = overhead \cdot (e_L^i + e_{IA}^i + e_{Impl}^i \cdot mod + e_{QA}^i)$$

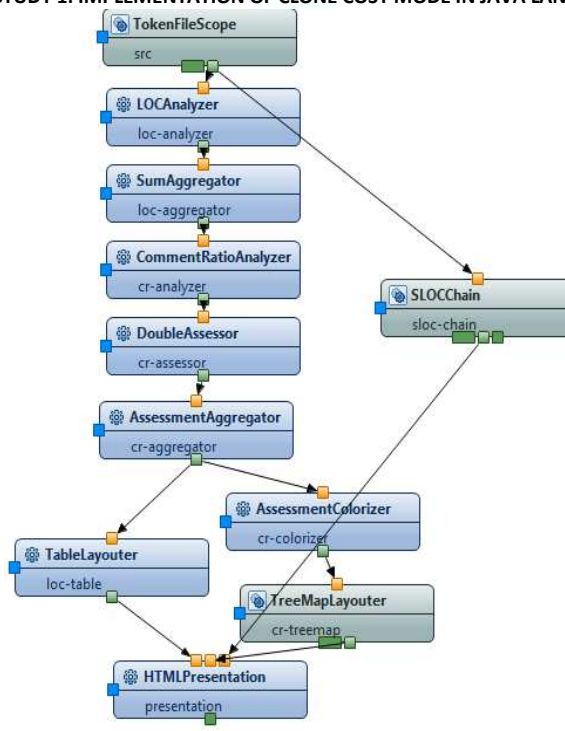
The relative cloning induced overhead is computed as follows:

$$\Delta e = \frac{\text{overhead} \cdot (e_L^i + e_{IA}^i + e_{Impl}^i \cdot \text{mod} + e_{QA}^i)}{e_A^i + e_L^i + e_D^i + e_{IA}^i + e_{Impl}^i + e_{QA}^i + e_O^i}$$

This model computes the relative effort increase in maintenance costs caused by cloning. It does not take impact of cloning on program correctness into account.

5. IMPLEMENTATION OF CLONE COST MODEL

CASE STUDY 1: IMPLEMENTATION OF CLONE COST MODE IN JAVA LANGUAGE.



In new programming languages For Example Java, C#.

Requirement – To implement a clone cost model on some sample code and produce results that show how the model can prove effective in maintaining software systems that have substantial amount of cloned code.

Tools used – ConQAT with Eclipse Indigo IDE as editor

Samples of code used -

1. JabRef - an open source bibliography reference manager (Java)
2. Apache Common Collections – an extension of Java Reference library (Java)

Associated Terminology -

1. *Lines of code (LOC)* – denote the sum of the lines of code of all source files, including comments and blank lines.
2. *Source statements (SS)*- are the number of all source code statements, not taking commented or blank lines and code formatting into account.
3. *Redundancy free source statements (RFSS)*- are the number of source statements, if cloned source statements are only counted once. It thus estimates the size of a system from which all cloning is perfectly removed.
For example, if a file contains 100 statements (and no clones) in version 1, and 50 of them are duplicated in the file to create version 2. SS increases to 150, but RFSS remains at 100.
4. *Overhead* - denotes the ratio by which a system’s size has increased due to cloning. It is computed as For the above example (in 3.), the resulting overhead is 0.5, denoting a cloning induced size increase by 50%
5. Δe – The difference in amount of effort required per change request in a software that has certain amount of cloned code and has no tool support. It is calculated as:

$$\Delta e = \frac{\text{overhead} \cdot (e_L^i + e_{IA}^i + e_{Impl}^i \cdot \text{mod} + e_{QA}^i)}{e_A^i + e_L^i + e_D^i + e_{IA}^i + e_{Impl}^i + e_{QA}^i + e_O^i}$$

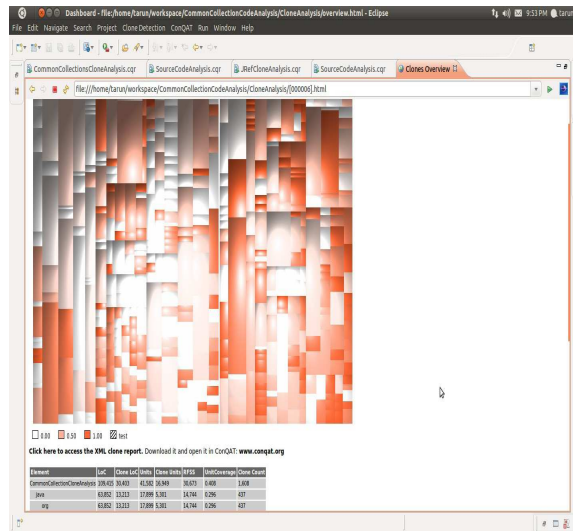
Procedure -

1. Prepared and configured the conQAT tool and downloaded the Java Source codes for the analysis.
2. Created new project for a particular code and configured the conQAT code blocks for the source code analysis and clone analysis.
3. Prepared the run configurations for the conQAT analysis.
4. Generated the reports by running conQAT processors.
5. Implemented the derived formulas of the cost model and compiled the results.

Results -

Screen shots of the conQAT reports:

CLONE ANALYSIS OF APACHE COMMON COLLECTIONS



EFFORT DISTRIBUTION ASSUMED FOR THE CALCULATIONS

According to the thesis the average effort distribution has been calculated as:

Table 1. Effort distribution

Activity	[31]	[6]	[36]	Estimate
Analysis			26%	5%
Location		13%		8%
Design	30%	16%	19%	16%
Impact Analysis				5%
Implementation	22%	29%	26%	26%
Quality Assurance	22%	24%	17%	22%
Other	26%	18%	12%	18%

We assume that 50% (8% location, 5% impact analysis, (26% X 0.63) of implementation and 22% quality assurance; rounded from 51.38% to 50% since the available data does not contain the implied accuracy.) of the overall maintenance effort are affected by cloning. To estimate the impact of clone indication tool support, we assume that 10% of that effort are used for impact analysis (5% out of 50% in total). In case clone indication tools are employed, the impact of cloning on maintenance effort can thus be reduced by 10%.

FINAL RESULTS OF COST MODEL EXECUTION

Name of Library and Language	kLOC	kSS	kRFSS	Overhead	Δe	Δe_{tool}
JabRef(java)	117	74	47	57%	28%	25%
Apache Common Collections (java)	109	55	31	77%	39%	34%

CONCLUSION

In this paper, we have implemented the analytical cost model, this cost model is used to quantify the economic effect of cloning on maintenance efforts. It can be used as a basis to evaluate clone management alternatives.

Instead of computing absolute costs, the model computes maintenance effort increase relative to a system without cloning. Since in a relative cost model many factors that are independent of cloning remain constant, they do not need to be reflected in it. We implemented the cost model Using ConQat tool and find out the clone in the various open source in java language. Based on the results, some projects can achieve considerable savings by performing active clone management.

FUTURE WORK

There is a definitive need for future work in this area. The assumptions the cost model is based on need to be validated. The consequences of cloning on the number of field failures needs to be modeled quantitatively, instead of qualitatively as currently done in the model. We plan to perform sensitivity analysis to determine the relative importance of the individual parameters to guide instantiation in practice. Furthermore, we intend to instantiate the model using project specific effort parameters. Lastly but most importantly, we need to validate the correctness of the results, e. g., through comparing efforts on projects before and after clone consolidation with the predicted efforts.

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INTELLIGENT SCADA FOR HOME APPLICATION

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ABSTRACT

A supervisory control data acquisition system (SCADA) is an integrated platform that incorporates several components and it has been applied in the field power system and several engineering applications to monitor, operate and control a lot of processes. In the future electrical network, SCADA system are essential for an intelligent home automation resources like HVAC centralized control of lighting appliances, Air Conditioning and Refrigeration system, water reservoir system, etc. This paper present a SCADA system for typical household application which is implemented on iFIX4.0 software. The main objective is to manage residential consumption, reducing or curtailing loads to keep the power consumption in or below a specified set point imposed by the customer and generation availability.

KEYWORDS

Human machine Interface, Intelligent control, PLC and SCADA.

INTRODUCTION

Home automation is the residential extension of "building automation". It is automation of the home, housework or household activity. Home automation may include centralized control of lighting, HVAC (heating, ventilation and air conditioning), appliances, and other systems, to provide improved convenience, comfort, energy efficiency and security. Home automation for the elderly and disabled can provide increased quality of life for persons who might otherwise require caregivers or institutional care. Devices may be connected through a computer network to allow control by a personal computer, and may allow remote access from the internet. Through the integration of information technologies with the home environment, systems and appliances are able to communicate in an integrated manner which results in convenience, energy efficiency, and safety benefits.

Although automated homes of the future have been staple exhibits for World's Fairs and popular backgrounds in science fiction, complexity, competition between vendors, multiple incompatible standards[a] and the resulting expense have limited the penetration of home automation to homes of the wealthy or ambitious hobbyists. As the number of controllable devices in the home rises, interconnection and communication becomes a useful and desirable feature. For example, a refrigerator can send an alert message when it needs cleaning and service. Rooms will become "intelligent" and will send signals to the controller when someone enters. If no one is supposed to be home and the alarm system is set, the system could call the owner, or the neighbors, or an emergency number.

Other automated tasks may include setting the air conditioning to an energy saving setting when the house is unoccupied, and restoring the normal setting when an occupant is about to return. Home automation can also provide a remote interface to home appliances or the automation system itself, via telephone line, wireless transmission or the internet, to provide control and monitoring via a Smartphone or web browser. In terms of Lighting Home Automation, it is possible to save energy when installing various products. Simple functions such as motion sensors and detectors integrated into a relatively simple home automation system can save hours of wasted energy in both residential and commercial applications. For example imagine an auto on/off at night time in all major city office blocks, say after 10pm, when no motion is detected, lights shut down, the company could save kilowatts of wasted over night energy[b].

After this introduction section, this paper is organized as follows: Section II deals with Basic structure of SCADA systems; Section III describes intelligent SCADA system for industrial purpose; Section IV presents case study; V Simulations; and finally, Section VII presents the conclusions.

BASIC STRUCTURE OF A SCADA SYSTEM

In order to increase the flexibility of the SCADA systems, it is important to isolate subsystems which are influenced by changes of environments. Therefore, programs in electric power systems falls into three hierarchical layers as shown in Figure 1. Interfaces between different layers encapsulate the inner-structure of each layer; therefore, the modification of programs and data in one layer does not affect other layers [c].

FIG.1: THREE LAYERS OF SCADA SYSTEM

Task dependent part
Power system dependent part
Computer system dependent part

Monitoring of nowadays complex power systems and enable operators to accomplish their tasks. The traditional power system structure is changing with more and a more competitive business environment. In face of these challenges the operators need to change their control/operation strategies adopting more flexible methodologies and the SCADA system.

Task Dependent Part: Programs and data in this part are independent of the configuration of both power systems and computer systems. Since the programs in this layer become general package software independent of system configuration, they can be used in all offices with minimum modification. Namely, their modifications are needed only when application specification is changed.

Power System Dependent Part: This part encapsulates the hardware configuration and operational organization of real power system, and provides two abstract data models. One corresponds to hardware of power systems, such as a topology of transmission lines, circuit-breakers and transformers. The other corresponds to operational organization of power system, such as office configuration, control areas and ordering authority. These models make programs of the task dependent part independent of real power system Configuration.

Computer Dependent Part: This part hides a computer system configuration. It encapsulates network topology of computer system, computer architecture, location of resources etc., and the programs and data of upper two layers can be developed without awareness of computer environments.

INTELLIGENT SCADA

Making the new paradigm possible requires decision decentralization and the adequate means to implement it. This is certainly not the case of current SCADA systems. These are intended for the monitoring and supervision of equipments owned (or at least operated) by a very limited number of entities (one in most cases). It is assumed that there is a fixed entity to operate each piece of equipment (there is of course flexibility to operate at different levels, such as locally or remotely, but in the scope of the same entity such as a distribution or transmission company). In the future DER owned by a large set of diverse entities will represent a significant part of the overall resources. It is not possible to adequately plan and operate the system if DER are not considered as taking part in the solution of power system problems. For this, it is required to have decentralized intelligence and decision ability. It is equally important to have SCADA based on

a power system model which is based on the new paradigm. This imposes to consider both the physical part of each power system component and its cyber dimension, which requires a SCADA based on a cyber-physical model of the power system. Power system components are important because of:

- a) the relevance of their physical existence and operation features (P);
- b) the availability of relevant information we may have about them in decision centers (I);
- c) the permission to operate them (O).

The relevance of one specific component for the solution of a particular problem must be evaluated considering simultaneously a), b) and c). In fact, it is not at all relevant to have a component with the adequate characteristics to in the current state of art; SCADA systems consider these three conditions in a very limited way, using the logic of serving a single entity that uses each SCADA. In the future, SCADA will have to consider the same three conditions in the scope of competitive environments where each entity SCADA has direct access to its own components. When negotiated, each SCADA can also have access to information and operation of other players owned components. Moreover, in many cases, once these permissions, and the conditions under which they should become active, are define are, the permission should be automatic and transparent to the users. Like this, real-time operation is guaranteed and market and ownership issues are respected. solve a problem if one does not have access to the required information about it in due time to take a decision. None of these is of any value if one does not have the permission to operate this component. Some characteristics of SCADA systems presently Commercialized can be pointed out [d]:

- Today's SCADA systems are able to take advantage of the evolution from mainframe based to client/server architectures. These systems use common communications protocols like Ethernet and TCP/IP to transmit data from the field to the central master control unit;
- SCADA protocols have evolved from closed proprietary systems to an open system, allowing designers to choose equipment that can help them monitor their system using equipments from a variety of vendors;
- SCADA systems are widely used to monitor and control critical infrastructure utilities;
- While SCADA protocols are more open today, there is not yet a clear consensus of which protocol is the best.

The main advantages of using SCADA systems in a company are [e]:

- Real-time monitoring,
- System modifications,
- Increased equipment life,
- Automatic report generating,
- Troubleshooting, etc.

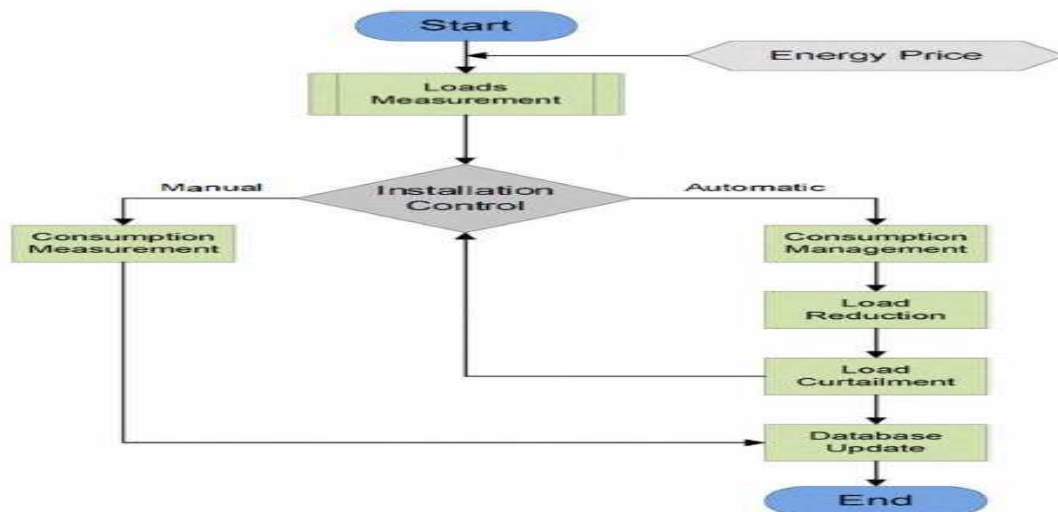
CASE STUDY

This section presents a case study to illustrate the implemented energy management methodology. Sub-section A describes the methodology used to undertake load management. Sub-section B describes the equipment used for the case study. Sub-section C describes the developed human-machine interface. Finally, sub-section D presents the results obtained for this case study.

A. DECISION METHODOLOGY

The main objective of the decision methodology is to manage loads when there is a shortage in the available power to supply the load. This can happen due to a shortage in power generation or to user defined consumption limits. When, for instance, in night periods, generation is higher than load, no action in the load side is performed. The surplus energy is stored in batteries; if batteries are full-charged, some generation resources are automatically disabled. This is a real-time control system that evaluates at each moment the energy consumption and, if necessary, makes changes to the connected loads. Fig. 2 presents a schematic representation of the implemented decision strategy.

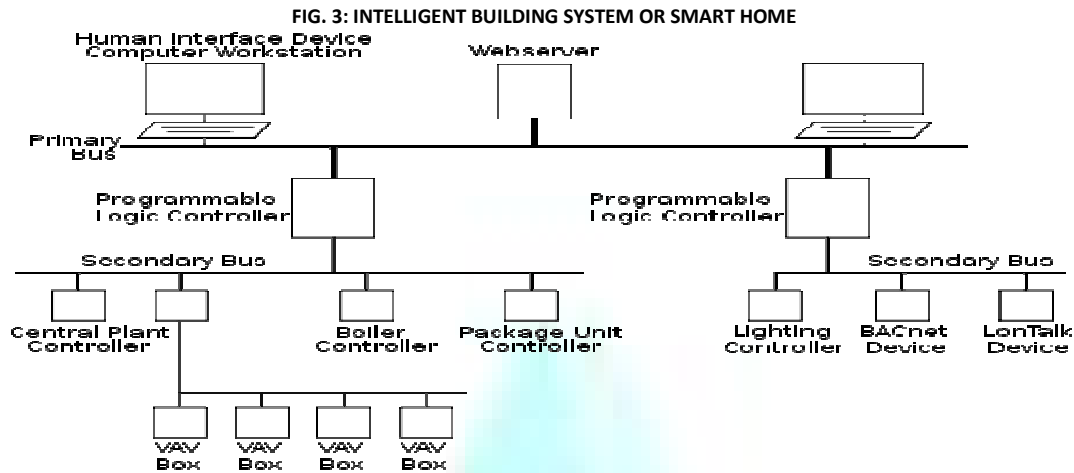
FIG. 2: SCHEMATIC REPRESENTATION OF IMPLEMENTED STRATEGY



The controlled installation can operate two load types: controllable and non-controllable loads. Non-controllable loads can only be operated manually. Controllable loads can be operated both in manual and automatic modes. Load management is performed taking into account a reestablished order of merit that orders the loads by priority of supply as determined by the user. Rules concerning reducible and curtailable loads are taken into account by the decision methodology. As a reference for load management, a set point is required to define the maximum load to be supplied. This set point can be defined by the user, but if the power provided by the installed generation is not sufficient to supply the whole load, the set point is automatically adjusted to the value of generated power.

B. EQUIPMENT CHARACTERIZATION

For the present case study, the energy provided by generation units and storage is managed by the SCADA system and delivered to a set of loads.



The SCADA system is composed by several hardware components for data acquisition and resources management such as energy meters, switches, electronic ballasts, and drivers for motor control. The central operation of SCADA is undertaken by a tactile industrial computer that provides users with the human machine interface and runs iFIX4.0 software. This software is able to communicate with a PLC that is connected with all the components of the system. Since it is able to communicate in several protocols, it can be used to communicate with a large diversity of appliances and fig. 8 presents the control panel of the test bed used for this case study. The non-controllable portion of load is implemented with a set of variable resistive loads.

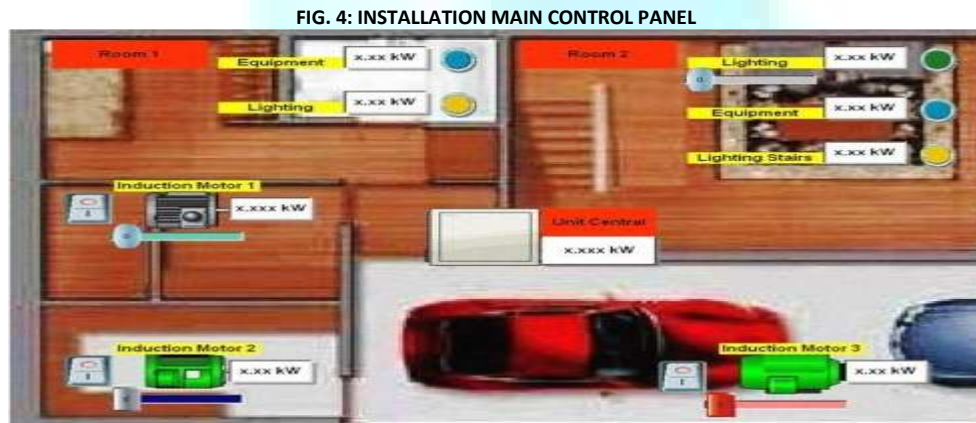
The test bed includes six controllable loads:

- 0.5 HP induction motor (IMA);
- 1.0 HP induction motor (1MB);
- 2.0 HP induction motor (IMC);
- 40 W incandescent lamp (IL);
- 72 W (2 x 36 W) fluorescent lamps (FL);
- 600 W heat accumulator (HA).

The energy to supply the load is provided by two photo voltaic panels, one wind turbine, one fuel cell and a storage system.

C. HUMAN MACHINE INTERFACE

The test bed installation represents a residential house which control display is presented in Fig. 4. This is the main menu where one can have a general view of the installation and some information about the loads.

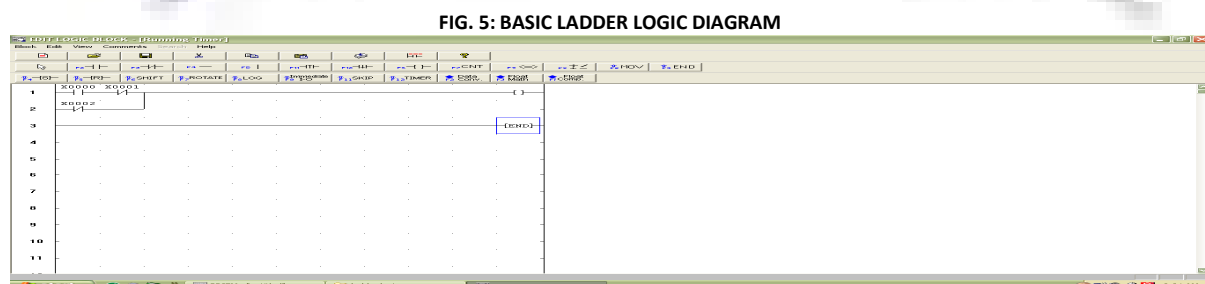


Clicking on each element, accesses a more detailed information menu. Fig. 4 shows a screen where one can see the total active power consumption of the installation and verify the results of the implemented load management. This interface is implemented in iFIX software which provides users with flexibility for both graphical interface and functionality development. Altogether, this implementation has 6 screen menus to control the whole installation.

SIMULATION

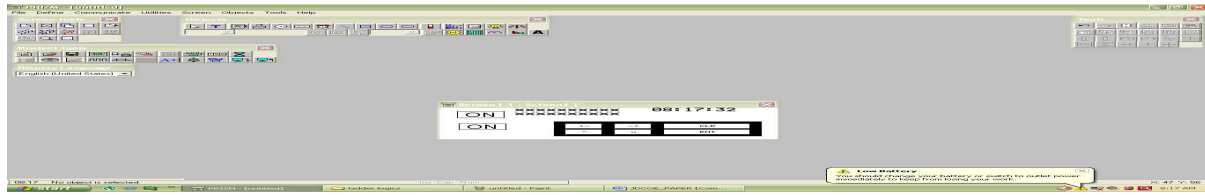
A. SIMULATION OF LADDER PROGRAMING

We studied the three types of plc like Siemens, Schneider, and Renu Electronics. After comparatively study we decide to use of Renu Electronics PLC with Prizm3.12 simulator. Because this PLC MODBUS protocol supported and it is easy to communicate with SCADA. Also it required RS 232 or serial cable. Proposed hardware system totally based on automation in which all field devices running according to ladder logic for this using Prizm3.12 simulator.



The ladder logic see in fig. 5 download in PLC after that all field devices inputs and outputs connected to the PLC. In Prizm3.12 a best feature is it gives a on-line or off-line simulation, if hardware not connected that time we test the ladder logic by off-line simulation mode. The on-line simulation step show in fig. 6.

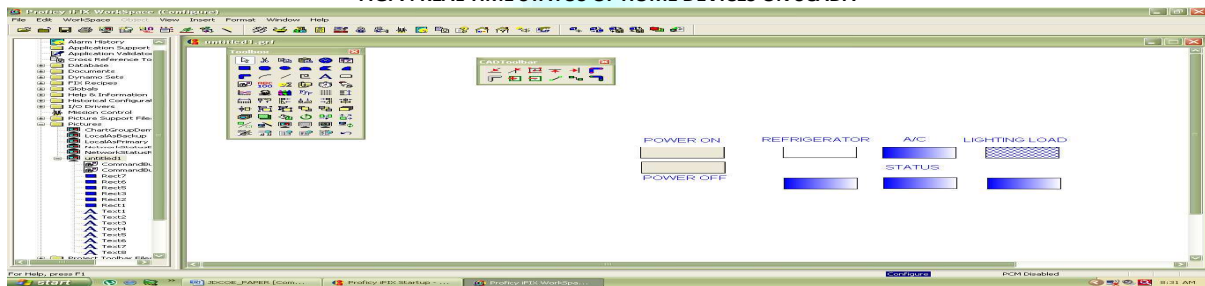
FIG. 6: SELECT SIMULATION USING PRIZM3.12



B. SIMULATION ON IFIX4.0 SOFTWARE

We studied the three types of SCADA like iFIX, InTouch and ICONICS. After comparatively study we decide to use iFIX SCADA software. Because iFIX SCADA is supports different PLC, it does not required particular drivers for communication with PLC. For SCADA use the ICONIC software in which we see the real time information of proposed system even if we observe fault at which place in system occur means monitoring whole system operation at control room. Real time status of field devices shows in fig. 7.

FIG. 7: REAL TIME STATUS OF HOME DEVICES ON SCADA



RESULT

The proposed system is designed for home automation, So that we can save the power of different Heavy Electrical Equipments (e.g. Motors, Refrigerator, Lighting, etc) also controls the operations and monitoring the real time information of home devices in the system.

CONCLUSION

This paper presents a load management application for use in home installations. The presented application is implemented in iFIX and Prizm3.12 simulator software.

- A supervisory control and data acquisition (SCADA) system is an integrated platform that incorporates several components.
- It has been applied in the field of power system and several engineering applications to monitor, operate, and control a lot of processes.
- To study how efficiently we can use SCADA system to control, operate and monitor the Load Distribution Schemes.
- The proposed work having Hardware and software Optimization with the help of PLC Ladder Logic. We are adopting this technique to reach strong Conclusion about their actual impact on the power Consumption.

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