

# Amity

## BUSINESS REVIEW

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Yashba Humra

### *Communications*

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Partha Jyoti Hatimuria and Anushree Mehrotra

*- A Historical Analysis of Segregation of Untouchable Castes in North India from circa A.D. 600-1200*  
Malay Neerav

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Sonam Gupta and Ishneet Dhillon

### *Book Reviews*

- Anu Sahi
- Tavishi

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# Contents

Vol. 17, No. 2

## ARTICLES

- 1** Inventory Management in Community Pharmacies in Nigeria  
*Osemene, O F and Osemene, KP*
- 15** Use of Facebook in Higher Education: A Promoter or Distractor  
*Amir Manzoor*
- 23** Structural Capital: A Comparative Study between Banking and Reality Sector of India.  
*Ajay Kr. Singh and Arpita Kaul*
- 35** Impact of Personality on Impulsive Buying Behaviour of Youth in Kashmir Province of Jammu and Kashmir  
*Shakeel Ahmad Sofi and Fayaz Ahmad Nika*
- 46** Organizational Commitment and Organizational Effectiveness  
*Davinder Sharma*
- 60** Consumer Behavior and Purchase Intention in Indian Organic Food Market  
*Roopali Batra*
- 78** An Empirical Study of Role and Significance of Salesmanship for Competitive Advantage with Special Reference to Indian Retail Industry  
*Rajul Dutt*
- 88** An Empirical Study of the Influence of Work Itself on the Motivation of School Teachers  
*Debarshi Roy and Palas R Sengupta*
- 101** An Evaluative Study on Internet Banking Security among Selected Indian Bank Customers  
*V. Vimala*
- 119** Impact of Share Buybacks on Earnings Per Share: Some Empirical Evidences  
*Yashba Humra*
- 126** Communications  
- Improving Hospital Turnover Time in Stop Over  
*Partha Jyoti Hatimuria and Anushree Mehrotra*
- 130** - A Historical Analysis of Segregation of Untouchable Castes in North India from circa A.D. 600-1200  
*Malay Neerav*
- 140** - Equitization of State Owned Enterprises in Vietnam – A Case Study of Vietnam Airlines Company Limited  
*Sonam Gupta and Ishmeet Dhillon*
- 154** Book Reviews
  - *Anu Sahi*
  - *Tavishi*

# From the Desk of the Editor-in-Chief

*There is no austerity equal to a balanced mind, and there is no happiness equal to contentment; there is no disease like covetousness, and no virtue like mercy.*

*Chanakya*

First time in my lifetime, the Union Budget has been presented on February 1, 2017 with three key factors, "Skill", "Livelihood" and "Demonetization" as the most important issues. India is into the process of structural transformation and this bold & unexpected move by the Government of India of demonetizing the Indian economy has grabbed both the political space as well as the public attention. The stashed Black money has been forced out into the open. Though, Demonetization has been at the cost of much discomfort causing cash crunch, yet the outcome has been extremely positive and in the favor of turning the Indian economy cashless. The psychological impact has been manifold and those steeped into this grim business of stashing black money are running hither and thither for hideouts.

The opposition has been referring to demonetization as yet another scam and I feel that they are making all efforts to 'recast' demonetization as one of the historic flaws of the Government. Mahatma Gandhi says, "Capital as such is not evil; it is its wrong use that is evil. Capital in some form or other will always be needed." The intelligence agencies have reported the availability of high volume of Counterfeit notes. The Counterfeit notes have been neutralized and this has deprived terror merchants of all types, including the naxals. Infact, I regard it as a surgical strike on terrorist funding.

With Demonetization, greater tax compliance has been observed and people are aware of the Government's move if they do not comply. Illegal activities have been been crippled to a very great extent which is a welcome move by the central government and deserves appreciation.

I have an ardent hope that you will enjoy reading all the articles in the current issue and will revert with your valuable comments.

Enjoy Reading!

**Sanjeev Bansal**

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# Inventory Management in Community Pharmacies in Nigeria

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*There is no data on the types of technology used in community pharmacies to manage inventory in Nigeria. Also the extent of use of such technology and factors influencing their use has not been studied. This study is carried out to identify the types of technology used in managing inventory in community pharmacies, determine the extent of use of such technologies, evaluate the factors influencing their use, and identify the benefits of inventory management technologies in community pharmacies. A cross sectional survey of 410 community pharmacists was undertaken with the aid of pre-tested questionnaires which were purposively administered to achieve the objectives of the study. Data was analyzed using frequencies, percentages, means, standard deviations and ordinary least square regression analysis. The study identified eleven different technologies that community pharmacies utilize in managing inventory. These were the bin cards, stock cards, store ledger inventory control cards, computers among others. Prominent factors influencing their use include but not limited to knowledge, training and skill of the community pharmacists. Respondents perceived that inventory control technologies used were beneficial to them. The underutilization of newer technologies to manage inventory could limit community pharmacists' ability to deliver quality pharmaceutical services that are patient-focused.*

**Keywords:** Computer, Generics, Medication, Patients, Stock.

## INTRODUCTION

The rising profile and sophistication in the operations of community pharmacies in developed countries has been attributed to the use of technology in various aspects of community pharmacy practice especially in inventory management. In the pharmaceutical setting, inventory could be regarded as all the medications and non-medical supplies used in the day-to-day running of a pharmacy. Inventory could be classified as raw materials work-in-progress and finished goods (Kotler, 2002; Lucey, 2006). The management of inventory therefore involves a process of ensuring that these medical and non-medical inventory are properly managed in such a manner that stock outs are avoided at all times thereby ensuring commodity security at low costs (USAID | DELIVER PROJECT, 2013). Inventory represents major assets in community pharmacies (West, 2009). Inappropriate management of inventory could lead to undesirable consequences such as overstocking, under-stocking, increased carrying costs arising from product storage, damage, theft and stock out cost (West, 2009). The latter could mar the image of the pharmacy through the loss of customers, decreased cash flow, and compromised patients' wellbeing through the use of unwholesome products that may have either expired or deteriorated. Developed countries have been able to leverage the use of technology to manufacture and inventoried many medical and non-medical products over the years. In

Nigeria, community pharmacies use of technologies to manage inventory has so far not been reported. Also, the gains of using modern technologies to control inventory in Nigerian community pharmacies have not been discussed.

## RESEARCH QUESTIONS

From the statement of the problem, the following research questions were formulated as follows,

1. What are the technologies used to manage inventory in community pharmacies in Nigeria?
2. What is the extent of use of such technologies in community pharmacies in Nigeria?
3. What factors affect the use of the identified technologies in the management of inventory in community pharmacies in Nigeria?
4. What are the benefits arising from the use of such technologies to manage inventory in community pharmacies?

## OBJECTIVES OF THE STUDY

The specific objectives of the study are to:

- i. Identify the types of technology used in community pharmacies to manage inventory;
- ii. Determine the extent of use of such technologies;
- iii. Evaluate the factors affecting the use of such technologies in the management of inventory in community pharmacies; and
- iv. Determine the benefits of using the identified technologies to manage inventory in community pharmacies.

## LITERATURE REVIEW

Inventory management could be called stock control. It involves balancing of influx and outflow of products in order to such avoid wastages and ensure that goods are purchased at minimal costs (Rosenblatt, 1977). It is an intricate process which

requires that the operators strive hard to balance the conflicting economics of not holding too much stock (Adeyemi & Salami, 2010). Inventory could be regarded as stock of goods maintained by a business in anticipation of future demand (Drury, 1996). There are three broad reasons for holding stocks; which according to (Lucey, 2006) are transactional which helps to meet production and sales targets. It would also absorb variations in demand; as necessary part of the production process; act as buffer between production processes and enable a smooth flow of the production process; Precautionary which is to avoid stock outs and meet unexpected shortages in the future and speculative motive which is a strategic move that could be as a deliberate investment policy to checkmate unforeseen shortages or future inflations.

### *Costs Associated with Inventory*

All costs incurred in the process of managing an inventory are called stock costs. Specifically, they are made up of costs of holding stock (carrying costs such as pilferage of medicines, which is a major challenge in community pharmacy practice, audit, handling, store staffing), cost of obtaining products (overhead costs), and stock out costs which leads to losses to future sales, customers' goodwill, contributions and decreased cash flow (Huffman, 1996; Carrol, 1998; Lucey, 2006; Bouldin et al., 2011). Efficient and effective inventory managers would endeavour to keep these costs at the barest minimum while at same time maintain appropriate stock level to keep the community pharmacy going.

### *Objectives of Inventory management in community pharmacy*

In community pharmacy practice as well as in other businesses, the general focus is to continue to balance the conflicting mechanism of not holding too much stock (Adeyemi & Salami, 2010); but at the same time ensure the availability of adequate stock of medication. Furthermore, the following objectives

are subtly pursued: to reduce the time and costs for placing orders of drugs, and tender purchasing; improve patient welfare by reducing incidences of out of stock, keeping medication cost low, and ensuring that costs associated with damage and expiration of drugs are reduced too (Mahatma et al., 2012). Invariably, these actions would improve patients' care, optimize the use of resources and add value to services rendered to patients (Mahatma et al., 2012).

### *Types of inventory management systems*

The two major types of inventory management systems are the Re-order Level (two-bin system) and the Periodic Review systems which could be called the constant cycle system (Lucey, 2006). However, a firm may decide to use the two systems simultaneously i.e. the hybrid system. In the re-order level system a predetermined re-order level is set and when inventory level falls to the re-order level, a replenished order called Economic Order Quantity (EOQ) is issued. Here inventory remains at reorder determined points (Lucey, 2006). This is one of the major merits. Others are that the system is more responsive to fluctuations in demand, automatic generation of a replacement order at the right time occurs, and the system helps to lower inventory on the average. In the periodic review system inventory are reviewed periodically at a fixed interval and at the necessary time, uncalculated replacement order is raised. It is apt for large quantities of inventory. This in itself is an added advantage as well as a disadvantage because larger inventory could attract discounts while more costs could be incurred as purchasing costs.

### *Methods of managing inventory in community pharmacy*

Three prominent methods exists namely the visual, periodic and perpetual methods (Carroll, 1999; West, 2009; Bouldin et al., 2011). The visual method involves mere visualizing and counting the amount

of inventory and then comparing the result with the documented amount in the store books. The idea is to determine whether inventory has gone beyond the desired level so that a purchase order could be made. This method according to Ayad 2011, is inexpensive, convenient, and requires less pharmacy personnel but associated with errors such as staff oversight, focus is on inventory rather than costs and there is high probability of overlooking low inventory. The periodic method is almost the same as the visual method except that the periodic method is regularly conducted on a predetermined periods of time. The process gives room to monitor fluctuations in demand and supply, involves less record keeping but measures inventory at a single point in time, and requires a lot of staff and therefore expensive (Ayad, 2011). The perpetual method is commonly used in advanced countries. It works with the aid of computer software which automatically deducts the amount of inventory sold once a prescription is filled (Ayad, 2011). With the perpetual method, inventory and cost of products are monitored continuously. It gives a quick and accurate assessment of inventory position, and makes up-to-date records available. However, the pharmacists and ancillary staff must be computer literate. Users of such facility require constant training because there are variants in the software employed in carrying perpetual inventory monitoring.

### *Factors affecting inventory management in community pharmacy*

Community pharmacies keep varieties of inventory but this depends on the type of the community pharmacy, its' location, prescription and demand pattern of surrounding hospitals, customer base of each pharmacy location and the financial strength of the community pharmacy. However, notable factors that affect inventory management in that sector include but not limited to management principle of stocking. There could a deliberate policy to stock

more of generic drugs than branded drugs. Generics attract lower acquisition costs because they are cheaper than branded drugs. Inventory size has a direct relationship with inventory costs. Inventory shrinkage arising from theft, robbery, and shoplifting remains a potent factor that affect inventory management because 4.5% of community pharmacy sales are lost through inventory shrinkage (Garner, 1994). Unclaimed prescriptions are common and the pharmacists may have to return such prescribed medications to the shelf (Dwivedi et al., 2012). The use of formulary in hospitals could affect the stocking pattern of community pharmacies located around such hospitals.

#### ***Community pharmacy inventory keeping records***

Inventory keeping records are generally of two kinds namely, bin and inventory control cards. Usually, one bin card is kept per lot, batch, and indicates expiry date, quantity received, date of purchase, quantity issued, and quantity purchased. It is usually kept with the products on the store room shelves or pallets. The inventory control card has is opened for each product and are sometimes kept in ledger or book form and may be kept in the community pharmacists' office. These two inventory keeping records are mainly used in developing countries. However, they assist the pharmacists in knowing when to order or issue, how much to order or issue, how to maintain an appropriate inventory level of all products in order to avoid shortages and oversupply.

#### ***Technology used in inventory management in community pharmacy***

In developed countries, technology is deployed to manage inventory because they have been found to be more efficient, precise, and accurate (Ayad, 2011). Prominent among these technologies are the computer systems. Apart from their use in the maintenance of inventory, they can be used to

process prescription orders and maintain patient files. Pharmacy staff can order medications directly through wholesalers' website (Ayad, 2011). Computer can track turnover rates, predict future drug needs. Perpetual inventory system is based on the use of computer. Another tool used is the barcode technology which is a handheld device that can scan the barcode or enter the ID number of the medication that needs to be ordered. It can be used to monitor or track inventory in community pharmacy. It improves patients' safety by reducing erroneous medication stocking, preventing the distribution of expired medications, and facilitates recall (Daina, 2010; ASHP, 2011, Ingersoll, 2015). Computers can be networked for monitoring inventory in community pharmacies especially those that have multiple branches. This will allow data to be shared. If such computer is connected to the internet, then community pharmacy can place order for medicine supply from the manufacturers in order to make new purchases for inventory replacement. Extranet which allows limited access to specific sites can be used in community pharmacy to track and monitor inventory. Radio Frequency Identification microchips can be used to track medications from the date they are manufactured to the date they are removed from storage shelves (Yuan, 2004; Ayad, 2011). Point of Sale (POS) can be used to manage inventory by minimizing inventory shrinkage arising from cashiers' error and pilfering. It can be used to monitor sales, profits and priceless in making informed decisions on inventory management. Mobile phones can serve as inventory tracking and monitoring tool. Mobile phones are widely used because they are portable and personal (Philips et al., 2006). Radio Frequency Identification (RFID) can be used to identify missing inventory, increase sales and profits, decreases patients' waiting time, offer useful insights into consumer buying behaviour (Yuan, 2004). However, they are expensive (Attaran, 2011). Closed Circuit Television (CCTV) is widely used to monitor

inventory through surveillance. It would guide against inventory shrinkage in the pharmacy as a result of pilfering, robbery and burglary.

Deploying modern technology to control inventory requires training, money, manpower and skill because technology is the application of knowledge which is tacit in nature. Developed countries such as the USA, Canada, and UK among others community pharmacies have leveraged technology to make impressive strides in inventory management. Furthermore, some of the inventory management control software that are commonly used are Sage, Peach Tree, Tally, Quickbook, Abacus Law, Microsoft Money, Electroclerk, Personal Stock Management, Dac Easy, among others (Ingersoll, 2015).

#### ***Inventory management strategies in community pharmacy***

The two distinct strategies that are widely employed are the 80/20 rule and ABC (always, better, and control) analysis. In the former, it is assumed that 80 percent of the drug costs of a pharmacy are spent on 20 percent of the pharmacy's stock. Hence, it is wiser to focus on the management of the inventory of the top 20 percent of medications carried. By doing so, the pharmacists can review the purchasing history of the top 20 percent of medication and use the result to manage future inventory levels. ABC analysis is primarily on usage and cost. The medication items must first be identified in order to ease the process of classifying them in order of relevant importance. This involves the process of "separating the vital few from the trivial many" (Dwivedi et al., 2012). In practice, A class consists of 20 percent of products that account for 80 percent of pharmacy annual drug costs. The B class consists of 15 percent of the pharmacy's medications that account for 15 percent of pharmacy annual drug costs. The C class consists of 65 percent of the pharmacy's medications that account for 5 percent of pharmacy annual drug costs.

In order to balance profitability with inventory control the ABC strategy focuses more on medications that have high costs to the pharmacy and minimal focus is placed on low-cost products (Ingersoll, 2015). The ABC method is limited in the sense that only monetary values and rate of usage of products are considered. (Dwivedi et al., 2012). However, an item may be of low value and of low consumption rate but vital. Then it cannot be rejected because it is not in category A. Therefore we have to apply the VED (vital, essential, and desirable) analysis to handle this situation. Using a combination of the ABC and VED techniques appears to be better option" (Dwivedi et al., 2012; Anand et al., 2013; Devnani et al., 2010).

### **CONCEPTUAL FRAMEWORK**

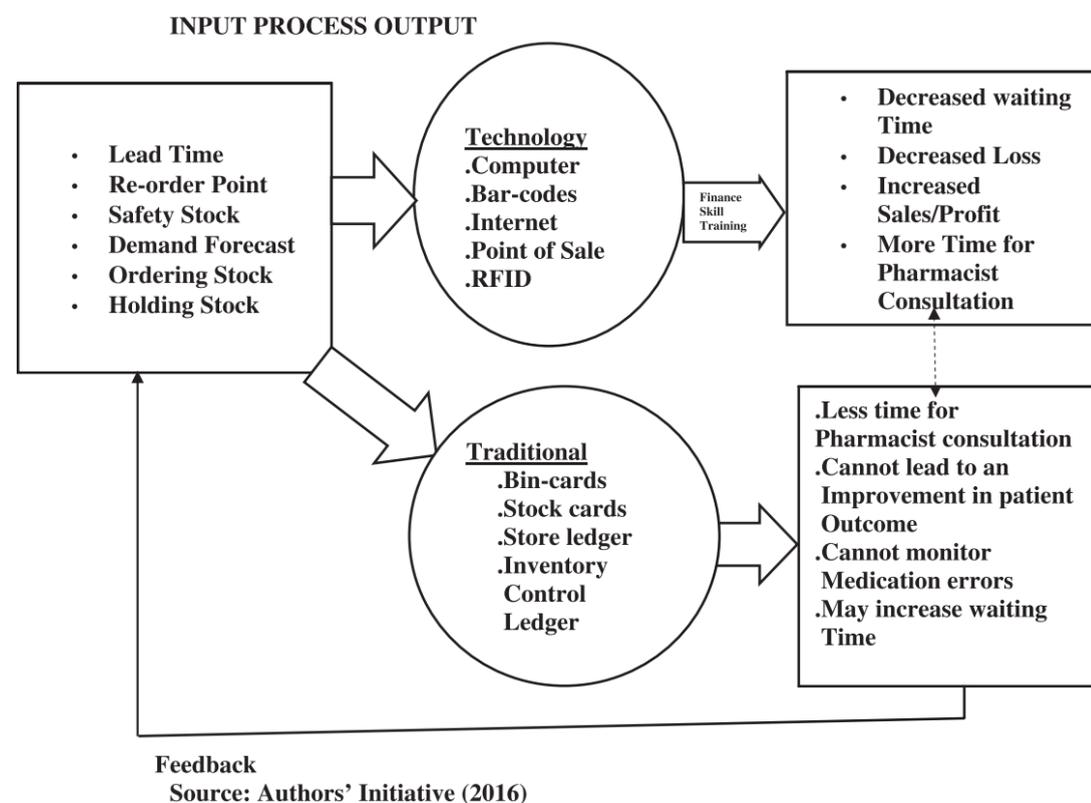
The conceptualized framework for this study was gleaned from the review of current and extant literature on inventory management systems. The capabilities of the traditional inventory control tools such as the bincards, stock cards, and inventory control ledger among others in terms of outcomes are stated and shown in Fig 1. Little training and minimal skills are required to effectively put them to use. These tools are less expensive, not complex but could be tedious and time wasting hence requires more personnel to put them to effective use. As a result of the nature of these inventory control tools, they are not efficiently operationalized, because they are time wasting and more often than not do not create ample time for the community pharmacists to embark on patient-centred care. They also have the tendency to prolong patient waiting time and indirectly, increase the costs of care. Naturally, the traditional tools used for inventory management are not suitable for detecting and monitoring errors arising from medication use. However, they could be invaluable in decreasing inventory shrinkage.

Advent of new technology is gradually replacing the traditional methods of controlling and managing

inventory especially in advanced countries. In this regard, the computer systems are frequently replacing existing systems even if the process is a step-care one. The new technology for inventory management is computer driven and expensive. In any inventory control system, the latent but desired goals are usually to shorten the lead time, ensure the availability of safety stocks, decrease the cost of ordering and holding stocks and ensure almost an error free re-ordering points. In fact, computerized programme has been discovered to decrease workload, time and money budgeted for inventory. (Awaya et al., 2005). Achieving all this requires a

critical mass of highly skilled individuals, who must undergo incessant trainings in order to effectively put to use the computers. The resultant effect of using modern technology to manage inventory are decreased inventory shrinkage, reduction in patient waiting time, improves medication management, creates more time for the community pharmacist to conduct patient counselling, and has a higher probability of increasing sales and profit. The underlining principle of the study framework, is that outputs not only depend on the nature of inputs but also on the process that transforms the inputs to outputs.

Fig 1: Conceptual Framework for inventory control system in community pharmacy



## RESEARCH METHODOLOGY

Study design Structured and semi-structured questionnaires were administered to community pharmacists at the annual conference of the Association of Community Pharmacists' of Nigeria (ACPN) organized in 2015. The timing of the study was chosen to coincide with the period of the ACPN conference because a lot of community pharmacists would be in attendance. It was also easy to reach a majority of the community pharmacists attending the ACPN conference. The study was a cross sectional survey. Model specification In order to evaluate the factors affecting inventory management in community pharmacies, an empirical model was formulated. This model captured the relationship between inventory management activities in community pharmacies and some identified explanatory variables from literature that affect such activities. Other factors not explicitly included in the model were captured by the error term as presented below.  $CIMA = f(T, K, TR, PN, S, ISH, C, IS, PT, UCP, UFM \dots Ut)$  (1)

The explicit form of equation (1) above is represented as follows

$$CIMA = \beta_0 + \beta_1 T + \beta_2 K + \beta_3 TR + \beta_4 PN + \beta_5 S + \beta_6 ISH + \beta_7 C + \beta_8 IS + \beta_9 PT + \beta_{10} UCP + \beta_{11} UFM - Ut \quad (2)$$

Where:

CIMA = Community Pharmacists' Inventory Management Activities (Dependent variable) while the independent variables are: T=Technology

K=knowledge

TR=Training

PN=Personnel

S=Skill

ISH=Inventory Shrinkage(pilferage, shoplifting, robbery, damages, deterioration, expiration)

C= Cost

IS= Inventory Size

PT= Product Type

UCP=Unclaimed Prescriptions

UFM= Use of Formularies

$\beta_1 - \beta_{11}$  = Regression coefficients of the variables to be measured

$\beta_0$  = Constant term/Slope or intercept

Ut= Stochastic error term

### Research hypothesis

Ho: No significant relationship exists between all the identified explanatory variables and inventory management activities in community pharmacies.

### Sample size

Pre-tested questionnaires were administered to 410 community pharmacists using purposive or judgmental sampling technique because the researcher used his own judgement to choose and select respondents who best meet the purpose of the study.

### Questionnaire design and questionnaire administration

The questionnaire and oral interview were the primary instruments for data collection and contained mostly closed ended questions. Questions in the questionnaire were drawn in such a way that they elicited appropriate responses on the study objectives. The first part of the questionnaire contained demographic variables, such as age, sex, year of graduation, degree(s) obtained, experience, and location of practice area. The second part of the questionnaire contained questions on core issues which helped to identify the types of instruments used by the community pharmacists to manage inventory; the extent of use of such instruments, the factors affecting their use, strategies to optimize their use, and the prospects of using modern technologies to operationalize inventory management in community pharmacy practices in Nigeria. In this regard, respondents were asked to tick in the spaces provided in the questionnaire, type(s) of instruments used in managing inventory, the extent of use of such instruments in a 5-point Likert scale as Never (1), Rarely (2), Sometimes (3), Often (4) and Always (5). Furthermore, they were asked to rate the influence of some identified factors which affect inventory management in their pharmacies on a 5-

point Likert scale as No influence(1), Little influence(2), Moderate influence (3), High influence (4), and Very High influence (5). This was complemented with oral interview which focused on the benefits and prospects of modern technologies in operationalizing inventory management in community pharmacies. The questionnaires were picked by the conference participants at the point of registration and filled later.

### **Validity and Reliability of the research instruments**

A number of measures were taken to validate the questionnaire. First, the questionnaire items were designed from research questions, study objectives, and the conceptual framework. The contents of the questionnaires were validated through a focus group interview with seven community pharmacists in Oyo State. Reliability coefficient of the questionnaires was also determined. Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Pallant, 2007). Cronbach's alpha was used to assess the consistency of the scales used. Authors such as Hair et al., 2003, Pallant; 2007, posited that reliability scores greater than 0.70 are acceptable. All items had an alpha score above 0.70, hence they are suitable for analysis with acceptable reliability. Cronbach alpha score of 0.85 was obtained for the entire scale. This indicates that there is internal consistency of the entire variable scale and that variable construct exhibited strong internal reliability. The questionnaires were constructed in simple prose devoid of ambiguity. It was also pre-tested in twenty community pharmacists in the study area at the pilot stage. Thereafter, comments, suggestions and corrections made by the respondents were incorporated in order to improve the quality of the questionnaire.

### **DATA ANALYSIS**

Analysis of data was carried out with SPSS version 18 for windows. Results were presented in descriptive statistics such as frequency, percentages, means and standard deviations. These were used to

identify the various types of instruments used in inventory control in community pharmacies; determine the extent of use of such instruments, by community pharmacists. Simple multiple regression analysis was used to evaluate factors influencing inventory control by community pharmacists. The robustness of this model was determined based on the values of the  $R^2$ , Adj.  $R^2$ , standard of the regression, t-test of each independent variable in the function, F-test of the overall equation, appropriateness of the signs on the regression coefficients as they conform to economic implications and number of statistically significant variables. Durbin Watson  $d^*$  statistics was used to establish the level of auto-correlation between the dependent and explanatory variables.

Means, standard deviations and regression technique was used to analyse ordinal data obtained from Likert Scale as if they were interval data for the following reasons: the sample size (410) is adequate and has at least 5 observations in a group (Jamieson, 2004); the study population of interest was normally distributed (Jamieson, 2004), parametric tests can be used to analyse data obtained from Likert scales (Sullivan & Artino 2013); and parametric tests are sufficiently robust to yield largely unbiased answers that are acceptably close to "the truth" when analysing Likert scale responses (Norman, 2010).

### **DISCUSSION OF RESULTS**

The percentage response for the administered questionnaire was 99.3% because out of a total of 413 questionnaires that were administered, 410 were properly filled, and used for analysis. Ages groups within 31-52 years bracket were more than other age groups. The distribution of respondents according to academic qualifications presented in Table 2 showed that holders of first degree (Bachelor of Pharmacy or its' equivalent) were higher in number. No respondent had neither a Master of Philosophy nor a Doctor of Philosophy degrees. Some of the respondents had more than one qualifications. Most of the community pharmacists practice in the urban and sub-urban centres 362 (88.3%) while a few of

them 48 (11.71%) practice in the rural areas. The study identified eleven types of technologies used in managing inventory in community pharmacies. All the respondents utilized the traditional tools of controlling inventory, such as the bin-cards, stock cards and inventory control ledgers in their community pharmacies. The community pharmacies also made use of mobile handsets. The large scale use of these tools may be because they are inexpensive, less complex and requires little training and minimal skills, to operationalize when compared to modern technology-based tools. Mobile phones, are personal, portable, and easy to use. (Phillips et al., 2006). However, more hands or personnel are usually required, to effectively put to use traditional tools; especially, if the inventory is large. In addition, traditional inventory management tools may not be robust enough to efficiently control inventory activities in modern day community pharmacy practice as a result of the expanding roles of the pharmacy profession. Currently, there is a paradigm shift in pharmacy practice from being product-focused to patient-centred care (Hepler & Strand, 1990) which requires the use of modern techniques and technologies. Appropriate use of technology to manage inventory could decrease patient waiting time, create more time for community pharmacist to provide pharmaceutical care and other pharmaceutical services to patients and customers (Awaya, et al., 2005). The use of technology to monitor inventory could reduce incidents of medication errors and improve patient outcomes (ASHP, 2011). Meanwhile, the traditional inventory control tools are less effective, more error prone, time wasting and more often than not do not create ample time for the community pharmacists to embark on patient-centred care (Awaya, et al., 2005; Ayad, 2011). In most cases, the traditional tools used for inventory management are not suitable for detecting and monitoring errors arising from medication use because they cannot be used to track the degree of patient compliance to prescribed medications.

The use of modern technologies to control inventory by the community pharmacists was revealed by this

study to be grossly inadequate. Apart from the Electronic Payment System (63.3%), and perhaps the Point-of-Sales (42.1%), the Barcode, CCTV, and the Internet were underutilized. Even, the RFID was never used at all in spite of the fact that research has shown that the radiofrequency identification (RFID) microchips, is capable of storing information about pharmaceutical products from their day of manufacture to the time they are removed from the shelves (Awaya et al., 2005). This attribute of the RFID makes it a priceless instrument for monitoring and tracking inventory, and drug usage because it will reduce inventory shrinkage arising from shoplifting, robbery, and theft. RFID captures information about existing inventory (Yuan, 2004). The RFID has improved product distribution from manufacturers to wholesalers and to retailers in pharmacies. This rigorous tracking process can help detect faked and adulterated medicines since RFID provides the opportunity to trace the sources of such medicines. RFIDs, therefore become indispensable tools not only for managing inventory, but also for minimising the chances of administering wrong medicines which usually have the potential of causing great and unimaginable harm to patients. The lack of use of the RFID by community pharmacies maybe due the fact RFIDs are expensive (Attaran, 2011). The influence of cost ( $\beta=0.74$ ,  $p=0.032$ ), as a variable on inventory management, was not only significant but very high (74%). The gross underutilization of the barcode technology is another major finding of this study. In most advanced countries, the barcode technology remains a "must-use" for dispensing in hospitals and in the retail community pharmacies. The barcode technology screens prescriptions and at the same time ensures that the correct medication is used to fill prescriptions (Ingersoll, 2015). It also improves medical record keeping, enhances patients' safety and quality of care. Therefore, the barcode technology is an error-prevention strategy that should be used in controlling inventories in community pharmacies. The barcode identifies sources of routine error, and permits better management of drug distribution process (Daina, 2010). Use of the POS was uncommon and below average among the community pharmacies. Some of

## Inventory Management in Community Pharmacies in Nigeria

the outstanding attributes of the POS which community pharmacies could leverage on are that the POS monitors and records all sales, reduces cashiers error, ensures easy and customers checkout, reduces inventory shrinkage, identifies seasonal trends in sales among others. The end result is that the POS will provide quality information that would enable the community pharmacists make better and informed decision on inventory management.

Regression results showed that all but one of the explanatory variables captured in the model had significant effects on inventory control system in community pharmacies. The determined coefficients of the eleven explanatory variables in the regression model revealed the extent to which they affected inventory control activities in community pharmacies, (which was proxied by the dependent variable (CPUT) as follows Technology ( $\beta_1=0.94, p=.031$ ), Knowledge ( $\beta_2=0.81, p=.001$ ), Training ( $\beta_3=0.77, p=.003$ ), Personnel ( $\beta_4=0.75, p=.010$ ), Skill ( $\beta_5=0.83, p=.014$ ), Inventory Shrinkage ( $\beta_6=0.87, p=.001$ ), Cost ( $\beta_7=0.74, p=.032$ ), Inventory Size ( $\beta_8=0.67, p=.011$ ), Product Type ( $\beta_9=0.53, p=.024$ ), Unclaimed prescriptions ( $\beta_{10}=0.21, p=.066$ ) and Use of Formularies ( $\beta_{11}=0.72, p=.007$ ). Only the variable, unclaimed prescription which was not significant, had minimal effect on inventory management activities in community pharmacies. All other variables had direct relationships with the dependent variable. Therefore, a unit change in each of the variables will cause a corresponding change of 94%, 81%, 77%, 75%, 83%, 87%, 74%, 67%, 53%, 21% and 72% respectively in the dependent variable. These results revealed the magnitude of influence the explanatory variables especially technology (94%), inventory shrinkage (87%), skill (83%) and knowledge (81%) have on management of inventory in community pharmacies.

The Durbin-Watson statistics obtained for the model was 1.80 which is close to 2. This result signifies the absence of first order autocorrelation in the regression model. The coefficient of determination R-squared was 0.72 which shows that 72% of inventory activities in community pharmacies is determined by the variations in the independent

**Table 1: Sample of Study Distribution According to Age**

Age (years)	Number	Percentage
<30	21	5.12
31-41	154	37.56
42-52	165	40.24
53-63	60	14.63
>64	10	2.44
Total	410	100

**Table 2: Sample of Study Distribution According to Qualifications**

Qualification	Number	Percentage
B. Pharm	347	84.63
Pharm D	13	3.17
M. Pharm	12	2.93
MSc in Pharmacy	8	1.95
M.Phil. in Pharmacy	NIL	NIL
MBA	25	6.10
MPH	5	1.22
Ph.D.	NIL	NIL
Total	410	100

**Table 3: Sample of Study Distribution According to Experience**

Experience (Years)	Number	Percentage
< 5	45	10.98
5-10	103	25.12
11-15	91	22.20
16-20	85	20.73
21-25	45	10.97
26-30	24	5.85
> 30	17	4.15
Total	410	100

**Table 4: Practice Location of the Community Pharmacists**

Practice Locations	Number	Percentage
Rural	48	11.71
Sub-Urban	52	12.68
Urban	310	75.61
Total	410	100

## Inventory Management in Community Pharmacies in Nigeria

**Table 5. Types of Technology used for Inventory Management in Community Pharmacies.**

Types	Number	Percentage
Computer system	180	43.9
Electronic payment	310	75.6
Closed Circuit Television	87	21.2
Barcodes	60	14.6
Point-of -Sales	209	51.0
Mobile Phones	410	100.0
Internet	189	46.1
Radiofrequency Identification (RFID)	NIL	NIL
Bin-cards	410	100.0
Stock cards	410	100.0
Store Ledger	410	100.0
Inventory Control Ledger	410	100.0

**Table 6: Extent of Use of Technology to Manage Inventory in Community Pharmacies.**

No.	Types of Instruments	Never 1	Rare 2	Sometimes 3	Often 4	Very Often 5	Mean	Std Dev.
1.	Computer system	1	1	4	174	230	4.54	0.56
2	Electronic payment	73	30	40	68	199	3.70	1.57
3	Closed Circuit Television	93	53	24	99	141	3.35	1.58
4	Barcode	276	104	8	12	10	1.48	0.87
5	Point-of -Sales	232	69	20	10	79	2.11	1.56
6	Mobile Phones	0	0	30	125	255	4.55	0.62
7	Internet	38	14	17	144	197	4.09	1.23
8	RFID	NA	NA	NA	NA	NA	NA	NA
9	Bin-cards	0	0	3	173	234	4.41	0.66
10	Stock cards	0	0	52	142	216	4.40	0.70
11	Store Ledger	0	0	70	169	171	4.25	0.71
12	Inventory Control Ledger	0	0	50	59	301	4.61	0.71

**Inventory Management in  
Community Pharmacies in Nigeria**

**Table 7. Factors that affect inventory management activities in community pharmacies in Nigeria.**

No.	Variables	No Influence 1	Little Influence 2	Moderate Influence 3	High Influence 4	Very High Influence 5	Mean
1.	Technology	0	0	0	21	389	4.95
2	Knowledge	0	5	8	54	343	4.79
3	Training	0	2	3	77	328	4.77
4	Personnel	10	11	30	80	279	4.48
5	Skill	4	3	22	100	281	4.59
6	Inventory Shrinkage	0	0	10	170	230	4.54
7	Cost	2	6	30	97	275	4.55
8	Inventory Size	1	5	10	120	274	4.61
9	Product Type	10	12	10	168	210	4.36
10	Unclaimed Prescriptions	157	211	20	10	12	1.80
11	Use of Formularies	23	19	39	114	215	4.17

**Table 8. Ordinary Least Square Estimation Results**

CIMA	2.81	0.94 $\beta_1$	0.81 $\beta_2$	0.77 $\beta_3$	0.75 $\beta_4$	0.83 $\beta_5$	0.87 $\beta_6$	0.74 $\beta_7$	0.67 $\beta_8$	0.53 $\beta_9$	0.21 $\beta_{10}$	0.72 $\beta_{11}$
Se	(0.75)	(0.34)	(0.38)	(0.30)	(0.23)	(0.40)	(0.42)	(0.30)	(0.34)	(0.11)	(0.18)	0.29
t-value	3.75	2.79	2.15	2.58	3.25	2.05	2.08	2.50	1.99	4.70	1.16	2.50
Prob.	.011*	.031*	.001*	.003*	.010*	.014*	.001*	.032*	.011*	.024*	.066	.007*

\*Significant at p<0.05 Adj. R-square =0.713

R2 = 0.72

F-Stat = 655.93. Prob F-Stat = 0.000.

Durbin Watson Statistics (D-W) = 1.80

**Table 9: Respondents' perceived benefits of using technology to manage inventory.**

Benefits	Number of Respondents	Percentage
Decreased waiting time	402	98.0
Decreased loss	389	94.9
Increased sales/profit	279	68.0
More time for patient counselling	398	97.1
Ensures availability of products	388	94.3
Ensures patients' satisfaction	245	59.8
Improves accountability	406	99.0
Decrease in medication errors	402	98.0

Some respondents mentioned more than one benefit.

**Inventory Management in  
Community Pharmacies in Nigeria**

variables as explained by the model. Therefore, only 28% changes in the dependent variable could be attributed to the influence of other variables not found in the equation but measured by the error term. The Adjusted R square value which is the most useful measure of the success of a model was 0.71; while the F-statistics was 655 and significant at 5%. Hence the model is of good fit.

Some benefits of using technology in managing inventory in community pharmacies are presented in Table 9. A majority of the respondents believed that the use of technology in the management of inventory would result in a decrease in patient waiting time, a reduction in loss arising from inventory shrinkage and medication errors. In addition, more time would not only be available for patient counselling by community pharmacists, but also improve accountability, product availability and sales.

## CONCLUSION

The study identified eleven different technologies that community pharmacies utilize in managing inventory. These technologies are the computer system, electronic payment, closed circuit television, barcode, point-of-sales, mobile phones, internet, bin cards, stock cards, store ledger and inventory control cards. The predominant technologies used in descending order of magnitude were bin cards, stock cards, store ledger inventory control cards, mobile phones, electronic payments, point-of-sale, internet, computer systems, closed circuit television, and barcode. Factors influencing the use of these technologies in decreasing order of magnitude were the level of technological capability of community pharmacists, their knowledge and training, inventory size, pharmacists' skill, cost, inventory shrinkage, quality of personnel, product types, use of formularies and unclaimed prescriptions. Community pharmacists were of the opinion that the use of technology in inventory management would reduce patient waiting time, create more time for patients' counselling, reduce medication errors, minimize inventory shrinkage, ensure availability of products and increase the degree of accountability in

community pharmacies. However, some new technologies were not made use of in controlling inventory. Therefore community pharmacies should make use of newer technologies that would enable them manage inventory better.

## LIMITATIONS OF THE STUDY AND NEED FOR FURTHER RESEARCH

Not all community pharmacists attended the ACPN annual conference. Therefore, the findings of this study cannot be generalized because the opinions of those who did not attend the conference were not obtained. Also the opinions of customers or patients who patronize these community pharmacies were not sort. Doing so would have provided useful data that could have been used to validate the claims of the community pharmacists, hence the need for further research.

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# Use of Facebook in Higher Education: A Promoter or Distractor

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*Academic literature suggests that increased academic engagement results in academic success for students. However, available literature does not provide a clear explanation of the concept of student engagement itself. The student engagement has two broad dimensions: academic and social. Recently, the increased proliferation of social media and digital technologies has persuaded academics to use these technologies in a bid to increase student engagement. This study analyzed the use of Facebook (FB) in higher education and majority of students used FB but this use was predominantly social that was affected by the personality factors of individual student. The use of FB in higher education appears a medium that distract rather than engage the students.*

**Keywords:** Facebook, Social Media, Higher Education, Students, Student Engagement.

## INTRODUCTION

Student engagement is a significant predictor of academic performance (Chickering & Gamson, 1999; Pascarella & Treznini, 2005; Krause & Coates, 2008; Reyes et al., 2012) and enabler of good undergraduate learning. (Chickering & Gamson, 1987, 1999; Reyes et al., 2012) There exist various measures of student engagement that focus on academic parameters interaction of students with peers faculty and social support (Coates, 2008; National Survey of Student Engagement (NSSE, 2005; McClenney et al., 2012; Henrie et al., 2015; Pike, Kuh & McKinley, 2008; Zhao & Kuh, 2004).

Increasing number of students in the tertiary education has created a diverse student body around the globe (Dobson, 2010). Similarly, many significant shifts are taking place. The funding available for students clubs & societies is decreasing (NUS, 2011; Nichols et al., 2014) more and more students are engaging in work while studying (Polidano & Zakirova, 2011; Quaye & Harper, 2014) and universities facing, increasing pressures to look for new avenues of students engagement with academia (Coates, 2006; Coates & Ransome, 2011; Pike, Kuh & McCormik, 2011; Quaye & Harper, 2014). Most of the present generation of university students has been brought up in an environment where they had access to modern information & communication technologies including Internet. Currently, many universities around the globe are delivering their services online. There is an increasing interest in student engagement via new forms of digital communication media. Online social

media is one form of such communication media. Until recently, the trends of use of social media in academic settings vary significantly across different parts of the world. Many metrics developed to measure student engagement relates to student experience and not to the student learning. In the context of developing world, the existing literature lacks as to how the academic learning is associated with increased social interaction of students and what is the possible role of such social interaction of students in academia. Recently, the use of university-based student portals and online learning management systems has started to take center stage in university course delivery. As such universities must enhance their understanding of the impact of various web-based learning practices including on social media student engagement. (Coates, 2007, Mazer, Murphy, & Simonds, 2007).

The intuitive and appealing concept of engagement is yet a difficult one that lack clarity in its definition. There exist various methods of assessing engagement such as AUSSE (Hagel et al., 2012) and National Survey of Student Engagement (NSSE) (NSSE, n.d.) Both are common survey instruments that include items regarding different aspects of the university and its services. Such items focus on specific tools or processes and not the functions of the institution & its structure. Such focus leads to the confusion as to whether engagement should be regarded as an attribute of student, the university, or the interaction between student & the university.

Earlier, the concept of student engagement was conceived as student engagement with academics that could be increased by enhancing university course offerings to reduce student attrition rate. Little emphasis was placed on academic discipline itself. Recent academic view of engagement recognize two broad meaning of engagement: academic engagement and social engagement. Academic engagement refers to student's willing participation in university learning activities and perform as per instruction provided. The social engagement refers to the social attachment of the student with university and academics. Student

engagement can be considered to have many aspects. Students learning is through a cognitive process. The outcomes of this learning process are supported by appropriate learning behaviors. The learning process and learning behaviors are mediated through affective academic experience. Here the affective experience means desire & motivation to learn. This effective experience can be a result of a positive desire or fear. However, this desire or fear is not enough for good academic learning. To achieve desired learning outcomes, and university must focus on developing students' cognitive skills.

According to Fredrick, Blumenfeld and Paris (2004), instructional designs that take into account the development of the appropriate behaviors required for cognitive engagement can generate the cognitive and behavioral activities essential for learning. The existing literature is predominantly focused on student outcomes with little attention towards student engagement, which is crucial for desired student outcomes. In developing countries perspective, more evidence is required to establish whether increased student engagement is associated with academic success of the student. It can be argued that promoting student engagement through social media may not provide the development of cognitive engagement required for student learning. Still little evidence is available that shows increasing student metrics of engagement can help increase students' success. It is therefore can be argued that increased social engagement through social media, may not improve the student's cognitive engagement required for learning (Amichai-Hamburger & Vinitzky, 2010; Mehdizadeh, 2010; Wilson, Fornasier, & White, 2010, HU, 2011).

Use of social media is rapidly increasing especially with the increased availability of portable computing devices. It is this proliferation of the use of social media that has attracted universities attention for its use in higher education to promote student engagement. Social networking sites, with a large member population that is digitally proficient,

have been regarded as effective tools that can help promote student engagement.

This study focuses on FB because it is the dominant social networking site that had an active user base of more than 1.23 billion by the end of 2013 (Sedghi, 2014). According to Ryan and Xenos (2011), typical FB user spends upto 2 hours per day on FB. Each FB user creates a profile in which he/she provides a range of personal information, work and education history, interests, and other details. Users on also send friend requests to other members, join interest groups and networks, send messages to other users, and write on their walls. The use of FB has attracted significant attention of the researchers. There exist many studies that examine FB and its use (Cheung, Chui & Lee, 2010; Ryan and Xenos, 2011; Junco, 2012; Nadkarni & Hofmann, 2012; Kross et al., 2013), user motivation for using FB (Ross et al., 2009; Lau & Lam, 2012 Deng & Tavares, 2013), and psychological factors that affect use of FB (Carpenter, Green & LaFlamm, 2011; Ryan & Xenos, 2011; Zhong, Hardin & Sun 2011; Nadkarni & Hofmann, 2012; Hong & Chiu, 2014).

study sample, 175 were male and rest was female. This average age of participants was 19.85 years.

This study used multiple researches instruments. Australian personal Inventory (API) and Facebook Questionnaire developed by Ross et al. (2009) were used. The 28-items of Facebook questionnaire measured basic FB use, attitudes towards FB, and information relating to personal information posted on FB. Each item was measured on a five-point likert-scale. The API was developed by Murray et al., (2009) that measures big five personality traits including neuroticism, extraversion, openness, and conscientiousness. The API consisted of 50 items and each item was measured on a five-point Likert-scale where 1 represented 'very inaccurate' and 5 represented 'very accurate'. Another questionnaire was developed to measure student's academic performance in order examine whether differences exist in the academic performance of student FB users and nonusers. Questionnaires were distributed in hard copy format. Data was examined using SPSS V22 software.

## RESEARCH METHODOLOGY AND MEASURES

The participants of this research were students from a large public university in Karachi. All 324 participating students had FB accounts. In our

## RESULTS AND DISCUSSIONS

The basic descriptive statistics regarding the FB usage of the participants is shown in Table 1. The time spent using FB was measured in minutes.

	Time spent using Facebook	Number of Facebook logins per day	Number of Facebook friends	Number of Facebook Groups	Number of photos posted
Overall N = 324	Mean = 67.56 SD = 63.45	Mean = 5.21 SD = 6.12	Mean = 351.6 SD = 230.21	Mean = 65.91 SD = 210.42	Mean = 282.92 SD = 369.21

Table 2 show preferred functions/ applications of FB used by the students.

Function	Percentage
Wall	36%
Massages	18%
Photos	17 %
Events	15%

Use of Facebook in Higher Education:  
A Promoter or Distractor

Response	Percentage
It is how I communicate with my friends	57%
It allows me to communicate with people from my past	18%
It provides me with information	5%

	Conscientiousness		Neuroticism		Extroversions	
	Low Mean (SD)	High Mean (SD)	Low Mean (SD)	High Mean (SD)	Low Mean (SD)	High Mean (SD)
Time spent per day using Facebook	81.92 (77.9)	55.21 (49.11)	60.13 (58.21)	82.21 (80.88)	68.12 (65.67)	73.12 (75.11)
Number of Facebook friends	392.82 (260.58)	283.24 (182.11)	365.33 (238.42)	364.63 (242.07)	280.13 (243.01)	443.12 (228.13)
Number of Facebook groups	106.12 (247.11)	37.43 (80.21)	25.21 (58.16)	112.56 (332.04)	43.13 (84.21)	119.56 (356.21)
Number of photos posted	295.11 (328.24)	238.76 (385.17)	301.65 (423.05)	260.13 (274.12)	162.01 (215.11)	384.98 (363.12)

From the information presented in Table 1, 2, and 3, it appears that the most preferred application of FB is the Wall (36%), followed by messages (18%), photos (17%) and events (15%). When students were asked, why do they like FB, the most common response was "It is how I communicate with my friends (57%), followed by "It allows me to communicate with people from my past" (18%). The least preferred reason for liking FB was "It provides me with information". Only 5% of respondents thought that FB provides them with information.

Table 4 shows the participants' responses on big-five personality traits. The table reveals significant differences in FB use among students having different personality traits.

Looking at Table 4, we can see that students high on neuroticism spent more time using FB, participated in more FB groups and posted more photos as compared with the students low on neuroticism. Students high on extroversion spent more time using FB, had more FB friends, participated in more FB

groups and posted more photos as compared with the students low on extroversion. Students high on conscientiousness spent less time using FB, had less FB friends, participated in less FB groups and posted less photos as compared with the students low on conscientiousness.

The relationship between variables of academic performance and FB users and nonusers was examined through Multiple Analysis of Variance (MANOVA). First, missing data and outliers were examined and assumptions of MANOVA were checked. GPA and hours spent studying per week were defined using a five-point Likert scale. To check the independence assumption of MANOVA a residual vs. group plot was developed for each independent variable (i.e. FB use, student status, and student major). The histogram for each dependent variable and independent variable did not show normal distribution but it was expected given that ordinal data was used (Bartlett & Wasley, 2008). GPA showed negative skewness while study hours showed positive skewness. This non-normal

Use of Facebook in Higher Education:  
A Promoter or Distractor

distribution of dependent variables means that the results should be interpreted with caution. The MANOVA assumption of homogeneity of covariance was not met because the significance value of Box's test was less than 0.05. Levene's test was used to check the same assumption for univariate. Test results show that the same assumption for univariate was not met for GPA ( $p < 0.01$ ) but upheld as shown by the results of ( $p = 0.21$ ). The three-factor MANOVA was performed on dependent variables (GPA, and study hours), and independent variables (FB use, student status, and student major). FB use had two categories: yes and no. Student status had two categories: undergraduate and graduate. Student major had three categories: business, engineering, other. The results of Shapiro-Wilk Test showed that multivariate main effect was statistically significant FB use and student status.

FB Use Wilks lambda = .862,  $F = 32.234$ ,  $p < .001$   
Student Status Wilks lambda = .943,  $F = 8.254$ ,  $p = .001$

A univariate ANOVAs was performed on dependent variables and independent variables. Study hours ( $F = 57.329$ ,  $p < .001$ ) and GPA ( $F = 13.307$ ,  $p = .001$ ) were found significant for FB use. Only GPA ( $F = 15.812$ ,  $p < .001$ ) was significant for student status. The ANOVA for student status indicated significant differences on GPA between undergraduate and graduate students. The reported mean of GPA of graduate student was in 3.25-4.0 range while reported mean of GPA of undergraduate student was in 2.15- 3.0 range. No significant two- and three-way interactions were present in the MANOVA and ANOVA analysis. It can be said that, at univariate level, relationship between student's FB use, study hours, and GPA is independent of student status and student major.

The main reason for respondent's use of FB appears to be social interaction. Use of FB to get information is very uncommon. This finding needs cautious interpretation through. The research scales used in this study contained very few items regarding

student's use of FB for information seeking. It is possible that respondents may not have considered this aspect of FB use in depth. It appears that different personality traits influence pattern of FB use by students. Students high on conscientiousness use FB less as compared with students low on conscientiousness. This suggests that students high on conscientiousness are less likely distracted by FB use in their studies. This finding supports the notion that FB is more suited for social interaction rather than academic interaction. Students high on neuroticism used FB more and were members of more FB networks. Though they had similar number of FB friends as compared with students low on neuroticism, they posted less photos and used block lists more often. In line with the finding of Postman (2005), FB appears to be a medium that helps knowing social and personal lives of friends without active engagement with friends. FB does not provide social engagement with the external world. It appears that FB interface does not provide active social engagement with people. Rather engagement through FB is an indirect social engagement with the external world. Therefore, use of FB to promote engagement among students who are below average may act as a distractor rather than a promoter of academic engagement. Student high on extraversion had more friends, were member of more FB groups, shared more photos, and checked their FB wall more often. It can be seen that FB allows these students to show their extrovert personality.

It can be inferred that FB use reflects personality. FB is a medium that students can use for showing their personality and engaging socially with others in way they prefer. However, FB use does not promotes any specific social behavior that could act as a catalyst to enhance academic engagement. In fact, FB may become a distractor for less conscientious students and degrade their academic performance. This finding is in line with Madge, Meek, Wellens and Hooley (2009) that suggest the most common use of FB by students is to setup timings for face-to-face meetings for academic arrangements. In other

words, FB is used to facilitate social engagement around academic engagement that would take place in future. This study also found that students feeling bored or looking for opportunities of some mental rest used FB more often because they considered FB as an easy option to handle such situations of stress or dullness (Zohonget. Al, 2011). Students with less need of cognition use social media more. If this pattern becomes typical, FB can act as a preferred from of distractor. As such, FB would be least effective to promote academic engagement. The current design of FB promotes social interaction and entertainment. FB does not provide any tools that could provide study-relevant form of interaction. Familiarity with FB may help students engage socially within an unfamiliar academic environment. However, its use can be regarded as a source of disengagement rather than solution of disengagement.

This study found that academic performance of student FB users and non-users was significantly different. Student FB users reported a lower mean GPA and spent few hours per week studying on average than student non-users ( $M = 3.16, SE = .09; M = 3.92, SE = .06$ , respectively). It is interesting to note that both users and non-users spent time on Internet that didn't differ significantly between the two groups. It appears that the users and non-users have very different study strategies. The study also found significant differences between GPA of undergraduate and graduate students with graduate students reporting a higher mean GPA than undergraduates. This study did not find any significant two-way or three way interactions. This suggest that univariate relationship between FB use and GPA and hours spent studying is the same irrespective of student's status or the major. It can be inferred that student personality is a significant predictor of student's inclination to use FB. It appears that student users of FB more actively involved in extracurricular activities and there is an increased probability that these students would use FB to extend their existing social network. The study

also found that non-users of FB reported more working hours. This suggest that probably these students consume too much time in their work and academic lives that they either don't have enough time to engage with other people on FB or may be its not their priority.

## CONCLUSION

This study considered the role of social media in increasing academic engagement of students. During initial years of study programs, universities need a common and moderate level of social and academic engagement to facilitate students continue their study. Different types of students may need different types of engagement. Facebook, as a medium of social interaction, has a limited role in engaging students to academics. Academicians planning to use Facebook to promote academic engagement should therefore be cautions and plan accordingly.

## LIMITATION AND FUTURE RESEARCH AREAS

Limitations of current study include a relatively small sample of students limited to one country. The results may not be generalizable to students at other universities or other countries. Future research may investigate the role of social media in increasing academic engagement of students in cross-cultural settings and heterogeneous samples of students with different age groups and settings.

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## Use of Facebook in Higher Education: A Promoter or Distractor

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# Structural Capital: A Comparative Study between Banking and Reality Sector of India

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*Structural capital is that infrastructure, processes, procedures and databases of the organization that help human capital to function (Maddocks & Beaney, 2002). In order to gain perspective on the concept of structural capital an extensive review of literature was carried out. Objective of the study is to see whether there is a statistically significant difference between the different factors of structural capital for reality and banking sector. This study concentrates on banking and reality sector of India. The basis of selection of banking and reality sector organizations was the top 3 private banks, public banks and reality sector organizations according to the Net Sales for 2012 as given in Prowess database.*

*The data were collected using the questionnaire formulated after the Review of Literature. The questionnaire had 123 questions. 12 hypotheses were formulated and mean scores were calculated; also chi-square test was applied using PASW.*

*It was found that all the 12 factors show statistically significant difference in the means of reality and banking sector, it means that both the sector give different weightage to different factors of structural capital.*

**Keywords:** System, Information System and Participation.

## INTRODUCTION

Our economy is evolving from being an agrarian economy, to industrial economy to service economy to knowledge economy to a wisdom economy. So, the nature of our economy has made it necessary to understand the concept of structural capital. As new employees, who will replace old employees can always learn from these structures so that the significance of the employees who leave diminishes.

Structural capital is that infrastructure, processes, procedures and databases of the organization that help human capital to function (Maddocks & Beaney, 2002). "Structural capital includes things like, buildings, hardwares, softwares, processes, patents, trademarks, organization's image, information system, and proprietary databases" (Essays UK, 2013). "Structural capital can be classified into organization capital, process capital and innovation capital. Organizational capital includes the organization philosophy and systems for" (Essays UK, 2013) improving the performance of the organization.

Process capital includes the processes, i.e., techniques, procedures, and programs that implement and augment the delivery of goods and services. Innovation capital includes intellectual properties and intangible assets (Edvinsson & Malone, 1997). Intellectual properties are commercial rights that are protected like copyrights and trademarks. Intangible assets are all of the other talents and theory by which an organization is run.

## REVIEW OF LITERATURE

In order to gain perspective on the concept of structural capital an extensive review of literature was carried out. It was found that hardly any literature is available on this topic in India which means not much work has been done on this area in India.

Table No. 1.1 has been formulated stating the definitions given by different researchers.

Authors	Definitions of Structural Capital
Bontis, (1996)	Those technologies, methodologies and processes that make the functioning of the organization possible, this is, basically the elements that define the working mode of the firm.
Kogut & Zander, (1996)	Elements that belong to the organization and that facilitates its configuration as an entity providing coherence and superior principles for coordination.
Euroforum, (1998)	Knowledge that can be reproduced and shared and, therefore, becomes somewhat explicit.
Camison, Palacios, & Devece, (2000)	Knowledge that the organization has internalized and that remains within its structure processes or culture although employees leave.
Carson, Ranzijn, Winefield, & Marsden, (2004)	Processes and procedures that arise from employee intellectual contribution.
Ordonez de Pablos, (2004)	Knowledge that remains in the organization when employees return to their homes and, therefore, is owned by the firm. In this sense, SC is integrated by organizational routines, strategies, process manuals, and databases.
Alama, (2007)	Intangibles that determine the manner of working of a company.

(Essays UK, 2013)

Aziz, Sharabati, Jawad & Bontis, (2010) conducted a research on intellectual capital and business performance in the pharmaceutical sector of Jordan. In this study 132 top and middle level managers drawn from Jordanian Association of

Pharmaceutical Manufacturers (JAPM). The survey instrument was based on Bontis' intellectual capital questionnaire (Bontis, 1998a). The study has taken three factors of structural capital into consideration i.e., Systems and programs (S&P), Research and Development (R& D), and Intellectual Property Rights (IPR).

In this research, the following tests were applied:

- To test normal distribution Kolmogorov Smirnov for all dependent and independent variables.
- Cronbach alpha to test the reliability.
- To test validity factor analysis (i.e., Pearson's principal component analysis) was conducted with and without rotation (i.e., Varimax rotation with Kaiser normalization).
- Pearson's bivariate correlation coefficient to test relationship between independent and dependent variables.
- ANOVA test to analyze respondents' characteristics related to gender, age, education, experience, department, and sector.
- Before conducting multiple regression analysis, a test of multi-collinearity using the VIF (variance inflation factor) was also conducted.
- Partial Least Squares (PLS Graph v.3.00) was used to test conceptual model and relationships among independent and dependent variable.
- Path analysis.

(Youndt & Snell, 2004) define organizational capital as representing institutionalized knowledge and codified experience stored in databases, routines, manuals, structures, patents, trademarks and so forth.

They also state that organizational capital is also embedded in standard operating procedures, business processes, rules, routines, and informal "ways of doing business".

The results of the above stated study were that:

- Both documentation ( $\beta = 0.227$ ,  $p = 0.01$ ) and information systems ( $\beta = 0.271$ ,  $p = 0.01$ ) HR configurations were significantly related to an organization's level of organizational capital, supporting the above two Hypothesis.
- Organizational capital ( $\beta = 0.189$ ,  $p = 0.05$ ) was significantly related to organizational performance, providing string support for the Hypothesis 3.

Under Documentation HR Configurations the following statements were used:

- We encourage employees to write "lessons learned" reports after learning experiences (employee exchange programs, projects etc.).
- Our employees help redesign work systems.
- We encourage our employees to continuously update our company's knowledge databases.
- We have a successful employee suggestion program.

Under Information Systems the following statements were used:

- Our information systems are user-friendly.
- Our information systems are accessible to all employees.
- Our information systems are integrated with each other.
- We utilize groupware, email, etc.

## RESEARCH METHODOLOGY

Objective of the study is to see whether there is a statistically significant difference between the different factors of structural capital for reality and banking sector.

## SCOPE OF THE STUDY

This study concentrates on banking and reality sector of India, the basis of selection of banking and reality sector organizations was the top 3 private

banks, public banks and reality sector organizations according to the Net Sales for 2012 as given in Prowess database. Table No. 1.2 to Table No. 1.4 gives the details of the organizations and their net sales according to Prowess database.

Company Name	Annual Interim Consolidated
	Rs. Million
	March 2012
	Net sales
I C I C I Bank Ltd.	379948.6
H D F C Bank Ltd.	276055.6
Axis Bank Ltd.	219949

Company Name	Annual Interim Consolidated
	Rs. Million
	March 2012
	Net sales
SBI	1471973.9
PNB	374473.1
Canara Bank	308156.4

Company Name	Annual Interim Consolidated
	Rs. Million
	March 2012
	Net sales
D L F Ltd.	96293.8
Jaypee Infratech Ltd.	92050
Omaxe Ltd.	18487.5

## DATA COLLECTION

The data were collected using the questionnaire formulated after the Review of Literature, the questionnaire had 123 questions and Table No. 1.5 gives the details of the studies which have been used for formulation of the questionnaire.

Table No. 1.5 Table showing variables and factors taken from various researches		
S.No.	Factor	Research
1.	System	(Topal, Conkar & Mustafa, 2008), (Bontis, 1998b), (Aziz, Sharabati, Jawad, & Bontis, 2010), (Sofian, Tayles, & Richard, 2005), (Youndt & Snell, 2004)
2.	Research and Development	(Aziz, Sharabati, Jawad, & Bontis, 2010)
3.	Intellectual Property Rights	(Amiri, Jandghi, Alvani, Hosnavi, & Majid, 2010), (Sofian, Tayles, & Richard, 2005), (Youndt & Snell, 2004)
4.	Information System	(Topal, Conkar & Mustafa, 2008), (Bontis, 1998b), (Youndt & Snell, 2004), (Aziz, Sharabati, Jawad, & Bontis, 2010), (Sofian, Tayles, & Richard, 2005)
5.	Culture	(Topal, Conkar & Mustafa, 2008), (Bontis, 1998a), (Amiri, Jandghi, Alvani, Hosnavi, & Majid, 2010), (Youndt & Snell, 2004)
6.	Learning Organization	(Topal, Conkar & Mustafa, 2008), (Bontis, 1998a), (Amiri, Jandghi, Alvani, Hosnavi, & Majid, 2010), (Sofian, Tayles, & Richard, 2005)
7.	New Ideas	(Bontis, 1998a), (Sofian, Tayles, & Richard, 2005), (Amiri, Jandghi, Alvani, Hosnavi, & Majid, 2010), (Human Factor International, 2011)
8.	Documentation	(Youndt & Snell, 2004)
9.	Strategy	(Amiri, Jandghi, Alvani, Hosnavi, & Majid, 2010)
10.	Communication	(Human Factor International, 2011)
11.	Authority and Responsibility	(Human Factor International, 2011)
12.	Participation	(Human Factor International, 2011)

The details of data collection are given in Table No. 1.6 and Table No. 1.7.

Table No. 1.6 showing details of data collection from banks				
S.No.	Name of Banks	Actual	Target	Gap
1.	State Bank of India	31	31	0
2.	Punjab National Bank	31	31	0
3.	Canara Bank	24	31	7
4.	ICICI Bank Ltd.	31	31	0
5.	HDFC Bank Ltd.	24	31	7
6.	Axis Bank Ltd.	15	31	16
	TOTAL	156	186	30

Table No. 1.7 showing details of data collection from real estate organizations				
S.No.	Name of Real Estate Organizations	Actual	Target	Gap
1.	DLF Ltd.	3	31	28
2.	Jaypee Infratech Ltd.	31	31	0
3.	Omaxe Ltd.	13	31	18
	Total	47	93	46

It was decided that 31 is a large sample hence, at least 31 respondents from both banking and reality sector should be there. Therefore, total number of responses from banking sector and reality sector are more than 31.

## HYPOTHESES

Null Hypothesis 1 (HO 1): There is no statistically significant difference between the means of the factor system of banking and reality sector.

Alternative Hypothesis 1 (HA 1): There is statistically significant difference between the mean scores for factor system of banking and reality sector.

Null Hypothesis 2 (HO 2): There is no statistically significant difference between the means of the factor research and development of banking and reality sector.

Alternative Hypothesis 2 (HA 2): There is statistically significant difference between the mean scores for factor research and development of banking and reality sector.

Null Hypothesis 3 (HO 3): There is no statistically significant difference between the means of the factor intellectual property rights of banking and reality sector.

Alternative Hypothesis 3 (HA 3): There is statistically significant difference between the mean scores for factor intellectual property rights of banking and reality sector.

Null Hypothesis 4 (HO 4): There is no statistically significant difference between the means of the factor information system of banking and reality sector.

Alternative Hypothesis 4 (HA 4): There is statistically significant difference between the mean scores for factor information system of banking and reality sector.

Null Hypothesis 5 (HO 5): There is no statistically significant difference between the means of the factor culture of banking and reality sector.

Alternative Hypothesis 5 (HA 5): There is statistically significant difference between the mean scores for factor culture of banking and reality sector.

Null Hypothesis 6 (HO 6): There is no statistically significant difference between the means of the factor learning organization of banking and reality sector.

Alternative Hypothesis 6 (HA 6): There is statistically significant difference between the mean scores for factor learning organization of banking and reality sector.

Null Hypothesis 7 (HO 7): There is no statistically significant difference between the means of the factor new ideas of banking and reality sector.

Alternative Hypothesis 7 (HA 7): There is statistically significant difference between the mean

scores for factor new ideas of banking and reality sector.

Null Hypothesis 8 (HO 8): There is no statistically significant difference between the means of the factor documentation of banking and reality sector.

Alternative Hypothesis 8 (HA 8): There is statistically significant difference between the mean scores for factor documentation of banking and reality sector.

Null Hypothesis 9 (HO9): There is no statistically significant difference between the means of the factor strategy of banking and reality sector.

Alternative Hypothesis 9 (HA 9): There is statistically significant difference between the mean scores for factor strategy of banking and reality sector.

Null Hypothesis 10 (HO 10): There is no statistically significant difference between the means of the factor communication of banking and reality sector.

Alternative Hypothesis 10 (HA 10): There is statistically significant difference between the mean scores for factor communication of banking and reality sector.

Null Hypothesis 11 (HO 11): There is no statistically significant difference between the means of the factor authority responsibility of banking and reality sector.

Alternative Hypothesis 11 (HA 11): There is statistically significant difference between the mean scores for factor authority responsibility of banking and reality sector.

Null Hypothesis 12 (HO 12): There is no statistically significant difference between the means of the factor participation of banking and reality sector.

Alternative Hypothesis 12 (HA 12): There is statistically significant difference between the mean scores for factor participation of banking and reality sector.

## DATA ANALYSIS

Chi square test has been applied on SPSS 20 for analysis purpose as most of the data is non normal.

Table No. 1.8 Chi square test for reality and banking sector for the factor system			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	68.440a	32	0.000
Likelihood Ratio	71.761	32	0.000
Linear-by-Linear Association	18.671	1	0.000
N of Valid Cases	202		
a. 52 cells (78.8%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.9 Chi square test for reality and banking sector for the factor research and development			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.811a	30	0.000
Likelihood Ratio	77.429	30	0.000
Linear-by-Linear Association	0.876	1	0.349
N of Valid Cases	202		
a. 51 cells (82.3%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.10 Chi square test for reality and banking sector for the factor intellectual property rights			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	96.918a	39	0.000
Likelihood Ratio	97.424	39	0.000
Linear-by-Linear Association	2.816	1	0.093
N of Valid Cases	202		
a. 70 cells (87.5%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.11 Chi square test for reality and banking sector for the factor information system			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	67.964a	26	0.000
Likelihood Ratio	80.915	26	0.000
Linear-by-Linear Association	16.313	1	0.000
N of Valid Cases	202		
a. 39 cells (72.2%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.12 Chi square test for reality and banking sector for the factor culture			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	58.241a	25	0.000
Likelihood Ratio	64.443	25	0.000
Linear-by-Linear Association	15.109	1	0.000
N of Valid Cases	202		
a. 39 cells (75.0%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.13 Chi square test for reality and banking sector for the factor learning organization			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.125a	21	0.001
Likelihood Ratio	54.990	21	0.000
Linear-by-Linear Association	3.284	1	0.070
N of Valid Cases	202		
a. 33 cells (75.0%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.14 Chi square test for reality and banking sector for the factor new ideas			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	78.448a	48	0.004
Likelihood Ratio	92.168	48	0.000
Linear-by-Linear Association	0.020	1	0.888
N of Valid Cases	202		
a. 90 cells (91.8%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.15 Chi square test for reality and banking sector for the factor documentation			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	41.197a	15	0.000
Likelihood Ratio	43.581	15	0.000
Linear-by-Linear Association	4.129	1	0.042
N of Valid Cases	202		
a. 20 cells (62.5%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.16 Chi square test for reality and banking sector for the factor strategy			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.855a	14	0.020
Likelihood Ratio	30.304	14	0.007
Linear-by-Linear Association	0.820	1	0.365
N of Valid Cases	202		
a. 18 cells (60.0%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.17 Chi square test for reality and banking sector for the factor communication			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	65.543a	26	0.000
Likelihood Ratio	72.024	26	0.000
Linear-by-Linear Association	3.170	1	0.075
N of Valid Cases	202		
a. 42 cells (77.8%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.18 Chi square test for reality and banking sector for the factor authority & responsibility			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.998a	28	0.000
Likelihood Ratio	73.612	28	0.000
Linear-by-Linear Association	1.502	1	0.220
N of Valid Cases	202		
a. 46 cells (79.3%) have expected count less than 5. The minimum expected count is 0.23.			

Table No. 1.19 Chi square test for reality and banking sector for the factor participation			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	55.954a	32	0.005
Likelihood Ratio	62.817	32	0.001
Linear-by-Linear Association	0.911	1	0.340
N of Valid Cases	202		
a. 54 cells (81.8%) have expected count less than 5. The minimum expected count is 0.23.			

In Table No. 1.8 Pearson Chi square has a value of 68.440 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor system of reality and banking sector i.e., we reject null hypothesis HO 1 in favour of alternative hypothesis HA 1.

In Table No. 1.9 Pearson Chi square has a value of 69.811 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor research and development of reality and banking sector i.e., we reject null hypothesis HO 2 in favour of alternative hypothesis HA 2.

In Table No. 1.10 Pearson Chi square has a value of 96.918 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor intellectual property rights of reality and banking sector i.e., we reject null hypothesis HO 3 in favour of alternative hypothesis HA 3.

In Table No. 1.11 Pearson Chi square has a value of 67.964 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor information system of reality and banking sector i.e., we reject null hypothesis HO 4 in favour of alternative hypothesis 4.

In Table No. 1.12 Pearson Chi square has a value of 58.241 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor culture of reality and banking sector i.e., we reject null hypothesis HO 5 in favour of alternative hypothesis HA 5.

In Table No. 1.13 Pearson Chi square has a value of 48.125 with 0.001 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor learning organization of reality and banking sector i.e., we reject null hypothesis HO 6 in favour of alternative hypothesis HA 6.

In Table No. 1.14 Pearson Chi square has a value of 78.448 with 0.004 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor new ideas of reality and banking sector i.e., we reject null hypothesis HO 7 in favour of alternative hypothesis HA 7.

In Table No. 1.15 Pearson Chi square has a value of 41.197 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the

means of the factor documentation of reality and banking sector i.e., we reject null hypothesis HO 8 in favour of alternative hypothesis HA 8.

In Table No. 1.16 Pearson Chi square has a value of 26.855 with 0.020 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor strategy of reality and banking sector i.e., we reject null hypothesis HO 9 in favour of alternative hypothesis HA 9.

In Table No. 1.17 Pearson Chi square has a value of 65.543 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor communication of reality and banking sector i.e., we reject null hypothesis HO 10 in favour of alternative hypothesis HA 10.

In Table No. 1.18 Pearson Chi square has a value of 69.998 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor Authority & Responsibility of reality and banking sector i.e., we reject null hypothesis HO 11 in favour of alternative hypothesis HA 11.

In Table No. 1.19 Pearson Chi square has a value of 55.954 with 0.005 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant, which means that there is statistically significant difference between the means of the factor participation of reality and banking sector i.e., we reject null hypothesis HO 12 in favour of alternative hypothesis HA 12.

**Results**

Table No. 1.20 Results of Chi square test compiled			
NULL HYPOTHESIS	REJECT/FAIL TO REJECT	DATA SUPPORT	INFERENCE
<b>HO 1:</b> There is no statistically significant difference between the means of the factor system of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 68.440 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor system of reality and banking sector.
<b>HO 2:</b> There is no statistically significant difference between the means of the factor research and development of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 69.811 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor research and development of reality and banking sector.
<b>HO 3:</b> There is no statistically significant difference between the means of the factor intellectual property rights of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 96.918 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor intellectual property rights of reality and banking sector.
<b>HO 4:</b> There is no statistically significant difference between the means of the factor information system of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 67.964 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor information system of reality and banking sector.
<b>HO 5:</b> There is no statistically significant difference between the means of the factor culture of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 58.241 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor culture of reality and banking sector.
<b>HO 6:</b> There is no statistically significant difference between the means of the factor learning organization of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 48.125 with 0.001 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor learning organization of reality and banking sector.
<b>HO 7:</b> There is no statistically significant difference between the means of the factor new ideas of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 78.448 with 0.004 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor new ideas of reality and banking sector.
<b>HO 8:</b> There is statistically significant difference between the means of the factor documentation of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 41.197 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor documentation of reality and banking sector.
<b>HO 9:</b> There is no statistically significant difference between the means of the factor strategy of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 26.855 with 0.020 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor strategy of reality and banking sector.

**Structural Capital: A Comparative Study  
between Banking and Reality Sector of India**

NULL HYPOTHESIS	REJECT/FAIL TO REJECT	DATA SUPPORT	INFERENCE
<b>HO 10:</b> There is no statistically significant difference between the means of the factor communication of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 65.543 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor communication of reality and banking sector.
<b>HO 11:</b> There is no statistically significant difference between the means of the factor Authority & Responsibility of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 69.998 with 0.000 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor Authority & Responsibility of reality and banking sector.
<b>HO 12:</b> There is no statistically significant difference between the means of the factor participation of reality and banking sector.	<b>Reject</b>	Pearson Chi square has a value of 55.954 with 0.005 significance. This significance value is well below alpha level of 0.05 and is thus statistically significant.	There is statistically significant difference between the means of the factor participation of reality and banking sector.

**Table No. 1.21 Mean scores for Reality and Banking sector**

Descriptives		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
system	Reality	47	3.4766	.39927	.05824	3.3594	3.5938	2.67	4.27
	Bank	157	3.8318	.48202	.03847	3.7559	3.9078	2.07	4.73
rd	Reality	47	3.6638	.62151	.09066	3.4813	3.8463	2.00	4.20
	Bank	157	3.8051	.69796	.05570	3.6951	3.9151	1.70	5.00
ip	Reality	47	3.4823	.53662	.07827	3.3247	3.6398	1.80	4.20
	Bank	157	3.2866	.76782	.06128	3.1656	3.4077	1.00	5.00
is	Reality	47	3.6915	.40638	.05928	3.5722	3.8108	2.20	4.50
	Bank	157	4.1166	.64806	.05172	4.0144	4.2187	1.70	5.00
cul	Reality	47	3.6234	.39465	.05756	3.5075	3.7393	2.40	4.70
	Bank	157	3.9439	.49033	.03913	3.8667	4.0212	2.30	5.00
lo	Reality	47	3.8024	.41227	.06014	3.6814	3.9235	2.29	4.57
	Bank	157	3.9763	.61057	.04873	3.8801	4.0726	1.57	5.00
ni	Reality	47	3.6324	.42271	.06166	3.5083	3.7565	1.61	4.28
	Bank	157	3.6638	.67758	.05408	3.5570	3.7707	1.33	4.83
doc	Reality	47	3.5000	.64900	.09467	3.3094	3.6906	1.00	4.75
	Bank	157	3.7755	.75754	.06046	3.6561	3.8949	1.25	5.00
strategy	Reality	47	3.5904	.48180	.07028	3.4490	3.7319	1.75	4.50
	Bank	157	3.4936	.68871	.05496	3.3851	3.6022	1.50	5.00
com	Reality	47	3.7723	.37861	.05523	3.6612	3.8835	2.20	4.60
	Bank	157	3.9452	.59393	.04740	3.8516	4.0389	1.80	5.00
ar	Reality	47	3.7830	.42443	.06191	3.6584	3.9076	2.30	4.80
	Bank	157	3.9210	.69762	.05568	3.8110	4.0310	1.20	5.00
par	Reality	47	3.6511	.31956	.04661	3.5572	3.7449	3.00	4.50
	Bank	157	3.7713	.76770	.06127	3.6503	3.8924	1.00	5.00

**Structural Capital: A Comparative Study  
between Banking and Reality Sector of India**

## FINDINGS

Following findings can be inferred from Table No. 1.21:

1. The mean score for first factor system of banking sector (3.83) is greater than that of reality sector (3.48) which implies banking sector has more pronounced recruitment, selection, reward systems.
2. The mean score for second factor research and development of banking (3.80) is greater than that of reality sector (3.66) which means that banking sector spends more on research and development than reality sector.
3. The mean score for intellectual property rights of reality sector (3.48) is greater than that of banking sector (3.28) as it was also noticed during data collection that banking sector does not focus on intellectual property rights.
4. The mean score of banking sector (4.12) is greater than that of reality sector (3.69) for the fourth factor information system as banks need strong information systems.
5. The mean score of banking sector (3.94) is greater than that of reality sector (3.62) for the factor culture.
6. The mean score for the factors learning organization, new ideas, documentation, communication, authority & responsibility and participation of banking sector (3.98, 3.66, 3.77, 3.94, 3.92, and 3.77) is greater than that of reality sector (3.80, 3.63, 3.50, 3.77, 3.78, 3.65).
7. The mean score of the factor strategy of reality sector (3.59) is greater than that of banking sector (3.49).

## CONCLUSION

It can be clearly inferred from Table 1.20 that all the 12 factors show statistically significant difference in the means of reality and banking sector, it means that both the sector give different weightage to different

factors of structural capital.

According to the findings stated in the above section it can be clearly stated that banking sector emphasizes more on structural capital concept than the reality sector.

## RECOMMENDATIONS

It is recommended that reality sector should also build its structures in order to ensure that it does not depend too much on the human capital. Although reality sector does have a strong strategy but in times of crisis these strategies are not the only way out for instance currently due to demonetization the sector is expected to suffer a huge loss and in such hard times structural capital can be a panacea. Thus, reality sector should spend time, money and effort on the factors system, research and development, information system, culture, learning organization, new ideas, documentation, communication, authority & responsibility and participation.

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#### BRIEF PROFILE OF THE AUTHORS

**Rtn. Dr. Ajay Kumar Singh**, Joint Dean - Admissions, University of Delhi, is teaching since 2000 at Faculty of Commerce & Business, Delhi School of Economics, University of Delhi, having 30 years of teaching experience in all with 170 publications including 10 books, 1 International Monograph, 85 research papers (including Scientific Journal ACTA OPERATIVO OECONOMICA, Slovak Republic; ACTA OECONOMICA PRAGENSIA; Agricultural Economics – Czech; Emerald; Inderscience, UK; International Journal of Business and Management Studies, Turkey; etc.), 12 articles, 11 case studies, 43 editorial reviews, 2 abstracts, and 6 book reviews (including two GOLD MEDALS for best paper awards, two best paper awards, two silver medal winning papers, and two 2nd best papers). Dr. Singh, Editor-in-Chief: DBR) was conferred by ICA, BEST BUSINESS ACADEMIC OF THE YEAR (BBAY) AWARD – 2011 GOLD MEDAL & MMSM Research Award 2011 & 2012 GOLD MEDAL. 23 Scholars have been awarded Ph. D. degree, 4 have submitted, and 6 are pursuing Ph. D. under his supervision. Dr. Singh is a certified trainer and healer from ESOCEN, USA, done blessing course of Art of Living, Angel Healing from Prithvi Gurukool, ACMOS healing of Paris, etc. Dr. Singh is District Literacy Committee Chair for Rotary International District (RID) 3012, Member of Apex Body of Art of Living, Executive Vice President of Indian Association for Management Development, Fellow and Managing Trustee of Indian Commerce Association, Hony. President of Governing Body of Divine Group of Institutions, DSPSR, and many NGOs.

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# Impact of Personality on Impulsive Buying Behaviour of Youth in Kashmir Province of Jammu and Kashmir

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*Most of the time consumers make plentiful decisions relating to every feature of their daily life. Nevertheless, most of these resolutions by and large are made devoid of much contemplation as to how or what is implicated in the particular development. Generally, in majority of consumer decision-making circumstances, consumers hardly entertain the adequate degree of information exploration. Rather, it would become tiresome practice if all buying decisions entail the need for extensive effort. But contrary to it, if all the purchases were made customarily, then they would most often have the propensity to be boring, monotonous and would hardly bring enjoyment or freshness to a buyer. The degree of an exertion that a consumer exercises for getting to the bottom of problem largely depends on the level of his/her precision for selection criteria, the scope of information he/she is already having about the product beforehand, and the accessibility to the number of substitute options (Schiffman&Kanuk, 2000). Practically consumers seldom have all the necessary information or satisfactorily precise information or even an ample level of interest or inspiration to craft the so-called faultless judgment. It is for this reason that consumers are always restricted by their existing skills, inflexible traditions of life, by their standards and ambition for life, and by their limited scope for comprehension (Schiffman&Kanuk, 2000). Consumers are always seen reluctant to engage themselves in expansive decision making who have no time in the world and are thus always prepared to patch up just for good enough. Generally consumers don't have time to search for alternatives which narrows down their scope for making rational decision.*

*Impulsive buying is essentially an irrational buying that a consumer makes and an impulsive buyer is always found susceptible to unprompted behaviour. There are whole host of factors that induce consumer to impulsiveness. Research in past on scale improvement in Impulsive Buying and Personality Framework has had exploited independent approach in the development of an instrument.*

*An attempt has been made to test a model based on theoretical aspects of Personality and Impulsive Buying. A sample of 624 was chosen for the study which included students of higher education having diverse background. Based on the results of structural coefficients, model has been found significant which has clearly revealed that different aspects of personality significantly determine the cognition and affection of a young consumer which in turn determines the buying tendency of an individual.*

**Keywords:** Personality, Affection, Cognition, Buying Tendency, Scale Development

## INTRODUCTION

Personality varies from an individual to individual and in most of the cases inheritance as a determinant of personality becomes the predominant factor for shaping the personality of an individual. Environmental factors at times also influences the personality and in addition, there are whole host of situational factors that shape the personality of an individual as well. As personality differs from an individual to individual and so does vary their buying behaviour, the buying behaviour of a straggler on the whole may be found completely different from that of a trendsetter and the cognitive abilities of diverse individuals perchance may be unlike and same may be the case with feelings component. It is worth to mention here that both affection and cognition shape the buying behaviour of a consumer. Identifying how affection and cognition vary from a person to person and how these two psychological components shape impulsiveness and spontaneity within the consumer group was one the aspects that this was study is intended to. This study has brought to fore interesting observations associated with consumers having diverse personalities. This present work on consumer behaviour shall act as significant ingredient and shall facilitate an end user to shape his/her buying behaviour while in controlling the rudiments that incite the consumer to impulsive buying behaviour. Affection and Cognition has a

stretched history of shaping the consumer behaviour but how interaction of personality and impulsiveness carry along the rationality within the consumer was something new that was the centre of attention in present study. Most of the research studies in past have focused mainly on advertisements and its impact on consumer behaviour but only a little attention has been paid towards internal stimuli such as personality and its influence on impulsive buying behaviour of youth. The current study shall generate greater weight for corporate organizers as the findings of the study shall enable them to target different consumer groups with the spot-on-tactics because it is not that business organizations will map for innovators and then same can be applied to the laggards and to the middle majority on the whole. There needs to be different strategies in inciting such consumers for spontaneous shopping. In the same way, it was important to explore as to how people having varied personalities differ in their buying nature and in impulsive buying in particular like that of Extrovert and Introvert, Agreeable and Not Agreeable, Consumer possessing high Emotional Intelligence and Low Emotional Intelligence and being highly Open to Experience and Low to openness to Experience. This is because of the fact that if a consumer happens to be Extrovert, having low Emotional Intelligence, high Openness to Experience different strategies such as tactics of profanity can be better off to incite them towards impulsive buying. Things don't get different when Sensing verses Intuitive, Thinking verses Feelings, Judging verses Pursuing become the focal point of discussion as the shoppers being highly sensitive, Feeling and perceiving can also be provoked and incited by external tactics such as advertising in general and Subliminal Advertising in particular. The same may not be the case with consumers being highly intuitive, Sensing and Thinking and different approach from advertising outfit will have to be pursued to have higher and desirable outcome. But this also opens the gateway for the consumer welfare

advocates to decide how to do against decisive techniques of external agency. There cropped up the need of identifying personality of the youth and the degree of impulsiveness that prevails within an individual being different from others in terms of personality.

## LITERATURE REVIEW

Most of the time consumers make plentiful decisions relating to every feature of their daily life. Nevertheless, most of these resolutions by and large are made devoid of much contemplation as to how or what is implicated in the particular development. Generally, in majority of consumer decision-making circumstances, consumers hardly entertain the adequate degree of information exploration. Rather, it would become tiresome practice if all buying decisions entail the need for extensive effort. But contrary to it, if all the purchases were made customarily, then they would most often have the propensity to be boring, monotonous and would hardly bring enjoyment or freshness to a buyer. The degree of an exertion that a consumer exercises for getting to the bottom of problem largely depends on the level of his/her precision for selection criteria, the scope of information he/she is already having about the product beforehand, and the accessibility to the number of substitute options (Schiffman&Kanuk,2000).

Practically consumers seldom have all the necessary information or satisfactorily precise information or even an ample level of interest or inspiration to craft the so-called faultless judgment. It is for this reason that consumers are always restricted by their existing skills, inflexible traditions of life, by their standards and ambition for life, and by their limited scope for comprehension (Schiffman&Kanuk, 2000).

Consumers are always seen reluctant to engage themselves in expansive decision making who have no time in the world and are thus always prepared to patch up just for good enough. Generally consumers

don't have time to search for alternatives which narrows down their scope for making rational decision (March & Simon, 1958). Past studies in the field of consumer behaviour have made every effort to make a distinction between people who are impulsive buyers and those who are not (Rook and Fisher 1995; Youn and Faber 2000). Even though such endeavor is expensive and valuable in its approach, it is not free from being obscure and the fact that more or less everybody engages in sporadic spontaneity and that even well predictable impulsive buyers can and do have power over their urge at times to control their impulsiveness.

Impulsive buying is basically defined as an unplanned buying (Dittmar, 1995). Applebaum (1951) stated that impulsive buying is an outcome of promotional stimuli and that buying items are not decided in advance in a consumer's mind before starting a shopping trip. According to Kollat (1993), impulsive buying behavior is realistically accidental behavior when it is associated to emotional preferences in shopping.

Furthermore, impulse buying is described as an outcome of in store behaviour and that consumers do not have any objective to shop for any particular item before entering the shops (Cobb and Hoyer, 1986). Rook (1987) re-conceptualized the idea of impulsive buying and defined it as a spontaneous process that occurs when consumer experiences an unexpected and unrelenting push for attaining something instantaneously. The desire to purchase on impulse is hedonically complex and largely encourages emotional conflict. Also, impulsive buying occurs with diminished regard for its consequences. In other words, consumers after having gone through impulsive purchase do not give any importance to future short comings arising as a result of spontaneous buy. He also stated that the occurrence of impulsive buying behavior often go together with negative consequences such as being let down, finding one-self to be blameworthy and distressed about financial tribulations associated

with it. From his viewpoint, impulse buying is often concentrated and forceful.

It is more or less instantaneous choice making process that takes fairly little time and is just like clutching an article and not cautiously selecting it. In addition, it is emotionally-oriented, with the recklessness sentiments persuading consumers to instantaneously buy a specific product. Thus, impulse buying is seen as an unreasonable performance and at times horrific buying behavior.

Furthermore, impulsive buying is a hedonic and multifaceted occurrence of emotions that responds to stimulus and thrill seeking (Piron, 1991). To sum up, impulse buying embraces unintentional buying, a stimulus and purchasing on-the-spot.

There are two unambiguous motives in the impulse buying antecedent framework. As for the basic motive is concerned, it articulates that consumers do not settle on to buy a particular item before the shopping trip. While the succeeding motive encompasses that consumers end up the purchase dilemma in store only (Beatty and Ferrell, 1998).

Thus, as per this observation, impulse buying is defined as an unlooked for and an inadvertent buying. It takes precedence when consumers are subjected to external stimuli such as sales sponsorship. Furthermore, there are innumerable in-house feelings that intensify impulse buying behaviour to a large extent.

Till date, there have been number of attempts to develop a model for determining impulsiveness and reasons thereof. But it still requires immense workout for developing comprehensive framework that could facilitate different stakeholders in the estimation of impulsiveness across different consumer groups which the present study on model development has fittingly taken into consideration.

Table1: Literature Review in Tabular Form

Author	Year	Findings/Suggestions/Conclusion
Rook and Fisher	1995	They observed that credit cards make it easier to purchase things spontaneously.
Dittmar et.al	1995	They revealed that music products and clothing were the most probable items to be purchased impulsively.
Beatty and Ferrell	1998	There are multitude of supplementary situational and unpredictable factors such as money in hand and time accessibility that force spontaneous shopping.
Wood	1998	An inverse association was identified between age and impulsive buying.
Bayley and Nancarrow	1998	Immediacy attribute forces consumers to purchase spontaneously because they are always accompanied by preconceived notion that they get such opportunity only once.
Youn and Faber	2000	Consumers are prejudiced by an occurrence of interior disagreement between both rational and arousing drives as soon as a hasty buying impulse strikes.
Youn and Faber	2000	Revealed that spontaneity was found significantly associated with that of personality variable 'lack of control'.
Shiv and Fedorikhin	2002	Impressed that when privileged possessions are limited, actions of a consumer are determined by lower-order developments.
Jones et, al.	2003	Consumers do not lean to look for additional information so as to construct fitting buying judgment.
Verplanken et al.	2005	Revealed that that a universal impulsive buying propensity is robustly embedded in personality.
Chang et .al	2011	Argued that consumers who had more positive emotional responses to the retail environment were more likely to make higher impulsive purchases.
Sharma	2012	Adopted the conceptual framework of cognition and affection for exploring impulsive buying behaviour.
Donnelly, Iyer, and Howell	2012	They stated that conscientiousness was more probably to play a key part in scheduling for upcoming everyday expenditure.
Muruganatham and Ravi	2013	Consumers who had more positive emotional responses to the retail environment were more likely to make higher impulsive purchases.
Bratko et al.	2013	Found that extraverts were motivated largely by the over lapping genetic manipulators during impulsive buying propensity.

## RESEARCH OBJECTIVES

The main objective of this study was to explore the impulsive buying behaviour of the consumers and their degree of affection and cognition with respect to different personalities, as level of affection and cognition aids in determining the type of behaviour (Almanda Leigh Coley,2009). This research proposal employed new scale PACBS (developed by the researcher in the inter-disciplinary subject of personality and impulsive buying in order to determine the association between the personality, Impulsive Buying and the buying tendencies for a particular product). It was also purposeful to

analyze how respondents under study differed in their Undesirable advocacy to Buy, Cognitive Dissonance (Emotional Conflict), Affirmative Buying Sensations, Mood management so as to find out their overall level of affection as these sub dimensions form the part of affection. Cognition also formed the centre of attention and for determining its level among the respondents Scant Planning, Prudence and Cognitive Deliberation and No Prominence to potential consequences were explored for the cause. Apart from this, impulsiveness across different demographic variables was also investigated for the purpose of determining association between impulsiveness and demographic variables.

### The main objectives of the study were:

1. To study the relationship between personality and impulsive buying behaviour.
2. To study the impact of personality on cognition and affection of a consumer.
3. To study the impact of cognition and affection on buying tendencies of a consumer.
4. To study the impact of personality on buying tendencies of a consumer.
5. To make different suggestions for both consumer welfare advocates and marketers.

## HYPOTHESIS

H<sub>01</sub> : Cognition and Personality are independent.

H<sub>02</sub> : Affection and Personality are independent.

H<sub>03</sub> : Affection and Cognition are independent.

H<sub>04</sub> : Cognition and Buying Tendencies are independent.

H<sub>05</sub> : Affection and Buying Tendencies are independent.

H<sub>06</sub> : Personality and Buying Tendencies are independent.

## RESEACH METHODOLOGY

### Research Design

The research design included both explorative and descriptive approaches where former approach was employed for preliminary identification of the problem and then redressing the problem through application of descriptive research design. Exploratory design was primarily adopted to explore different constructs and data was collected through cross sectional 'one-shot' design.

### Sampling Design

#### a.) Area of Study and Sample Frame

The area of study was Jammu and Kashmir and data was collected from the institutes of higher learning that included Universities and Government Colleges.

#### b.) Population for the Study

The population above 18 years of age was considered as sample for the study. Majority of the population as said earlier included students studying in various colleges of the Srinagar city. The population was further dived into three groups of Early Adulthood (18-23), Middle Adulthood (24-29) and Late Adulthood (30-35).

#### c.) Sampling Method (Technique)

Sampling method being common and important practice of any social science research was also taken care by adopting cluster sampling and as respondents exhibit common characteristics within the colleges and universities, it deemed to use cluster sampling. As is well known that it is not possible to collect data from whole of the population and is time consuming as well, therefore, it necessitated to adopt some form of sampling. Since area of the study being large in scope, and being mostly spread in educational institutes, it was more than appropriate to use cluster sampling. Each of the Universities and Colleges were taken as clusters. Furthermore, to achieve more reliable results, simple random sampling was used by affiliating random numbers to Universities and Colleges.

#### d.) Sample Size

Selection of an optimum sample size is always the core issue that researchers face to make their study more reliable. A sample size of 624 was chosen for this study. The formula used for the calculation of sample size is discussed here underneath:

$$n = X^2 * N * P(1-P) / \{ME^2 * (N-1) + (X^2 * P * (1-P))\}$$

Source: C. R. Kothari, Research Methodology (Methods and Techniques)

Where

n = Sample size

X<sup>2</sup> = Chi-Square for the specified Confidence level at 1 degree of freedom

N = Population Size

P = Population proportion (0.50 in this study)

ME = Desired Margin of error( Expressed as proportion5%)

With 95% significance level, 5% acceptable margin of error, population of youth in Srinagar being greater than 1 lakh but limited to 1,01,43,700, also with proportion being 0.50 and Chi Square at one degree of freedom at 95% level is 3.84. After using these values in the above mentioned formula, sample size calculated for all values greater 1 lakh but less than 10,00,00,000 is 384. Additional 21 respondents were included for data collection which increased sample size to 405. Additional 240 respondents were included for data collection which increased sample size to 624.

### Instrument

Self Administered Structured Instrument (i.e. PACBT Questionnaire) consisted of four sections, Section A included demographic characteristics of respondents used for data collection, section 'B' comprised of personality items; while as C included impulsive buying variables and finally section 'D' included eight statements about buying tendencies for specified products. Apart from demographics which consisted of nominal scales, 5- point scale was adopted for rest of the items.

## DATA ANALYSIS AND DISCUSSION

In order to test various theoretical relationships, Structural Model was tested and model is shown in figure 1 below:

Based on past literature, six factors including Expressive Propensity, Emotional Stability, Sociableness, Pleasure Seeking Propensity, Conscientious and Conservativeness were treated as observed variables that determined personality of a consumer. In the same way, several observed variables including Prudence and Cognitive Deliberation, Scant Planning, Belief about Impulsive Buying and No to Potential Consequences determined Cognition of a consumer. The three underlying factors including Affirmative Buying sensations, Undesirable Advocacy to Purchase and

Emotional Conflict formed the part of Affection of a consumer. Making further advances in this direction, eight statements were assigned to one factor and were used for analyzing buying tendencies of a consumer. It is pertinent to mark here that the latent dimensions including Personality, Cognition, Affection and Buying Tendencies were added primarily based on the results of EFA of previous studies and past related literature.

### Assess Structural Model Validity

The important consideration of a structural model lies in the assessment of Model Fit Indices of the hypothesized framework. Only when both model fit indices including Goodness of Fit Indices and Badness of Fit Indices have desirable results associated with them, one can proceed with further analysis.

Based on the results of Structural coefficients, the proposed model was found to fit the data satisfactorily as the fit values were well within acceptable ranges [Chi-square = 1146244,  $p < .000$ , RMR=0.148, GFI=0.713, CFI= 0.863 and RMSE=0.058, NFI=0.810, NNFI=].

The structural Model clearly indicates that personality determines cognition and affection as path estimate for affection (0.65,  $p < 0.05$ ) is significant and so is the path estimate for cognition (0.37,  $p < 0.05$ ) and are both significant predictors of personality and hence impulsive buying. Similarly, cognition and affection are significantly related as their path estimate (0.38) is significant at 0.05 of significance level.

The magnitude and significance of the loading estimates clearly indicate that all of the five six constructs of personality, four constructs of cognition, three constructs of affection and eight items of the buying tendencies are relevant in predicting Personality, Cognition, Affection and Buying tendencies. Moreover, personality has significant impact on cognition and affection. Cognition (-0.44) and affection 0.98 also have

### Specify the structural Model

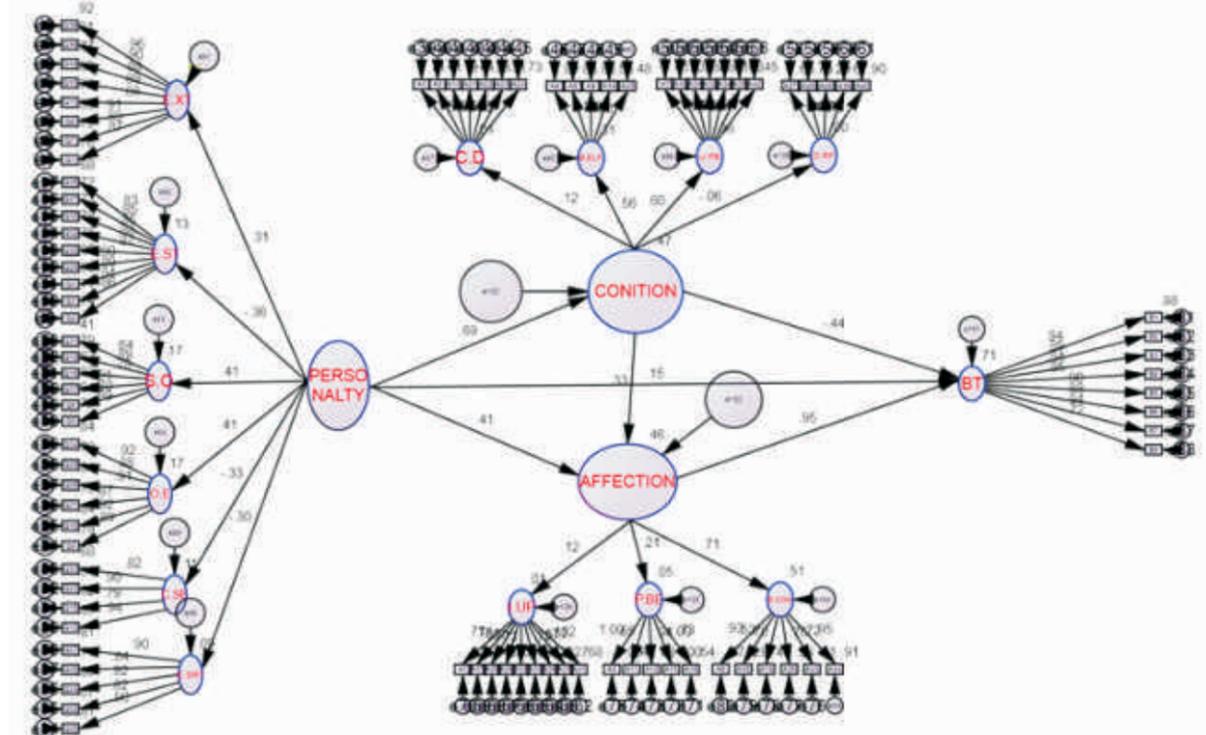


Figure:1

significant impact in determining buying tendencies for specified products. Personality does not directly impact buying tendencies for specified product and it has only an indirect effect through cognition and affection which are primarily determined by the personality.

## HYPOTHESIS TESTING

### H<sub>01</sub>: Cognition and Personality are independent.

The results of the Structural Equation Modeling have revealed that Cognition and Personality are significantly related with each other and it is apparent from Structural Model Coefficients (Table 2) that significance value associated with the data (Personality vs Cognition) is significant as  $p < 0.05$ . Therefore, null hypothesis is rejected.

### H<sub>02</sub>: Affection and Personality are independent.

The results of the Structural Equation Modeling have revealed that Affection and Personality are also significantly related with each other and it is apparent from Structural Model Coefficients (Table 2) that significance value associated with the data (Personality vs Affection) is significant as  $p < 0.05$ . Therefore, null hypothesis is again rejected.

### H<sub>03</sub>: Affection and Cognition are independent.

The statistics associated with cognition and affection in Structural Model Coefficients is consistent with the literature as both are associated with each other and their association is significant as well. Furthermore, null hypothesis is also rejected as  $p < 0.05$ .

Impact of Personality on Impulsive Buying Behaviour of Youth in Kashmir Province of Jammu and Kashmir

Table 2: STRUCTURAL MODEL COEFFICIENTS

				Estimate	S.E.	C.R.	P
<b>Determinants of personality</b>							
Ext	<---	Personality		1.000			
EST	<---	Personality		-1.040	.234	-4.448	***
SO	<---	Personality		1.357	.279	4.873	***
OE	<---	Personality		1.367	.278	4.920	***
CSC	<---	Personality		-1.084	.247	-4.379	***
CSR	<---	Personality		-.947	.236	-4.017	***
<b>Determinants of affection</b>							
IUP	<---	AFFECTION		.151	.062	2.455	.014
ECON	<---	AFFECTION		1.000			
PBE	<---	AFFECTION		.297	.069	4.298	***
<b>Determinants of cognition</b>							
UPB1	<---	COGNITION		1.000			
BELIEF	<---	COGNITION		1.140	.187	6.095	***
CD	<---	COGNITION		.160	.071	2.252	.024
<b>Impact of personality on cognition and affection</b>							
COGNITION	<---	Personality		.921	.206	4.464	***
AFFECTION	<---	Personality		.665	.279	2.384	.017
AFFECTION	<---	COGNITION		.481	.192	2.509	.012
<b>Impact of Cognition and affection on Buying tendencies for specific products</b>							
BT	<---	COGNITION		-1.098	.533	-2.061	.039
BT	<---	AFFECTION		1.918	.747	2.568	.010
BT	<---	Personality		.467	.671	.697	.016

**H<sub>04</sub>: Cognition and Buying Tendencies are independent.**

After examining Structural coefficients associated with Personality Impulsiveness and Buying Tendencies Scale, it is oblivious that Cognition and Buying Tendencies are significantly related with each other. Moreover, the probability associated with the data is less than 0.05 as  $p < 0.05$  implies rejection of null hypothesis.

**H<sub>05</sub>: Affection and Buying Tendencies are independent.**

Here null hypothesis was also rejected as the probability associated with the data is less than 0.05 and it supports the alternative hypothesis that affection and buying tendencies are significantly related with each other.

**H<sub>06</sub>: Personality and Buying Tendencies are independent.**

To see if there is any direct relationship between personality and buying tendency, a hypothesis was

Impact of Personality on Impulsive Buying Behaviour of Youth in Kashmir Province of Jammu and Kashmir

set up and after examining the structural Model Coefficients, it was found that the association between two variables is significant as probability associated with the data is less than 0.05

**CONCLUSION**

Based on the application of Structural Model Equation, a number of theoretical relations were tested and it is explicitly shown in table 2 that all the determinants of personality significantly determine the personality of an individual. Furthermore, the test findings associated with affection and cognition are significant as well. The important part of the present study that is impact of personality on cognition and affection is also highlighted in the same table. The results are again consistent with the past literature and significantly determine the cognition and affection of a young consumer. In addition, cognition has significant role in determining the degree of affection of a consumer as is reported by the structural coefficients.

The second portion of the structural model (please refer figure 1) is also illustrated as structural coefficients in table 2. The examination of the second part of the model is also constructive. It can be seen from the table 2 that the level of cognition and affection significantly determine the degree of buying tendencies which is significant as well. Therefore, higher the degree of cognition lower would be buying tendencies as its coefficient is negative significant. This largely emphasizes the significance of type of personality that would determine the degree of cognition which in return lays the foundation for buying tendencies. Similarly, type of personality determines the degree of impulsiveness (Affection) which in turn leads to significant association between buying tendencies and affection of a consumer. The structural model coefficients provide an inclusive picture of various independent and dependent various that shapes the buying behaviour of a consumer.

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# Organizational Commitment and Organizational Effectiveness

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*This study was designed to compare organizational commitment of the employees in public and private sector organizations in food processing industry, to make out the association between subscales of organizational commitment, to compare these dimensions of organizational commitment vis-a-vis different psycho-demographic factors of the employees and to investigate the relationship between organizational commitment and organizational effectiveness. The scope of the study was public and private sector organizations belonging to Punjab and Haryana in food processing industry. The sample comprised 196 respondents drawn from three public sector organizations, and six private sector organizations. Comparisons made on the basis of hierarchical levels and other psycho-demographic factors make the study comprehensive. The results revealed a very significant and positive correlation between three subscales of organizational commitment and clearly support the idea that aggregated organizational commitment is related to organizational effectiveness indicators.*

**Key words:** Organization, Commitment, Effectiveness etc.

## INTRODUCTION

In the era of globalization, organization of market economies face strong pressures to be efficient and also to produce value added outputs. The goal of efficiency and competitiveness can be attained if organizations possess the right people with the right attitudes and skills. That is why organizations, across the business landscape, are being seen battling out for workforce share in a way they battle for market share.

Organizations have realized that their survival largely depends upon their ability to attract, motivate, and retain the key talent needed. While the factors such as capital, equipment, and other resources are important for organizational success; the human factors appears to be the most important one since it is the people who have to use all other resources. Without the productive efforts and full-hearted engagement of workers, the material and other resources of the organization would be of no use. Not even the latest technologies would be able to produce the targeted results. Committed workforce is a 'hallmark' of a successful organization. Committed or dedicated employees are expected to be more productive and work with focus on quality to increase customer satisfaction and the profitability of their organization. In other words, committed employees are the salient resources and the foundations of any organization.

### Organizational Commitment

Organizational Commitment or Member identity is a value laden, behaviorally anchored cultural

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## Organizational Commitment and Organizational Effectiveness

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variable of organizational environment. It is an attitudinal pr emotive dimension of work motivation, manifesting itself in members' behavior.

Organizational Commitment is widely studied with other vital organizational factors predicting the success of an organization. Before getting into its nitty- gritty's, a more simple and comprehensive definition of Organizational Commitment certainly needs to be mentioned.

Hall et al. (1970) define organizational commitment as the "process by which the goals of the organizations and those of the individual become increasingly integrated and congruent". Buchanan (1974) concluded that an acceptable definition of organizational commitment was still lacking. A more basic problem appears to be that there are at least two distinct approaches to define commitment, the psychological approach and the exchange approach. In an example of the psychological approach, Sheldon (1971) defines organizational commitment as an attitude or an orientation towards the organization, which links or attracts the identity of the persons of the organizations. Kanter (1968) and Buchanan (1974) also emphasize the affective attachment of the individual to the organization. A common deficiency in this approach is that commitment is treated as discrete from complementary work attitudes without specifying the nature or direction of links with these orientations (e.g., loyalty, job involvement, motivation etcetera).

The exchange approach is exemplified by Becker (1960) who advanced the notion of "side-bets" as influences that produce a willingness to remain attached to the object of the commitment. Becker argued that commitments come into being "when a person, by making a side-bet, links extraneous interests with a consistent line of activity". When side- bets are made to an organization (e.g., pension plans or other accrued investments), the individual perceives associated benefits as positive elements in an exchange and, being reluctant to lose these

benefits, is more likely to stay with that organization. The individual thus become organizationally committed. Porter et al. (1974), define organizational commitment as "the strength of an individual's identification with and involvement in a particular organization". Salancik (1977) defines organizational commitment as "a state of being in which an individual becomes bound by actions to beliefs that sustains activities and involvement". Salancik proposed two approaches- prospective and retrospective. In prospective view, commitment is conceived as an individual's psychological bond to the organization/ social system, as reflected in his involvement with , loyalty for and belief in the values of the organization. In retrospective view, commitment results as an individual becomes bound to the behavioral acts that are chosen voluntarily (Raju and Srivastava, 1986).

Meyer and Allen (1991) held that organizational commitment is a multidimensional construct comprising three components: affective, continuance and normative. Affective commitment has been defined as an employee's emotional attachment to, identification with and involvement in the organization. Employees with a strong affective commitment will remain in the organization because they want to. Continuance commitment on the other hand has to do with one's awareness of the costs associated with leaving the present organization. Employees whose commitment is in the nature of continuance will remain in the organization because they have to. Normative commitment has to do with feeling of obligations to the organization based on one's personal norms and values. Employees whose commitment simply because they believe they ought to.

### Organizational Effectiveness

The success of an organization is often said to be measured in terms of its effectiveness. Effectiveness refers mainly to goal fulfillment. Campbell (1974) holds that the global question about whether an

organization is 'Effective' or 'Ineffective' is virtually useless.

Effectiveness is not one thing. An organization can be effective or ineffective on a number of different facets that may be relatively independent of one another. Interest in organizational effectiveness, is of course, not a recent phenomenon. Since Adam Smith, society has tried to organize human activity to yield the highest output. In one view an organization is seen as a rational set of arrangements oriented towards achieving certain goals. From this position effectiveness can be defined in terms of goal attainment. Others take an open system view of organization and define effectiveness as the degree to which an organization can preserve the integration of its parts. In this view the organization's adaptations and survival became a measure of organizational effectiveness. Penning and Goodman (1977) opine that organizations are effective to the extent that relevant constraints can be satisfied and organizational results made to approximate or exceed a set of referents from multiple goals.

Etzioni (1964) defines organizational effectiveness as "the degree to which an organization realizes its goals". Cyert and March, 1965; Gross, 1979; Rhenman, 1967; Warner, 1967; Warriner, 1965 define effectiveness in terms of degree of goal achievement typically equated with "goals", "objectives", "purpose", "mission", "aims" and "task". Workers' cohesion, quality, innovativeness, adaptability, ability to transact with environment, productivity, efficiency, profit generation, goal realization, resource procurement, information management and communication- all attributes that can be viewed as means either to increase the efficiency of the productive process or of gaining access to greater or more valued resources- have been noted as aspects of organizational effectiveness.

To date, researchers have proposed a variety of specific dimensions of organizational effectiveness.

Dixit (1987) provided a multidimensional scale of organizational effectiveness. The scale consists of 8 dimensions that make up the organizational effectiveness construct. The 8 dimensions are- flexibility, acquisition of resources/ growth, planning, productivity, availability of information/ communication, stability, cohesive workforce, and satisfied workforce.

### ***Organizational Commitment and Organizational Effectiveness***

Organizational Commitment was found to be a very important organizational variable defining the success of an organization in many ways (being associated with major organizational variables). Organizational Commitment was found to be associated with organizational adaptability, turnover, and tardiness rate (Angle et al. 1981; Thanswor et al. 2004 and Chaitanya et al. 2001). Jauch et al., (1978) found in their research, that the researchers with the strongest professional commitment had higher research productivity. A strong body of theoretical research suggesting a negative relationship specifically between higher commitment levels and lower turnover intentions is well established (Boshoff et al., 2002; Chen et al., 1998; Cohen, 1998; Cohen, 1993; Firth et al., 2004; Meyer et al., 2002; Iverson, 1999; Mowday et al., 1982; Roshin and Korabik, 1995; Schwepker, 2001; Vallabh and Donald, 2001; Williams and Hazer, 1986).

Studies have also been conducted to find the association between the three subscales i.e.: Normative, Affective and Continuance components of Organizational Commitment. According to Meyer and Allen, these components of commitment are not mutually exclusive: an employee can simultaneously be committed to the organization in an affective, normative, and continuance sense, at varying levels of intensity. Diesh (1997) has found certain aspects of organizational climate to be significantly related to organizational structure. These emerged as important predictors of

organizational commitment in her study which focused on public sector managers. Purang (2008) observed that the positive perception of HRD climate predicts a better commitment level.

Katz (1964) identified three categories of employee's behavior essential for organizational effectiveness. According to Katz (1964), individuals must first be induced to enter and remain with an organization; as employees, they must carry out specific role requirements in a dependable fashion; and they must engage in innovative and spontaneous activity that goes beyond role prescriptions. Hendrix and McNichols (1984) found that organizational effectiveness can be improved if a group processing styles in a structured autonomy situation is created.

The relationship between age and organizational commitment has been studied by (Steers, 1977; Stevens et al. 1978; Morris and Sherman, 1981; DeCotis and Summers, 1987; Balaji, 1986; Steers, 1977; Alviand Ahmed, 1987; Diesh, 1997; Cohen, 1993; Pattanayak, 1993; Mannheim, 1975). Age is usually found to be positively related to commitment. Similarly, in a meta- analytic review, Mathieu and Zajac (1990) found a positively significant correlation between age and positive mean correlation of 0.36 ( $p < 0.05$ ) between age and organizational commitment. Bhagat et al. (1981) found that other variables such as age, education and need for achievement which were the antecedents of organizational commitment in earlier empirical studies, failed to predict commitment in the heterogeneous sample of working women. Kassahun (2005) found that employee age came out as the most important predictors of the organizational commitment.

Another personal variable closely related to age is tenure. Stevens et al. (1978) indicated that certain role factors such as tenure are strong influences on commitment. Some studies (Cohen, 1993; Balaji, 1986) found that organizational commitment was directly associated with length of service in

organization. Particularly, Cohen (1993) reported that the correlation and commitment was greater among the more senior employees (i.e. those with more than nine years of experience). In another slightly different study, Maeyer and Allen (1993) reported that analysis of organizational tenure generally showed a mild curvilinear relationship whereby middle- tenure employees possessed less measured commitment than new or senior level (by age) employees. In their subsequent analysis, Meyer and Allen, (1997) observed that it is possible that employees need to acquire a certain amount of experience with an organization to become strongly to it, or that long- service employees retrospectively develop affective attachment to their organization.

Job tenure, another age-related variable, is also found to be positively related to commitment (Sheldon, 1971; Alutto et al. 1973; Farrell and Rustbelt, 1981; Alvi and Ahmed, 1987). On the other hand, level of education is found to be negatively related to commitment by some researchers (Steers, 1977; Morris and Sherman, 1981; Glisson and Durick, 1988). Gupta and Khandelwal (1988) have found a significant and positive relationship between role efficacy and organizational identification. Singh and Das (1994) concluded that the organizational culture influences level of Commitment significantly.

## **METHODOLOGY**

### ***Present Study***

The above mentioned and other similar studies made the plot for the present study. The authors attempt to study organizational commitment and organizational effectiveness in two strata of culturally diverse organizations. In all, nine organizations belonging to Punjab and Haryana region were studied comprising three public sector organizations and six private sector organizations in Food Processing Industry. Description of the organizations is as follows:

Exhibit 1: (Targeted Organizations)	
Public Sector Organizations	Hafed, Panchkula (Haryana)
	Vita, Ambala (Haryana)
	Markfed, Patiala (Punjab)
Private Sector Organizations	Private Sector Organizational LT Overseas Pvt. Ltd., Jind (Haryana)
	Bonn Nutrients Pvt. Ltd., Ludhiana (Punjab)
	Milk Plant, Jind (Haryana)
	Pepsi Food Pvt. Ltd., Patiala (Punjab)
	Alchemist, Kurali (Punjab)
	Nestle, Moga (Punjab)

### Objectives

The paper studies organizational commitment and organizational effectiveness in food processing industry (both private and public sector organizations). The main objectives of the study are as follows:

- To compare the level of organizational commitment in public and private sector organizations of food processing industry.
- To compare the level of organizational commitment of employees among different hierarchical levels in food processing industry.
- To study organizational commitment vis-à-vis psycho-demographic factors i.e. marital status, qualification, hierarchy, age, gender and total work experience in food processing industry.
- To find the correlation between the three subscales- affective commitment, normative commitment and continuance commitment in food processing industry.
- To find the correlation between organizational commitment and organizational effectiveness in food processing industry.
- To find the impact of organizational commitment on organizational effectiveness in

food processing industry.

### Hypotheses

**H1a.** There is a significant difference in the level of organizational commitment in public and private sector organizations in food processing industry.

**H 2a.** There is a significant difference in the level of organizational commitment at different hierarchical levels in food processing industry.

**H3a.** There is a significant difference in the level of organizational commitment vis-à-vis psycho-demographic factors i.e. marital status, qualification, hierarchy, age, gender, and total work experience.

**H3.1a** There is a significant difference in the level of organizational commitment for male and female employees in food processing industry.

**H3.2a.** There is a significant difference in the level of organizational commitment for married and single employees in food processing industry.

**H3.3a.** There is a significant difference in the level of organizational commitment for the employee processing different educational levels in food processing industry.

**H3.4a.** There is a significant correlation between organizational commitment and the age of the employees.

**H3.5a.** There is a significant correlation between organizational commitment and total work experience of the employees in food processing industry.

**H4a.** There is significant correlation among the sub scales of organizational commitment in food processing industry.

**H5a.** There is a significant correlation between organizational commitment and organizational effectiveness in food processing industry.

**H6a.** Organizational effectiveness is positively and significantly predicted by organizational commitment of employees in food processing industry.

- 164 are married and 32 are unmarried.
- 90 have professional qualifications and 106 have no professional qualifications.

The other demographics are mentioned in Exhibit 2.

### Data Collection

Primary data was collected through preliminary interviews and questionnaires. Instrument Organizational Commitment questionnaire (Allen and Mayer, 1991) is used to undertake the study. The scale is multidimensional, suggesting three subscales i.e.; Normative (9 items), Affective (11 items) and Continuance Commitment (6 items). The Cronbach alpha coefficient of the scale was found to be 0.85. The second part of the questionnaire (Dr. N. Dixit) focused on organizational effectiveness, and included (24) statements covering eight effectiveness measures i.e. Flexibility, Acquisition of resources, Planning, Productivity and efficiency, Communication, Stability, Cohesive work Force and Satisfied work force. The Cronbach Alpha coefficients for all effectiveness measures were found to be 0.9339. The questionnaire also sought demographic information of respondents' i.e. age, education, marital status, hierarchical level, experience in present organization, experience in present position & total work experience.

### Data Analysis

The data was analyzed using SPSS. Necessary tables encompassing SPSS outputs are included in the paper at the appropriate places. The Confidence level of 0.05 is assumed for the study.

## RESEARCH DESIGN

The study is descriptive and empirical in nature. Three organizations were chosen from public sector and six from the private sector of food processing industry using systematic random sample. Then a sample of managers, supervisors and workers was chosen from a sample frame of nine companies using stratified random sampling. Managers, supervisors and workers were taken in the ratio of 1:2:3, based on availability and feasibility of the study. Out of a total of 196 respondents:

- 80 respondents belong to Public sector and 116 from Private sector in the food processing industry.
- 29 are managers, 76 are supervisors and 91 are workers.
- 171 are males and 25 are females.

Exhibit 2: Descriptive Statistics of Age Category (AGECATE) and Total Work Experience (TWE CATE)					
	N	Minimum	Maximum	Mean	Std. Deviation
AGE	196	22	68	39.52	11.560
TWE	196	1	42	16.35	11.629
Valid N (List wise)	196				

**Organizational Commitment and  
Organizational Effectiveness**

**Results of Independent Sample T-Test (Comparison VIS-À-VIS Public and Private Sector Organizations)**

The results are presented in Table1 below.

Table 1: Independent Sample t-test						
Dimensions		Levene's Test for Equality of Variances		t-test for Equality of means		
		F	Sig.	T	df	Sig. (2-tailed)
AFFECTIVE COMMITMENT	Equal variances assumed	12.186	.001	-.191	194	.849
	EVNA			-.203	193.914	.839
CONTINUANCE COMMITMENT	Equal variances assumed	1.974	.162	2.721	194	.007
	EVNA			2.764	178.894	.006
NORMATIVE COMMITMENT	Equal variances assumed	.241	.624	-.563	194	.574
	EVNA				169.268	.575

**Results of ANOVA (Hierarchy-Wise Comparison)**

The results are presented in Table 2 below.

Table 2: ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Affective Commitment	Between Groups	65.357	2	32.678	1.270	.283
	Within Groups	4965.031	193	25.726		
	Total	5030.388	195	14.305		
Affective Commitment	Between Groups	28.609	2	10.895	1.313	.271
	Within Groups	2102.656	193			
	Total	2131.265	195	5.623		
Affective Commitment	Between Groups	11.246	2	12.182	.462	.631
	Within Groups	2351.136	193			
	Total	2362.383	193			

In all cases, we cannot assume equal variances for public and private sector organizations as p- value of the F-test in the case of affective commitment comes out to be less than 0.05. But the results of Independent Sample t-test suggested no difference in the level of affective and normative commitment for the employees of public and private sector organizations, getting p-value more than 0.05. Therefore the null hypothesis (H1a) i.e. there is no significant difference in the level of normative and affective commitment of the employees in public

and private sector organizations in food processing industry is not rejected or may be accepted. However there is significant difference in continuance commitment, getting p-value less than 0.05. Therefore the null hypothesis (H1a) i.e. there is no significant difference in the level of continuance commitment of the employees in public and private sector organizations in food processing industry is rejected.

The results of one-way ANOVA (table 2) suggested no difference in the level of affective, continuance

**Organizational Commitment and  
Organizational Effectiveness**

and normative among different hierarchical levels (managers, supervisors and workers), getting p-value more than 0.05. Therefore the null hypothesis (H2a) that there is no significant difference in the level of normative, affective and continuance commitment at different hierarchical levels, is not rejected or may be accepted.

In all cases, we cannot assume equal variances for male and female sample as p-value of the F-test in the case of continuance commitment comes out to

be less than 0.05. But the results of Independent Sample t-test suggested no difference in the level of affective, continuance and normative commitment for male and female employees, getting p-value more than 0.05. Therefore the null hypothesis (H 3.1a) that there is no significant difference in the level of normative, affective and continuance commitment for male and female employees is not rejected or may be accepted.

**Results of Independent Sample T-test (Comparison VIS-À-VIS Gender)**

The results are presented in Table3 below.

Table 3: Independent Samples t-test						
		Levene's Test for Equality of Variances		t-test for Equality of means		
		F	Sig.	T	df	Sig. (2-tailed)
AFFECTIVE COMMITMENT	Equal variances assumed	.958	.329	.340	194	.734
	EVNA			.380	34.175	.706
CONTINUANCE COMMITMENT	Equal variances assumed	3.944	.048	-.746	194	.457
	EVNA			-.1059	45.124	.295
NORMATIVE COMMITMENT	Equal variances assumed	.370	.544	.743	194	.458
	EVNA			.789	32.805	.436

**Results of Independent Sample T-Test  
(Comparison VIS-À-VIS Marital Status)**

The results are presented in Table 4 below.

Table 4: Independent Sample t-test.						
		Levene's Test for Equality of Variances		t-test for Equality of means		
		F	Sig.	T	df	Sig. (2-tailed)
AFFECTIVE COMMITMENT	Equal variances assumed	15.799	.000	-.536	194	0.592
	EVNA			-.431	370520	0.669
CONTINUANCE COMMITMENT	Equal variances assumed	0.080	.777	1.173	194	.242
	EVNA			1.172	43.925	.248
NORMATIVE COMMITMENT	Equal variances assumed	.589	.444	-1.492	194	.137
	EVNA			-1.403	41.676	.168

**Organizational Commitment and  
Organizational Effectiveness**

In all cases, we cannot assume equal variances for married and single employees as p-value of the F-test in the case of affective commitment comes out to be less than 0.05. The results of Independent Sample t-test suggested no difference in the level of affective, continuance and normative commitment for married and single employees, getting p-value more than 0.05. Therefore the null hypothesis (H 3.2a) that there is no significant difference in the level of normative, affective and continuance commitment for married and single employees is not rejected or may be accepted.

The results of one -way ANOVA suggested no significant difference in the level of affective, continuance and normative commitment among different educational level getting p-value more than 0.05 but suggested a difference in the level of continuance commitment among different educational level. Therefore the null hypothesis (H 3.3a) that there is no significant difference in the level of normative and affective commitment for the employees processing different experience levels is not rejected or may be accepted. But the null hypothesis H3.3a that there is no significant

difference in the level of continuance commitment for the employees processing different educational level is rejected.

**Results of Karl Pearson's Correlation**

**(Correlation of commitment with Age):**

The results of Karl Pearson's Correlation (Table 6) suggested that there is no correlation between age of the employees and levels of normative commitment, affective commitment and continuance commitment. Therefore the null hypotheses (H3.4a), that there is no significant correlation in normative, affective and continuance commitment with age of the employees is not rejected or may be accepted.

**Results of Karl Pearson's Correlation**

**(Correlation of Commitment with Total Work Experience)**

The results of Karl Pearson's Correlation (Table 6) suggested that there is no correlation between the total work experience of the employees and level of normative commitment, affective commitment and continuance commitment. Therefore the null hypotheses (H3.5a), that there is no significant correlation between normative, affective and

**Results of ANOVA (Education -Wise Comparison)**

The results are presented in Table 5 below.

Table 5: ANOVA (Education- Wise Comparison)						
		Sum of Squares	Df	Mean Square	F	Sig.
Affective Commitment	Between Groups	39.558	3	13.186	.507	.678
	Within Groups	4990.830	192	25.994		
	Total	5030.388	195			
Affective Commitment	Between Groups	117.425	3	39.142	3.732	.012
	Within Groups	2013.840	192	10.489		
	Total	2131.265	195			
Affective Commitment	Between Groups	18.348	3	6.116	.501	.682
	Within Groups	2344.035	192	12.209		
	Total	2362.383	195			

**Organizational Commitment and  
Organizational Effectiveness**

continuance commitment and total work experience of the employees is not rejected or may be accepted.

**Results of Karl Pearson's Correlation**

**(Correlation between Sub-Scales of Commitment):**

The results of Karl Pearson's Correlation (Table 6) suggested that there is a very significant (p<0.01) correlation between normative and affective

commitment (r=0.380, p=0.000), between affective and continuance commitment (r=0.421, p=0.000). A still positive correlation is found between continuance and normative commitment(r=0.456, p=0.000) significant at 5% level of significance. Therefore the null hypotheses (H4a), that there is no significant correlation between normative, affective and continuance commitment is not rejected or may be accepted.

**Results of Karl Pearson's Correlation.**

The results are presented in Table 6 below

Table 6: Correlations						
		Normative Commitment	Affective commitment	Continuance Commitment	Age	Total Work Experience
Affective Commitment	Pearson Correlation	1.000	.456**	.421**	.028	.054
	Sig. (2-tailed)		.000	.000	.697	.455
	N	196.000	196	196	196	196
Continuance Commitment	Pearson Correlation	.456**	1.000	.380**	.052	.088
	Sig. (2-tailed)	.000		.000	.467	.222
	N	196	196.000	196	196	196

		Normative Commitment	Affective Commitment	Continuance Commitment	Age	Total Work Experience
Normative Commitment	Pearson Correlation	.421**	.380**	1.000	.007	-.016
	Sig. (2-tailed)	.000	.000		.921	.824
	N	196	196	196.000	196	196
Age	Pearson Correlation	.028	.052	.007	1.000	.920**
	Sig. (2-tailed)	.697	.467	.921		.000
	N	196	196	196	196.000	196
TWE	Pearson Correlation	.054	.088	-.016	.920**	1.000
	Sig. (2-tailed)	.455	.222	.824	.000	
	N	196	196	196	196	196.000

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

**Organizational Commitment and  
Organizational Effectiveness**

**Results of Karl Pearson's Correlation (Correlation between Organizational Commitment and Organizational Effectiveness):**

The results are presented in Table 7 below.

Dimensions		Affective Commitment	Affective Commitment	Affective Commitment	Organizational Effectiveness
Affective Commitment	Pearson Correlation	1	.415(**)	.469(**)	
	Sig. (2-tailed)		.000	.000	.000
	N	240	240	240	240
Continuance Commitment	Pearson Correlation	.415(**)	1	.393(**)	.358(**)
	Sig.(2-tailed)	.000		.000	.000
	N	240	240	240	240
Normative Commitment	Pearson Correlation	.469(**)	.393(**)	1	.354(**)
	Sig. (2-tailed)	.000	.000		.000
	N	240	240	240	240
Organizational Effectiveness	Pearson Correlation	.475(**)	.358(**)	.354(**)	1
	Sig. (2-tailed)	.000	.000	.000	
	N	240	240	240	240

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

The results of Karl Pearson's Correlation (Table 7) suggested that all the three organizational commitment dimensions (Affective, Normative and Continuance Commitment) were significantly and positively correlated with organization effectiveness (r=0.475, r=0.354 and r=0.358). Therefore the null hypotheses (H5a), that there is no significant correlation between organizational commitment and organizational effectiveness is not rejected or may be accepted.

**Results of Simple Linear Regression Test (Causal Relationship between Organizational Commitment and Organizational Effectiveness)**

The results are presented in Table 8, 9 & 10 below.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.504(a)	.254	.251	.54453

a. Predictors: (Constant), OC

The result of Simple Linear Regression test suggests that organizational commitment is a significant predictor (Result of ANOVA in Table 9, with p-value=.000) of organizational effectiveness with R=.504 (Table 8), slope of regression line=.889 and intercept=0.603 (Table 10), therefore the null hypothesis (H6a) is rejected.

**Organizational Commitment and  
Organizational Effectiveness**

**Table 9: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.982	1	23.982	80.882	.000(a)
	Residual	70.570	238	.297	.254	.254
	Total	94.552	239	.254	.254	.254

a. Predictors: (Constant), OC

b. Dependent Variable: OE

**Table 10: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	.603	.356		1.691	.092
	OC	.889	.099	.504	8.993	.000

a. Dependent Variable: OE

**FINDINGS AND CONCLUSIONS**

- No significant difference was found in the level of Normative, Affective and Continuance commitment for the employees Public and Private sector employees in Food processing industry.
- No significant difference was found in the level of Normative, Affective and Continuance commitment at different hierarchical positions (managers, supervisors and workers).
- No significant difference was found in the level of Normative, Affective and Continuance commitment for male and female employees in the Food processing industry.
- No significant difference was found in the level of Normative, Affective and Continuance commitment for married and unmarried/single employees in the Food processing industry.
- No significant difference was found in the level of Normative, Affective and Continuance commitment for the employees possessing different educational levels (Matriculate, Intermediate, Graduation, Post Graduation). these results don't support the results of Glisson and Charles (1988) and Bhagat et al. (1981).

- No significant difference was found in the level of Normative, Affective and Continuance commitment, and Age of the employees. These results don't support the results of Bhagat et al. (1981) and Kassahun (2005).
- No significant difference was found in the level of Normative, Affective and Continuance commitment, and Total Work Experience of the employees in the Food processing industry.
- A very significant correlation is found between Normative and Affective Commitment, and Affective and Continuance Commitment. A positive correlation was found between Affective and Continuance Commitment, Significant at 5% level of significance, supporting the results of Meyer and Allen (1991).
- The results revealed a very positive correlation of Organizational Commitment with Organizational Effectiveness in the Food Processing Industry.
- The results revealed that Organizational Commitment is the significant predictor of Organizational Effectiveness in the Food Processing Industry.

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# Consumer Behavior and Purchase Intention in Indian Organic Food Market

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*A growing concern among consumers for health and environmental aspects has led to a spur in the demand of healthy and safe agricultural products among consumers across the globe. As a consequence of this, there is an increased inclination to grow and consume organic foods obtained from organic farming.*

*Trailing the global movement, the demand for organic foods in India has also shown an uptrend. Though, earlier organic food producers primarily exported to Europe and the United States, as of now there is a gradual shift towards own domestic market. However, the organic culture in India is still at its nascent stage, despite its proven value for producing the high quality food with reliable nutritional value. While previous researches in India have focused on consumer behavior towards different food products, a very few studies have been conducted on organic foods.*

*The present research is an attempt in this direction. It specifically endeavors to investigate the consumer awareness and preferences regarding organic food products available in the market. To achieve the aforesaid purpose, primary data was collected from 120 consumers of north India with the help of a structured questionnaire. The inferences drawn from the research highlighted certain interesting but striking findings about organic food market in India.*

*Though a high degree of awareness and positive attitude of consumers for organic foods was observed, but in sharp contrast to this the purchase frequency of the same was very low. In spite of consumers finding these foods healthy, safe and environmental friendly, a dissatisfaction and distrust with regards to its information, availability, variety and price level coupled with distrust/non-reliability on the sources of supply was observed. Research results identified 'Product Information and Access', 'Convenience', 'Reliability', 'Social Appeal', 'Health and Safety', 'Sensory Appeal' as the perceived barriers to organic food consumption based on results of Factor Analysis.*

*The research findings have strong implications for organic food producers, marketers, retailers, marketing academicians, consumers and policy makers. Evidently marketers and regulatory bodies should realize that availability of greater information; increased variety of organic foods along with easy availability and standardized certifications have the potential to boost organic food sales.*

**Keywords:** Organic food, consumer behavior, barriers, marketers, India

## AN INTRODUCTION TO ORGANIC FOOD INDUSTRY IN INDIA

In present era, consumers are gradually becoming more and more aware of not only the benefits but also the harmful effects of the foods they are consuming. The stress of producing more food out of the limited land resource by adding artificial nutrients in the land is not a healthy practice. The usage of pesticides has been linked to a myriad of diseases. The Pesticides Literature Review, which is based on studies conducted by a multi-university research team in Toronto, concludes, 'people should reduce their exposure to pesticides because of links to serious illnesses'. Results of this study found a consistent evidence of serious health risks such as cancer, nervous system diseases and reproductive problems in people exposed to pesticide. Similar research has linked exposure to pesticides to increased presence of neurological disorders, Parkinson's disease, childhood leukemia, lymphoma, asthma and also a wide range of neurological health effects such as memory loss, loss of coordination, reduced speed of response to stimuli, reduced visual ability, altered or uncontrollable mood and general behavior, and reduced motor skills. The World Health Organization estimates that there are 3 million cases of pesticide poisoning each year and up to 220,000 deaths, primarily in developing countries.

Alarming increase in the cases of cancer can be related to the polluted food and water we are

consuming. Chemicals like ammonia can cause cancer founded in our food chain. As per the Statistics released by the Punjab government, Punjab alone has over 90 cancer patients per 1 lakh population. This is much higher than the national average of 80 per 1 lakh. The Malwa region, also known as the cancer belt has the highest average of 136 cancer per one lakh. Data over the last five years show that 8 people die every day due to cancer on an average. Simultaneously food has become more costly affair than it used to be.

Children, and indeed any young and developing organisms, are particularly vulnerable to the harmful effects of pesticides. Even very low levels of exposure during development may have adverse health effects. Growing responsiveness and understanding towards the ill effects of the food produced has resulted in an urge among consumers to choose a healthier option. Progressing to organic repellents is a logical step to potentially help reduce the chances of disease or disease acceleration. In the present times where the consumers are becoming increasingly health conscious, organic food is a recent development in the food industry. Researches on organic food market in India show that it is expected to grow at a CAGR of 21.34 percent over the period 2012-2016. The key vendors dominating this market space include Conscious Food Pvt. Ltd., Eco Farm Ltd., Morarka Organic Foods Pvt. Ltd., Organic India Pvt. Ltd., Sresta natural Bio products Pvt. Ltd, Fabindia Overseas Pvt. Ltd and many others. One of the key factors contributing to the growth of this market is the increasing number of health conscious consumers. Nevertheless, the high cost of organic food could pose a challenge to the growth of this market

Organic food is very much native to the land of India. Whosoever seeks to script a history on organic food will have to refer India and China. The farmers of these two countries are farmers of nearly 40 centuries and it is organic food that has sustained them. The very concept of organic food is based on the principle that Nature is the best role model for

food, since it does not use any inputs nor demand unreasonable quantities of water, entire system is based on intimate understanding of nature's ways'. Organic Farming does not believe in mining of the soil of its nutrients and do not degrade it in any way for today's needs, soil in this system is a living entity, soil's living population of microbes and other organisms are significant contributors to its fertility on a sustained basis and must be protected and nurtured at all cost.

In today's terminology organic farming may be defined as a method of food system which primarily aims at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment. As per the definition of the United States Department of Agriculture (USDA) study team on organic food "organic food is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection". In another definition Food and Agriculture Organisation of United Nations (FAO) suggested that "Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs".

In philosophical terms organic food means "food in spirits of organic relationship. In this system everything is connected with everything else. Since organic food means placing food on integral relationship, we should be well aware about the

relationship between the soil, water and plants, between soil-soil microbes and waste products, between the vegetable kingdom and the animal kingdom of which the apex animal is the human being, between agriculture and forestry, between soil, water and atmosphere etc. It is the totality of these relationships that is the bed rock of organic food. Keeping in mind the above factors, organic food seems to be a better solution for many health problems. There are certain claims that organic farming can reduce the production cost in agriculture as well as a farmer can get many benefits as his/her product will be sold at a higher price and also there is a need of organic food which guaranties a substantial growth of farmers.

## LITERATURE REVIEW

Environment friendly products are gaining high popularity among consumers because they are becoming more aware about their health and protection of the environment. People who believe in health benefits, taste, environmental protection and are inclined to improve their life style can be the potential consumers of organic food. Also consumers are willing to "pay for the privilege of buying green" (Mintu-Wimsatt and Bradford, 1995). Many factors induced the consumers to be attracted towards environment, explained by numerous studies during this period. This issue also attracted the media to explore, resulting more stringent legislation, which further resulted in the rise of premier group activities that has led consumers to become more concerned about the environment, resulting further, in great stirs of major industrial disasters (Schlegelmilch et al., 1996). This consciousness towards health is growing gradually with the increase of age.

Stefanicet. al. (2001) in his study of 250 respondents confirmed that individuals are not sufficiently informed about organic food and that they do not know how to properly define organic production. Its participants identified organic food quality, label

correctness and product brand as the most important features of organic food when compared to conventional food. Interestingly, one third of respondents found organic food to be healthier, tastier and better looking than conventional food. In fact an overwhelming majority (nearly 90 percent) of individuals believed that organic food is more expensive than conventional food but, nevertheless, they are willing to pay a higher price for organic food. Magnusson et al. (2001) in their study on attitudes towards organic foods among Swedish consumers reported demographic differences with respect to Swedish consumers' attitudes towards organic foods (milk, meat, potatoes, bread), purchase frequency, purchase criteria, perceived availability, and beliefs about organic food based on a sample of 1158 respondents. The majority of consumers, and particularly women and young respondents (18-25 years) reported positive attitudes, but purchase frequency was low. A total of 13 per cent stated that they regularly bought organic milk. Corresponding figures for organic meat, potatoes, and bread were 13, 16, and 8 per cent respectively. The most important purchase criterion was good taste, and the least important was "organically produced". Approximately half of the respondents were satisfied with the availability of the organic foods. The organic foods were perceived to be more expensive and healthier than conventionally produced alternatives. A major obstacle to the purchase of organic foods was reported to be premium prices. The results suggest that the consumption will not increase as long as important purchase criteria and perceived beliefs about organic foods do not match. Later Znaor (2002) studied organic agriculture and indicated the main motives for organic food purchases and consumption as one's concern for health. It was also observed that organic food is of better quality than conventional food and consumers' belief that organic food purchases support environmental protection and the development of rural areas are the added motives.

Radman (2005) conducted a research study on organic food consumption and the consumers' perception of organic food through a questionnaire survey on 179 Croatian consumers. The research findings affirmed that consumers believed organic products to be healthy, of good quality and tasty. However, they perceived organic food as expensive and are not satisfied with its appearance. Furthermore, the consumers do not know where organic food is typically being sold. Most of the consumers name the city market as a place of sale of organic food while the organic food in Croatia is not being sold at city markets. Thus, consumers equalize organically grown food with traditionally grown food. It was also found that consumers who have a more positive attitude to organic food are willing to pay higher prices for organic food. Nonetheless nearly 70 percent of the respondents said they would purchase more organic food if its price was lower. On the one side, due to organic trend being weakened in the Eastern and southern Europe, Italy being an exception, consumers of these areas were not much interested in the organic food (Dabbert et al., 2004; Padel et al., 2008), whereas on the other side, the developed and industrialized cities in these areas showed a remarkable growth in the market share of certified organic food products (Aschemann et al., 2007). The GfK market research (2008) on the organic food consumption based on a personal survey of households in May 2008, studied 1000 citizens (older than 15) of the Republic of Croatia. According to the research, 83 percent of the respondents are familiar with the organic food produced according to the criteria of organic agriculture. The participants older than 65 and the participants with a lower level of education are not familiar with organic food. At the place of purchase, 53 percent of the respondents would recognize organic food, with a higher level of recognition among the respondents with a higher education level (64 percent). The research has shown that organic food is identified with healthy food. The research observed that 37 percent of the respondents recognize organic food in stores with the help of the

front label, while 36 percent of the respondents mentioned the label 'healthy product' on the product or packaging. The research showed that the buyers of organic food are generally younger and middle aged people, highly educated and people with a higher personal income.

Different markets have different factors determining the popularity of organic food. The transformation in attitudes towards organic food was firstly witnessed at a political level initially in Europe and then North America and Japan. This was in response to the growing interest in organic products because of serious problems caused by the dominant world view underlying the methodologies of technology such as over production, environmental pollution, food scare and the depopulation of rural areas (Lockeretz, 2007; Padel and Lampkin, 2007). A progressive increase in environmental consciousness has been observed since the last four decades (Grant, 2007, Goleman, 2009). In addition to these efforts consumer awareness also encouraged consumers to take some responsibility to reduce environmental damage through recycling and purchasing ecologically sound products (Paladino and Baggiere, 2008). Renko and Bosnjak (2009) in their study of Croatia found that the consumers are still not sufficiently informed about organic food and do not recognize the unique symbol of the Croatian organic product. While comparing organic and conventional products, the authors confirmed that the majority of consumers find organic products to be healthier than conventional products but they find them to be more expensive than conventional ones. The study confirmed that 64 percent of the respondents are buying organic food. Furthermore, 26.2 percent of those who buy organic food buy it once a week; bread and other cereal products are the most purchased category (73.8 percent) and organic food is mostly bought in supermarkets and hypermarkets (40.9 percent). In the research, authors concluded that demand for organic food indeed exists and confirmed the importance of supermarkets and hypermarkets as the distribution channels of organic food in Croatia. Tolusic (2009)

observed that consumers are interested in organic food but, due to a poorly developed distribution network in Eastern Croatia, such products are purchased to a lesser extent. Zakowska and Biemans (2010) found that besides the price, foreign literature also identifies some other motives for not buying organic food: actual or perceived inaccessibility of organic food, inadequate organic food assortment, low consumer confidence in the quality and environmental standards for the production of organic food, low consumer confidence in the process of certification and labeling of organic food, difficulties in identifying organic food and insufficient education of consumers, i.e. their lack of recognition of organic food. The demand for organic food is increasingly based on the concept of values, a place of residence and access to information rather than on socio-demographic factors.

Recent studies across different countries also show mixed results and findings. Shafiea and Rennie (2012) in their study of Malaysian customers observed that food safety, human health and environmental concern along with sensory attributes such as nutritive value, taste, freshness and appearance influence organic food consumer preferences. Consumers also associated organic food with natural process, care for the environment and animal welfare and the non-use of pesticides and fertilisers. The correlation between demographic variables such as age, income and education and organic food consumption is not very significant. Results found that premium price continued to hold back organic food consumption. Chen, Lobo and Rajendran (2014) in their research investigated the important attitudes, demographics and segmentation of potential consumers' purchase intentions of organic food in urban China. The survey based on data collected at supermarkets in the major cities from 935 respondents generated five dimensions affecting attitude towards organic foods. Of these, the strongest dimension was 'Certification' which accounted for 24.7% of the total variance of 58.4% explained by the other five

dimensions. This dimension included food safety, government regulations and correct labelling. Chinese consumers are highly concerned about food safety issues relating to personal health. The findings also revealed that gender, age and educational level had no significant relationship in influencing the purchase intentions. However, income, attitudes and pre-purchase intentions all demonstrated weak to moderate significant correlations with purchase intentions of organic food. Finally, a cluster analysis was performed which generated three distinct clusters, which we named safety conscious, gastronomes and sceptics.

Among the developing countries, India is one of the most potential markets for marketing of organic food. Generally people over the centuries are well aware that the organic food is much more healthy and safe than inorganic food. India had been one of the main followers of organic food with increasing focus on production through natural fertilizers. Hence, India can be the best potential market for the marketers of organic food, but there is a need to win the confidence of consumers through quality products to make them loyal customers of organic food. (Chakrabarti, 2010). Another Indian study by Paul and Rana (2012) based on a survey of 463 respondents provided valuable insight into consumer behavior regarding organic food in India by examining the factors that influence consumers' intention to purchase organic food. Results indicated that health, availability and education positively influence the consumer's attitude towards buying organic food. Overall satisfaction of consumers for organic food was found to be more than inorganic food but the satisfaction level varied due to different factors. The study suggested that retailers can develop effective marketing programs and strategies to influence consumers positively. They can emphasize the health benefits and quality of organic food. They can make these products easily available to attract consumers to buy organic food. Shafi and Madhavaiah (2013) investigated the interrelationship between the measure of brand

equity and consumer behaviour in purchasing branded organic foods in India. Brand equity dimensions such as brand awareness, brand loyalty, perceived quality and brand association emerged as the most attributing features of brand equity based on 150 organic foods consumers from Shopian the largest district of Kashmir. The results revealed that all the four elements of brand equity have highest impact on consumer buying behavior but the highest impact on consumer purchasing behaviour is of brand loyalty.

Recent studies by Mehra and Ratna (2014) on attitude and behaviour of consumers towards organic food in India found that the organic food sector is growing significantly and surmounted growth is being witnessed from tier 1 and tier 2 cities in India, indicating huge acceptance among the masses. Six significant factors were found to influence the attitude towards organic food. They were perception towards organic food, health consciousness, product information, value for money, accessibility and trust. The demographic factors seemed to affect the attitude towards organic food, while they did not explain the actual buying behaviour. The paper attempts to provide evidence on the relatively under-researched area of attitude and behaviour towards organic food in the growing cities in India. Later, Ali, Alam and Ali, (2015) in his study of market structure analysis of health and wellness food products in India analyzed the market structure and level of competition in health and wellness food products by type, category, prime positioning and distribution networks in India. The study found that with growing incidences of problems like obesity, diabetes, coronary heart diseases and foodborne diseases, consumers are becoming aware of the role of food in ensuring health and well-being. There have been significant structural changes in the health and wellness food market compositions and India has huge market potential for health and wellness food products with a market size of Rs. 435 billion in 2013 and growing at a significantly high annual growth rate of about 13.8

percent during 2002-2013. Results indicated that there is significant competition in the health and wellness food market with average. However, the structure of market competition showed a varied trend across the types, categories, prime-positioning and distribution channels of health and wellness food products

## NEED AND OBJECTIVES OF THE STUDY

The increasing consumption of non organic foods is causing serious health problems like asthma, cancer, birth disorders and arthritis. It can also be linked with the numerous diseases allergies, obesity, and immunity system. On social front, the cost of production of non organic food is raising day by day putting huge pressure on farmers as well as the consumers. Despite all these serious problems, people still have a greater tendency to consume these food products and a weak inclination towards organic food is seen. In India, there are some initiatives of organic farming in the state of Maharashtra and Karnataka. Nonetheless, these initiatives and organic products have gone unnoticed by majority of the Indian consumers. A review of past literature reveals that very few studies have been conducted in India on organic foods and the reasons for its low preference. There is a growing need to explore the consumer perception and attitude towards organic food in India. The present research is a step in this direction.

The prime objective of the research is to determine the consumer attitude and behavior towards organic foods in specifically North India. The specific objectives of the research are:

- To study the consumer awareness and preferences regarding organic foods.
- To investigate consumer perceptions, beliefs and reasons for buying inorganic foods and disregarding organic foods.
- To explore the barriers to consumption of organic foods, that is to determine the factors responsible for non purchase of these foods.

**Sources of Data and Methodology**

The research is based on a primary survey of 120 respondents of Northern India selected conveniently from the different states primarily Punjab, Haryana, Chandigarh. The survey questionnaire was self-administered and distributed personally. The respondents were debriefed about the objectives of the research and the questionnaire was explained to them. The questionnaire comprised of a questions on likert scale, rank order and other closed ended questions pertaining to organic foods.

**RESULTS AND DISCUSSIONS**

The survey covered respondents of different gender, educational qualifications, ages and household incomes belonging to different areas of Punjab, Haryana and Chandigarh (Table 1). The study brought to light certain interesting but striking findings about consumer attitude towards organic foods.

Results reveal that in North Indian households both males and females were the grocery shoppers in equal preference (32 percent and 33 percent approx.) A similar proportion of households (35 percent) had shared responsibility among both males and females for the same (table 2).

**Table : 1 Demographic Profile of Respondents (N=120)**

	No. of Respondents (N=60)
<b>Gender</b>	
Male	48 (40.0)
Female	72(60.0)
<b>Education</b>	<b>No. of Respondents (N=60)</b>
Under graduate	2(1.7)
Graduate	14(11.6)
Post graduate	104(86.7)
<b>Age (years)</b>	<b>No. of Respondents (N=60)</b>
15 – 30 yrs	98(81.7)
31 – 45 yrs	20(16.7)
46 – 60 yrs	2(1.6)
> 60 yrs	0(0)
<b>Household Income ( monthly)</b>	<b>No. of Respondents (N=60)</b>
= 20000	44(36.7)
Rs. 20001- Rs. 40000	22(18.3)
Rs. 40001- Rs. 60000	28(23.3)
> Rs. 60000	26(21.7)

Source: Author's calculations based on primary data

**Table: 2 Grocery Shoppers in Household**

Grocery Shopper	No. of Respondents
Males	38(31.7)
Females	40(33.3)
Shared Responsibility	42(35.0)
Total	120(100)

Source: Author's calculations based on primary data

**Consumer Purchase Decision With Regards to Grocery Products**

Survey results reveal that the frequency of purchase of Milk and Vegetables is very high in grocery items (Table 3). While milk is bought almost daily or 3-4 times a week by nearly 55 percent respondents, vegetables and drinkables is purchased in the same frequency by nearly 38 percent and 34.5 percent of respondents respectively. The frequency of purchase of meat, rice and wheat is lowest with nearly 84 percent, 77 percent, 73 percent of respondents respectively purchasing it either monthly or even less followed by rice and wheat. Pulses also have low purchase frequency with 68 percent purchasing it either monthly or even less.

Freshness of the grocery and its quality came out to be the major influencing attribute, which contribute to the purchase decision making of the consumers (Table 4). Nearly 78 percent respondents ranked freshness/quality in top 3. This was followed by Nutrition value and Price being rank in top 3 by nearly 52.5 percent and 46 percent respondents. Convenience to use was the least influencing factor with only 3 percent respondents giving it high ranks.

Evidently freshness and quality of product, nutrition value and price emerged as the three most important attributes affecting purchase decisions of grocery foods.

**Table: 3 Frequency of Purchase of Grocery**

	Never Or less than once a month	Rarely (2-3 Times a Month)	Sometimes (2-3 Fortnight)	Often (3-4 Times a week)	Always (Almost Daily)	No. of Respondents
Milk	14(12.07)	24(20.69)	14(12.07)	12(10.3)	52(44.82)	116
Rice	50(43.10)	40(34.48)	12(10.34)	6(5.17)	8(6.9)	116
Wheat	30(25.86)	56(48.27)	20(17.24)	8(6.69)	2(1.72)	116
Vegetables	8(6.69)	36(31.03)	29(25.86)	17(15.51)	26(22.41)	116
Pulse	24(20.69)	56(48.27)	20(17.24)	8(6.69)	8(6.69)	116
Meat	76(65.51)	22(18.97)	10(8.62)	4(3.45)	4(3.45)	116
Drinkables	12(10.34)	37(32.75)	28(24.13)	21(18.97)	18(15.51)	116

Source: Author's calculations based on primary data

Note: Figures in parenthesis show percentage w.r.t. the row total.

**Table: 4 Importance of Different Attributes in Purchase Decision Making.**

Attributes	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Total	Mean Rank	Std. Dev.
Price	20(16.9)	18(15.3)	16(13.6)	20(16.9)	16(13.6)	14(11.8)	14(11.8)	116	3.77	1.99
Brand Name	20(16.9)	16(13.6)	8(6.7)	14(11.8)	28(23.7)	18(15.3)	12(10.2)	116	4.00	2.00
Availability	8 (6.7)	4(3.4)	10(8.5)	28(23.7)	10(8.5)	32(27.1)	22(18.6)	116	4.81	1.79
Taste	16(13.5)	18(15.3)	34(28.8)	12(10.2)	24(20.3)	6(5.1)	6(5.1)	116	3.44	1.67
Freshness/Quality	40(33.9)	34(28.8)	18(15.3)	6(5.1)	12(10.2)	6(5.1)	0(0)	116	3.44	1.52
Nutrition Value	12(10.2)	24(20.3)	26(22.0)	24(20.3)	12(10.2)	8(6.8)	10(8.5)	116	3.55	1.72
Convenience to Use	0(0)	0(0)	4(3.4)	14(11.8)	14(11.8)	32(27.1)	52(44.1)	116	5.98	1.18

Source: Author's calculations based on primary data

Note: Figures in parenthesis show percentage w.r.t. the row total.

### Consumer Awareness and Preferences for Organic Foods

An overwhelming majority of 93 percent of the respondents were found to be aware of organic food, with 41.67 percent respondents being those who bought organic food occasionally and 11.67 percent being those who were regular buyers of organic food (Table 5).

Vegetables and fruits are found to be the main grocery products for which organic foods are preferred being purchased by nearly 37 percent respondents followed by organic wheat flour being purchased by a meager 19 percent respondents (Table 6). A similar 17 percent purchased Organic milk. Thus vegetables and fruits are the main products in organic food segment that people prefer to purchase.

It is obvious from survey results that while there is a high awareness level about organic foods among the individuals in North India, the purchase preference is low.

### Consumer Perception towards Organic Foods

It is noteworthy that majority of the respondents were in agreement with all the positive statements about perceptions regarding organic food, except the perception that organic food is tastier than inorganic food with approx. 52 percent respondents being neutral about it. While a vast majority of 84 percent respondents agreed with the statement that organic food is healthier than non organic food, 79 percent were in agreement that organic foods are pesticides free and 77 percent were of the belief that buying organic food is good for environment (Table 7).

**Table: 5 Knowledge about Awareness of Organic Food.**

Level of Knowledge	No. of Respondents
Never Heard of it.	4(3.33)
Heard of it, Never bought it	48(40.0)
Heard of it, bought it occasionally	50(41.7)
Regular buyer of Organic food	14(11.67)
Purchase Organic Food Only	0(0)
<b>Total</b>	<b>116(96.7)</b>

Source: Author's calculations based on primary data

**Table: 6 Product-Wise Purchase of Organic Food**

Grocery Foods	Yes	No	No. of Respondents
Milk	20(16.9)	98(83.1)	118
Rice	16(13.6)	102(86.4)	118
Wheat flour	22(18.6)	96(81.4)	118
Pulses	12(10.2)	106(89.8)	118
Vegetables/ fruits	44(37.3)	74(62.7)	118
Meat	2(1.7)	115(98.30)	118
Drinkables	6(5.1)	112(94.9)	118

Source: Author's calculations based on primary data

Unquestionably, respondents belief organic foods to be healthy, safe and environmental friendly though they have doubts on the taste.

Table 8 shows that an overwhelming majority of 78 percent respondents felt that lack of information available about organic food, makes it difficult to make a purchase decision. Similarly, a vast majority of 76 percent felt that organic food is not easily available in local and supermarkets so they are hesitant to purchase it. An equal proportion (76 percent) felt that less variety and choice available in organic food is another big reason for its non purchase.

Interestingly a good majority of 60 percent respondents disagreed that they believed using

organic food is just a fashion and is not necessary for a healthy life. Nearly 40 percent respondents disregarded the statement that 'they are satisfied with non organic food hence don't want to shift to use organic food'. A similar proportion of 40 percent respondents they showed their disagreement to the perception they believe that non-organic foods are equally healthy so they do not purchase organic foods. Thus prime reasons for non purchase of organic foods among individuals in North India are lack of information about organic food, its benefits and range, constrained availability, and reduced variety. Consequently, there is a need of information flow towards customers about organic food .Further easy availability and enhanced variety will boost demand of these foods.

**Table: 7 Perceptions about Organic Food.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Mean Score	Std. Dev.
Buying organic food means I am providing healthier food to my family	48(41.4)	50(43.1)	18(15.5)	0(0.0)	0(0.0)	116	4.25	0.71
Organic food tastes better than non-organic food.	20(17.3)	32(27.6)	60(51.7)	0(0)	4(3.4)	116	3.55	0.90
Buying Organic food means I support local farmers and agriculture	16(13.8)	48(41.4)	42(36.2)	8(6.9)	2(1.7)	116	3.57	0.879
Buying organic food means I care for environment	34(29.3)	56(48.2)	22(18.9)	2(1.7)	2(1.7)	116	4.00	0.89
Buying organic food means my food is pesticides free	54(46.5)	38(32.8)	20(17.3)	4(3.5)	0(0)	116	4.22	0.86
Buying organic food means I care more for value than price	38(32.8)	42(36.2)	32(27.6)	4(3.5)	0(0)	116	3.99	0.87
Buying organic food means I am saving money, which otherwise will be spent on medicines	24(20.7)	54(46.5)	30(25.9)	6(5.2)	2(1.7)	116	3.79	0.89

Source: Author's calculations based on primary data

**Consumer Behavior and Purchase Intention  
in Indian Organic Food Market**

**Table: 8 Level of agreement with the reasons for not buying organic food**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Mean Score	Std. dev
There is less variety available of organic food	26(23.6)	58(52.7)	14(12.7)	12(10.9)	0(0)	110	3.89	0.89
There is lack of scientific evidence about organic food being healthy	14(12.7)	30(27.3)	44(40.0)	20(18.2)	2(1.8)	110	3.31	0.97
Organic food is not easily available in local market and even in supermarket	40(36.4)	44(40.0)	14(12.7)	10(9.1)	2(1.8)	110	4.00	1.01
There is lack of information available about organic food, so it is difficult to make a purchase decision	34(30.9)	52(47.3)	18(16.4)	5(5.5)	0(0)	110	4.03	0.83
I believe that non-organic foods are equally healthy	2(1.7)	16(14.5)	48(43.6)	38(34.5)	6(5.5)	110	2.72	0.84
Doubt about the taste of organic food, that it is actually good	6(5.5)	28(23.3)	46(41.8)	26(23.6)	4(3.6)	110	3.05	0.93
There is no guarantee whether the product is really organic, fresh and of good quality	22(20.0)	52(47.3)	24(21.8)	12(10.9)	0(0.0)	110	3.76	0.90
You are satisfied with non-organic food hence don't want to shift to use organic food	4(3.6)	30(27.3)	32(29.1)	38(34.5)	6(5.5)	110	2.89	0.99
Your friends and family do not use organic food	8(7.27)	46(41.8)	38(34.6)	16(14.5)	2(1.8)	110	3.38	0.89
Distrust on the source of supply	8(7.27)	44(40.0)	44(40.0)	14(12.7)	0(0)	110	3.42	0.80
I believe using organic food is just a fashion and is not necessary for a healthy life	6(5.5)	22(12.0)	16(14.5)	52(47.3)	14(12.7)	110	2.58	1.11

Source: Author's calculations based on primary data

A perusal of Table 9 reveals that the prime reason why people go for purchase of non organic food is it's easy availability as 67 percent respondents give it top three ranking and its mean rank is lowest (2.896) (Table 9). Next important reason for purchase emerged to be a large variety in the market as its mean rank came out to be second lowest (3.465) and 57 percent respondents ranked it in top three. Respondents do not think that non organic food is equally healthy and give this reason with the last

rank with a mean rank of 4.551. Further complete knowledge about non organic foods is not a motivation to purchase these foods, as mean rank to it was second highest 4.482.

***Perceived Barriers to Consumption of organic foods***

To identify empirically the barriers to consumption of organic foods and explore these factors that lead to non-purchase of organic foods, Factor Analysis

**Consumer Behavior and Purchase Intention  
in Indian Organic Food Market**

technique was used which reduce the vast number of statements into a fewer factors, which explain much of the original data. Tables 10,11,12 and 13 show the results of the factor analysis.

Measure of sample adequacy such as Bartlett's Test of Sphericity (approx chi-square is 1106.43, degree of freedom is 120, significance is 0.000) and KMO value (0.57) indicate that the data was fit for factor analysis (Table10). Bartlett's Test of Sphericity is significant. Thus, the hypothesis, that the inter correlation matrix involving these 16 variables is an identity matrix, is rejected. Empirical estimates of Bartlett's test and KMO value factor analysis indicate that factor analysis is feasible.

Principal component analysis along with Varimax rotation method was used for extracting factors. Six factors were retained on the basis of Eigen values (value that represents the total variance explained by each factor) and variance explained. The standard practice normally used is that all the factors with an Eigen value of one or more should be extracted.

Clearly there are six factors having Eigen values more than 1 (Table11). Thus, six factors were extracted which cumulatively explained 87.09 percent of the total variance The factors extracted using principal component analysis was rotated using Varimax rotation. All the variables / statements with factor loadings greater than 0.40, were considered in the relevant factor (Table 12).

After the number of extracted factors was decided, the factors were interpreted and named. This was done by the process of identifying the factors that were associated with each of the original variables. The rotated factor matrix is used for this purpose. The name of the factors, variable labels and factor loadings are summarized in Table 13. Table 13 shows that Factor 1 is linear combination of variable number 3, 4, 5 and 15. Factor 2 is linear combination of variable number 8 and 14 Factor 3 is linear combination of variable number 13 and 16. Factor 4 is linear combination of variable number 9, 10 and 11. Factor 5 is combination of variable number 1, 2, 12. Factor 6 is combination of variable number 6 and 7.

**Table: 9 Ranking of Reasons for buying Non-Organic Food on basis of their Importance**

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Total	Mean Rank	Std. Dev
It offers large variety	24(20.7)	26(22.4)	16(13.8)	12 (10.3)	6(5.2)	24(20.7)	8(6.9)	116	3.46	2.04
It is equally healthy as organic food	12(10.4)	18(15.5)	16(13.8)	12(10.4)	6(5.2)	10(8.6)	42(38.2)	116	4.55	2.26
There is complete knowledge of information about it	4 (3.5)	8(6.9)	22(18.9)	20(17.3)	30(25.8)	20(17.3)	12(10.3)	116	4.48	1.56
It is easily available in the market	36(31.0)	30(25.7)	12(10.3)	10(8.6)	12(10.3)	8(6.8)	8(6.8)	116	2.89	1.94
It is fresh and of good quality	26(22.4)	12(10.4)	10(8.6)	22(18.9)	22(18.9)	16(13.7)	8(6.8)	116	3.70	1.96
Its price lower than organic food	10(8.6)	20(8.6)	24(20.6)	10(8.6)	20(17.4)	18(15.5)	24(20.7)	116	4.46	1.95
It tastes really good	4(3.5)	12(10.3)	18(15.5)	30(25.8)	20(17.2)	16(13.7)	16(13.8)	116	4.39	1.65

Source: Author's calculations based on primary data

**Consumer Behavior and Purchase Intention  
in Indian Organic Food Market**

Table: 10 Results of KMO and Bartlett's Test		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.57	
Bartlett's Test of Sphericity	Approx. Chi-Square	1106.431
	df	120.000
	Sig.	0.000

Source: Author's calculations based on primary data

Table: 11 Principal Component Analysis-Total Variance Explained								
Total Variance Explained								
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance
1	5.038	31.485	31.485	5.038	31.485	31.485	3.207	20.045
2	2.436	15.225	46.710	2.436	15.225	46.710	2.472	15.452
3	2.236	13.973	60.683	2.236	13.973	60.683	2.455	15.341
4	1.810	11.310	71.993	1.810	11.310	71.993	2.097	13.107
5	1.414	8.840	80.833	1.414	8.840	80.833	1.869	11.679
6	1.001	6.258	87.091	1.001	6.258	87.091	1.835	11.468
+7	0.898	5.610	92.701					
8	0.459	2.871	95.572					
9	0.248	1.550	97.122					
10	0.213	1.329	98.450					
11	0.102	0.639	99.089					
12	0.056	0.349	99.438					
13	0.038	0.238	99.677					
14	0.034	0.211	99.888					
15	0.012	0.074	99.963					
16	0.006	0.037	100.000					

Source: Author's calculations based on primary data

**Consumer Behavior and Purchase Intention  
in Indian Organic Food Market**

Table: 12 Varimax Rotated Component Matrix						
	Rotated Component Matrix					
	Component					
	1	2	3	4	5	6
VAR00003	0.813					
VAR00004	0.846					
VAR00005	0.740					
VAR00015	0.815					
VAR00008		-0.895				
VAR00014		0.819				
VAR00013			0.749			
VAR00016			0.896			
VAR00009				0.891		
VAR00010				0.753		
VAR00011				0.685		
VAR00001					0.743	
VAR00002					0.904	
VAR00012					0.616	
VAR00006						0.759
VAR00007						0.853

Source: Author's calculations based on primary data

All the factors have been given appropriate names according to the variables that have been loaded on each factor. Table XIV identifies six factors / barriers leading to non-purchase of organic foods.

Consumer Behavior and Purchase Intention  
in Indian Organic Food Market

Table: 13 Factors Responsible for Non-Purchase of Organic Foods

FACTORS	STATEMENTS	FACTOR LOADING
<b>Factor 1- Product Information and Access</b>	Organic food is not easily available in local and even in supermarket.	0.815
	Lack of information about organic food, so it is difficult to make a purchase decision.	0.813
	Non-organic foods are easy to purchase in market	0.846
	Availability of complete knowledge about Non-organic foods	0.740
<b>Factor 2- Convenience</b>	You are satisfied with non-organic food hence don't want to shift to use organic food.	0.819
	Non-organic food is easily available in the market.	-0.895
<b>Factor 3- Reliability</b>	Distrust on the source of supply and Organic foods	0.749
	Prices of Non-organic are lower than organic food.	0.896
<b>Factor 4- Social Appeal</b>	Your friends and family do not use organic food as well.	0.753
	Non-organic foods offers a large variety of products	0.891
	Less choice available in organic food category.	0.685
<b>Factor 5 Health and Safety</b>	There is belief that there is nothing bad in non-organic foods and it is equally healthy	0.616
	There is lack of scientific evidence about organic food being healthy.	0.904
	Non-organic is equally fresh and of good quality.	0.743
<b>Factor 6- Sensory Appeal</b>	Doubt about the taste of organic food, that it is actually good.	0.853
	There is no guarantee whether the product is really organic, fresh and of good quality	0.759

Source: Author's calculations based on primary data

Table: 14 Ranking of Factors that would boost Purchase of Organic Food

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Total	Mean Rank	Std. Dev.
Lower Price of Organic Food	32(26.6)	16(13.8)	4(3.5)	8(6.9)	10(8.6)	14(12.1)	32(27.6)	116	4.01	2.49
More Information About Organic Food	22(18.9)	30(25.9)	20(17.2)	18(15.5)	16(13.8)	6(5.2)	4(3.5)	116	3.08	1.66
More Advertisement for Organic Food	8(6.9)	14(12.1)	16(13.9)	22(18.9)	16(13.7)	22(18.9)	10(15.5)	116	4.39	1.85
Wide product Range Of Organic Food	12(10.3)	24(20.7)	22(18.9)	18(15.5)	20(17.2)	14(12.1)	6(5.2)	116	3.65	1.73
Influence From Friends and Family	4(3.45)	2(1.72)	12(10.3)	20(17.2)	18(15.5)	26(22.4)	34(29.3)	116	5.24	1.63
More Scientific Evidence Of Organic Food Being Healthy	26(22.4)	16(13.8)	22(18.9)	12(10.3)	12(10.3)	18(15.5)	10(8.6)	116	3.53	2.02
Easy Availability of Organic Food	12(10.3)	14(12.1)	20(17.4)	18(15.5)	24(20.7)	16(13.8)	12(10.3)	116	4.06	1.82

Source: Author's calculations based on primary data

Consumer Behavior and Purchase Intention  
in Indian Organic Food Market

Based on the results of Factor Analysis, 'Product Information and Access', 'Convenience', 'Reliability', 'Social Appeal', 'Health and Safety', 'Sensory Appeal' emerged as the perceived barriers to organic food consumption. These factors were found to be responsible for non purchase of organic foods.

**Factors that would boost Purchase of Organic Food**

Availability of greater information about organic foods and reduced prices of these foods emerged as the most influential factors which may influence respondents to start purchasing organic food with nearly 45 percent and 40 percent of the respondents agreeing with the same (Table 14). Scientific evidence about organic food being healthy and its increased variety were found to be the other motivators for the same. People gave least importance to influence of friends and family with giving it highest mean rank (5.241) as 67 percent people kept it in the lowest three ranks. Further increased advertisement about organic food was also not a major influence as 47 percent gave it the lowest three ranks with giving it the second high mean rank of 4.396.

Evidently marketers should realize that availability of greater information; reasonable prices and increased variety and choice of organic foods have the potential to boost organic food sales.

**FINDINGS OF THE STUDY**

The research based on a primary survey of 120 respondents of North India aimed at studying the consumer attitudes and perceptions towards organic foods. It further identified the barriers to organic food consumption and explored the factors that could motivate and attract consumers towards these healthy alternatives.

Research findings confirmed that in North Indian households both males and females are the grocery shoppers in equal preference and a similar proportion of households have a shared responsibility among both males and females for the same. Furthermore, the frequency of purchase of

milk and vegetables is very high while that of meat, rice and wheat is very low in the category of grocery products. Freshness and quality of product, nutrition value and price emerged as the three most important attributes affecting purchase decisions of grocery foods.

It is obvious from survey results that while there is a high awareness level about organic foods among the individuals in North India, the purchase preference is low. It is noteworthy that an overwhelming majority of ninety three percent of the respondents is aware of organic foods, but only forty two percent are those who bought organic food occasionally. Surprisingly, a meager twelve percent respondents are regular buyers of organic food confirming a lower purchase preference in this segment. Additionally, vegetables and fruits are the main grocery products that people prefer to purchase in the organic food segment.

Unquestionably, respondents believe organic foods to be healthy, safe and environmental friendly though they have doubts on the taste. Results conclude that the prime reasons for non purchase of organic foods among individuals in North India are lack of information, constrained availability, and reduced variety. The primary reason why people go for purchase of non organic food is its easy availability and vast variety.

'Product Information and Access', 'Convenience', 'Reliability', 'Social Appeal', 'Health and Safety', 'Sensory Appeal' emerged as the perceived barriers to organic food consumption based on results of Factor Analysis. These factors were found to be responsible for non purchase of organic foods.

Results indicated that availability of greater information about organic foods and reduced prices of these foods emerged as the most influential factors which may influence respondents to start purchasing organic food. Scientific evidence about organic food being healthy and its increased variety are found to be the other motivators for the same. Increased advertisement and influence of family and friends were not so strong factors affecting purchase decision of organic foods

Consequently, there is a need of information flow towards customers about organic food. Further easy availability and enhanced variety will boost demand of these foods. Evidently marketers should realize that availability of greater information; increased variety and choice of organic foods have the potential to boost organic food sales. The consumers is

## CONCLUSION AND IMPLICATIONS

Despite the growing consciousness among Indian consumers for health and environment, Organic food market in North India is still at its nascent stage and can be considered as immature. Though the availability of ample fertile land especially in North India can remove the supply-related barriers to organic foods, but the promotion of various attributes of organic food remain one of the key issues to boost the demand of these foods. In spite of consumers finding these foods healthy, safe and environmental friendly, there is dissatisfaction and distrust with regards to its information, availability, variety and price level. Poor product information and access, lack of convenience and availability coupled with distrust/non-reliability on the sources of supply are the prime barriers to purchase of organic food in India.

Nonetheless our research is an area specific research limited to North India and restricted to specific grocery products but it has strong implications for organic food producers, marketers, retailers, marketing academicians, consumers and policy makers.

As the global and Indian production of organic food is expected to increase considerably, organic food industry has the potential to multiply and grow by many folds. It is evident from research our research in India that marketing academics need to play a crucial role to play in generating further insights into understanding the organic consumer and the marketing system in which they must make purchase decisions and consume organic products. This information may then be employed to aid consumers, the food industry (growers and retailers

alike), policy makers, and special interest groups in enhancing organic food demand. Research can also enlighten the industry and policy makers on what marketing strategies will be beneficial in educating and informing the public on the one hand; and at the same time also providing strategic advice on packaging, communications, pricing strategies etc. Retailers should develop effective marketing programs and strategies to influence consumers positively. They can emphasize the health benefits and quality of organic food. Organic food has positive connotation in consumers mind but more effort is needed to communicate various aspects of organic food production referring to organic standards and common principles covering environmental, social and ethical benefits of organic food consumption. Policy makers and regulatory bodies should provide proper certifications and labeling on organic products to authenticate the quality to foster consumer trust and reliability. Evidently marketers should realize that availability of greater information; increased variety of organic foods along with easy availability and standardized certifications have the potential to boost organic food sales. Indian consumers have a positive perception towards organic foods and they want to shift or at least give a try to organic foods, provided they are assured easy access and complete information and trust along with value for price.

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# An Empirical Study of Role and Significance of Salesmanship for Competitive Advantage with Special Reference to Indian Retail Industry

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*The objectives of this research are to understand the influence of selling traits dimensions in Indian Retail Market in Delhi NCR Region. A salesperson's success depends upon his ability to focus on matters relating to sales and the resilience displayed by him upon facing repeated rejections from the buyer.*

*The data was collected from the sample of 147 salespersons working in different Shopping Malls, Departmental Stores etc. The various demographic variables examined were age, gender, education, income occupation, Span of service and Religion. Three factors analysis were run in the present study to verify the postulated dimensionality of the independent and dependent variables respectively by utilizing the varimax rotation. On the variables being validated they were subject to a test of internal consistency. The mean was applied as a measure of Central tendency, which indicated that all the variable were above their midpoint level. One tailed Pearson correlation tests were employed (Table-6) all the independent variables were found to be significantly correlated with the dependent variable of salesperson performance indicating the achievement of predictive validity. One tailed Pearson correlation tests were employed and all the independent variables were found to be significantly correlated with the dependent variable of salesperson performance indicating the achievement of predictive validity and to test the hypothesis developed for the present study, regression was used. The independent variable (physical, mental, personal and social traits) were entered into a simultaneous regression model predicting salesperson performance.*

*The results shows that the  $\beta$ , t-statistics and the significance levels of each independent variable against the salesperson performance. Only, Physical trait significantly (significance level below than 0.01) explain salesperson performance whereas mental, personal and social traits did not (significance levels over than the minimum accepted level of  $p < 0.05$ ). Hence this indicates that physical traits influence the sales person performance.*

**Keywords:** Selling Traits, Salesman, Performance, retail.

## INTRODUCTION

The purpose of this study was to identify the factors that enable sales organizations to be highly successful. Companies have delayed and cut back spending, demanded price concessions, and involved more players in the buying process. Salespeople have had to work harder to demonstrate the unique levels of their products (which are increasingly viewed as commodities). Many sales organizations are finding that selling as demanding as ever. The engines of economic growth and profitably. "Nothing happens until someone sells something," is an old saying in business. But in reality, a lot must happen before a sale can be made. Companies count on their sales and marketing teams not only to sell products but to lay the groundwork to make it happen. However, salespeople are expensive. Often they are the most expensive element in a company's marketing strategy. As a result, they have to generate business in order to justify a firm's investment in them.

Salespeople aren't appropriate channels for companies in all situations, however. Some purchases don't require the salesperson's expertise. Or the heed to sell at a very low cost may make retail stores or online selling more attractive. But in salespeople can be best channel to reach customers. Similarly, salespeople interact directly with customers and, in so doing, gather a great deal of useful information about their needs. The salespeople then pass the information along to their

## An Empirical Study of Role and Significance of Salesmanship for Competitive Advantage with Special Reference to Indian Retail Industry

Firms, which use it to create new offerings, adjust their current offerings, and reformulate their marketing tactics. The trick is getting the information to the right decision makes in firms. Many companies use customer relationship management (CRM) software like Net suite or sales force. Com to provide a mechanism for salespeople to enter customer data to pinpoint segments of customers with which to communicate directly in addition to using the data to improve and create and marketing strategies, the information can also help marketing decision makes understand who makes buying decisions, resulting in such decisions as targeting trade shows where potential buyers are likely to be.

### Indian Retail Market

The importance of retailing is increasing day by day and today it is the integral part of the whole economy in India. The retail business sector is witnessing tremendous growth with the fast changing demographics and an increase in the quality of urban consumers but retail growth in India is at very early stage and unbalanced.

However, during the last five years, the Indian retail industry has seen phenomenal growth with the changing consumer behavior, lifestyle, increasing influence of western culture, rising incomes with the entry of corporate etc and India has now become the most attractive destinations for retailers from across the globe.

Retailing provides jobs to almost 10 percent of employable adults and it is perhaps the largest contributor to India's GDP as retail sales. Increase in income levels of middle and higher income groups with fast changing lifestyles, nuclear families, advent of cable television, internet are some valuable factors which contributed to the retail growth. As India is one of the world's largest consumer markets and ia an emerging world economic power, this market presents a potentially vast untapped source. There is a dramatic shift which is taking place in retail with changes in characteristics of competitive environment, consumer, technology and the economy put together are the driving force of the

future of retailing.

In India the retail market is as old as in the global context. However, the concept organized retailing is comparatively new. Retailing has been one of the prominent driving forces in business in India. Traditionally it has been dominated to a large extent by the unorganized sector. The Indian retail sector is facing intense competition. Though, new stores and malls and coming up every day, but differentiating their retail offerings is a real challenge for all of them. It is difficult for retailers to maintain an advantageous position only from products, price, promotions and the retailing network. With the changing profile of the Indian customer, it is become very challenging for the retailers to allure the customers to their stores. By improving the in-store environment, a store can create an effective consuming condition to stimulate consumers' immediate purchasing action.

"Nothing happens until someone sells something," is an old saying in business. But in reality, a lot must happen before a sale can be made. Companies count on their sales and marketing teams not only to sell products but to the lay the groundwork to make it happen. However, salespeople are expensive. Often they are the most expensive element in a company's marketing strategy. As a result, they have to generate business in order to justify a firm's investment in them. The change that organized retail has brought about is evident how it has transformed the neighborhood grocery or "kirana" store Gone are dust-coated shelves and cluttered the and in place are neat rows of the latest products and spruced up appearance and attentive staff.

## OBJECTIVES OF THE STUDY

- 1) To examine the relationship of various traits of salesman and performance.
- 2) Study the impact of the sales traits on the performance level of employees
- 3) To study the significance of salesmanship in building long lasting relationship for mutual benefits of organizations and sales employees

## RESEARCH METHODOLOGY

The Mode of data collection was personally through self administrated survey questionnaire during 15th April 2015 to 25th may 2015. The survey questionnaire was divided into three parts which includes demographic information , selling traits namely physical traits, mental traits, personal traits and social traits and salesperson performance. The respondents were asked to indicate their agreement or disagreement with several statements on a 7 point

liker scale from 1= strongly disagree to 7 = strongly agree. The Cronback alpha obtained for the measure were 0.91 for physical traits, 0.88 for mental traits, 0.78 for personal traits and 0.74 for social traits while 0.88 for salesperson performance.

The Sample for the empirical research consisted of 272 respondents. The respondents were told that participation was voluntary and not compulsory. Finally only 147 respondents returned the completed questionnaire. The demographic profile of Salesperson being evaluated are presented in Table

Variables	Description	Frequency	Percentage
Gender	Male	90	61.2
	Female	57	38.7
Age	<25 years	12	8.16
	25-35 years	88	59.8
	36-45 years	37	25.1
	46-55 years	10	6.8
Educational level	High school	8	5.4
	Intermediate	11	7.4
	Bachelor's Degree	108	73.4
	Master's Degree	20	13.6
Designation	Sales Executive	39	26.5
	Sales Manager	71	48.2
	Sr. Sales Manager	28	19
	General manager and above	9	6.1
Span of Service	<1 years	12	8.16
	2-5 years	44	29.9
	6-10 years	68	46.2
	11-15 years	19	12.9
	>15 years	4	2.7
Monthly Income	<15000	35	23.8
	15,000-30,000	71	48.2
	30,001-45,000	21	14.2
	45,001-above	20	13.6
Religion	Hindu	72	48.9
	Muslim	38	25.8
	Sikh	18	12.2
	Christian	16	10.8
	Other	03	2.0

## Results and Discussion

The Evaluated salespersons number is 147 and from the sales persons profile it can be concluded that 73.4% were graduates while 13.6% were post graduates. While 59.8 % salespersons were in the age group between 25-35 years and 25.1 % of them were in the age group of 46-55 years. It is evident from the profile that 61.2 % were males while 38.7 % were female respondents. Above 46.2% were having selling experience of 6-10 years and 29.9 % of them were having 2-5 years selling experience. Among them 48.2% were drawing salary between Rs. 15000-Rs. 30000 per month while 23.8% respondents were drawing less than Rs. 15000/month. In terms of Religion distribution 48.9% were Hindus while 25.8 % were Muslims.

### Goodness of Measures

#### Factor Analysis

The validation procedure adopted in the present study was factor analysis. It allowed the researcher to ensure whether the reduced set of items were similar to number of initially modeled concepts. Three factors analysis were run in the present study (Table 3 & 4) verify the postulated dimensionality of the independent and dependent variables respectively by utilizing the varimax rotation . All the factor analysis was diagnosed to have met the assumptions based on Kaiser-Meyer-Olkin measure and the diagonals of the anti-image correlation matrix to be above 15. On the examination of the 4 factor solution of independent variables revealed that a combined total variance of 69.96 % while major variation was witnessed by Physical traits (22.75%) followed by Mental traits(17.87%), Personal traits(17.51%) and Social traits (11.83%).

#### Reliability analysis

On the variables being validated they were subject to a test of internal consistency. It was done to determine the extent of agreement between

respondents of each dimension i.e higher score would determine higher reliability. The Conbranch's alpha on computation was well above the cutoff value of 0.70 indicated that all measures were reliable.(As suggested by Nummally and Nemstein 1994).

#### Descriptive Analysis

The mean was applied as a measure of Central tendency, which indicated that all the variable were above their midpoint level as indicated in Table-5. Out of the four independent variables, Mental traits was the highest in rating (M=5.56) while lowest was Physical traits(M=5.36).

#### Predictive and Discriminant Validity

One tailed Pearson correlation tests were employed (Table-6) all the independent variables were found to the significantly correlated with the dependent variable of salesperson performance indicating the achievement of predictive validity.

#### Regression Analysis

To test the hypothesis developed for the present study, regression was used. The independent variable(physical, mental, personal and social traits) were entered into a simultaneous regression model predicting salesperson performance. It is evident from the Table- 7, that selling traits dimensions significantly explain salesperson performance (R2 =0.47). R2 Is the proportion of variance in dependent variable i.e physical, mental, personal and social traits. The Table clearly shows that only Physical traits significantly (significance levels below than 0.01) explains salespersons performance whereas mental, personal and social traits did not as their significance level is over p<0.05, the minimum accepted level. Thus, the finding indicates that 47% of the variance in Salesperson performance can be predicted from the Physical trait variable. Hence it is included that only H1 that was posited as there is a significant positive relationship between physical

traits and salespersons performance is fully supported in the present study.

## LITERATURE REVIEW AND HYPOTHESIS

### DEVELOPMENT

Several studies in the past have identified and outlined a great number of independent variables than influences the salesperson performance .With respect to this, the present study is an attempt to continue from Churchill's et.al" (1985) work to examine the influence of selling traits on sales person performance and this study will investigate the influences of four selling traits on performance ie to study the relationship between selling traits (Physical, Social, Personal and Mental Traits) and performance of sales personnel and this is depicted in Fig-1

The salesman performance is dependent upon the contribution of many factors .It is being observed that selling skills of sales personnel plays an important role in making the actual sales which in turn makes revenue for the organization. According to Ingram et.al (2004), in today's competitive environment, business organizations are forced to look out for highly skilled salespersons and in the process to strengthen the sales department to ensure/enhance sales. Atuahene-Gima & Micheal (1998) mentioned that with the advent of technology and internet, consumers are much more informed and smarter and desire best from sellers to fulfill their demands. Now the companies have realized

that sales personnel are the major and important link between them and customers. Futrell (2006) mentioned the organizations to grow faster than its competitors should focus on quality sales personnel who not only generate business from existing customers but also find new prospects. Hence, the management are now motivated to understand the value/importance of sales persons and have realized the need for them in order to increase the market share more so due to main reasons (1) the business environment is becoming more and more complex and dynamic due to fast changing technology and(2) consumers are being well informed and educated and expects the best to satisfy their needs and wants.

### *Physical Traits and Salesman Performance:*

Cho (2001), mentioned that a person's behavior. According to Liegh and Summers (2002);Futrell (2006) pointed that one of the critical aspect for a successful selling is salesman's non verbal cues. William et al(1990), there are four major non verbal expressions such as pleasant voice ,non verbal vocalization, good body posture ,sound health ,positive self image might result in making the sales. Therefore any conscious effort on the part of the sales person to adapt on such physical traits will create a charisma on the customers and should give him as a seller a positive feeling to enhance the chances to sell or to perform better. Gabbot&Hogg (2000) suggested that a different characteristic of voice modulation is highly correlated with output of sales

#### Independent Variables

- Sales Traits Dimensions
  - Physical Traits
  - Mental Traits
  - Personal Traits
  - Social traits



#### Dependent Variables

Salesperson Performance

performance positively. Therefore, the above discussions suggests the first hypothesis ie

**H1:There is a positive relationship between physical traits and salesman's performance**

### *Social Traits and Salesman performance:*

According to Williams and Spiro (1985) to become a successful salesman, one should be able to adapt his/her style of communication according to the customers to interact with them. William et al (1990) posited that if the sales personnel are able to bring variation in their communication styles in relation to the customers are far more successful in closing the sale. Broorom et al,(1998) suggested that there is a positive relationship between adaptiveness in organizational sales. Rich and Smith (2000) found that sales personnel who possess high responsive characteristics have greater value also those acquiring observation skills concerning the social style of others are critical factors to become successful salesperson. Jane and Dawn (2003) suggested that the competency in being empathic is correlated with increased sales performance. Morgan and Stoltzman(1990) pointed out in their study that there is a positive relationship ship between ability to adapt and non verbal behavior. Babakus et al.,(1996)in their study found a positive association between salesperformance and sales organizational effectiveness and adaptive selling. To sum up, some previous empirical studies demonstrated a significant relationship of the social traits on salesperson's performance. Therefore, it is expected to have a similar relationship among the study sample of salespersons. Thus, the second hypothesis is

**H2: There is positive relationship between social traits and salesman's performance.**

### *Personal and Mental Traits and salesman performance:*

Personal and mental traits refer to the sales personnel behavior related to provide information, specification about the product along with the application and functions of the product and services. The sales persons should also possess knowledge not only about the organization they are working with but also about the industry, competitors, sales policies etc so as to cope with the complex and dynamic market environment .Ahearne and Schillewaert (2000) mentioned that salesman's performance is influenced by marketing skills. Consultative skills are another important factor considered for the enhancing the performance of a salesman (De Cormier and Jobber(1993). Schuster and Danes (1986) posited that negotiation skills possessed by a sales person contributed to the success of the sales person It is also recognized that effective sales persons possess richer and more interrelated knowledge structures about their customers than those that are less effective. Sujan et al( 1988).Besides aptitude for selling ,role perception, motivation, personality and organizational factors ,sales skills also affects the performance. Castleberry and Shepherd(1993), Ramsey&Sohi (1997) emphasized that for being a successful sales person effective listening is equally important as communication skills. Pettijohn and Pettijohn (1994) emphasizes upon that customer knowledge is important and that it should be included in sales training programmes. Makinen (2004) suggested in hiss research that it is important for salesman to have knowledge abuit the product .Rich and Smith (2000) found in their study that individuals possessing high responsive.

**H3 : There is positive relationship between personal traits and salesperson performance**

**H4 : There is positive relationship between social traits and salesperson performance**

An Empirical Study of Role and Significance of Salesmanship for Competitive Advantage with Special Reference to Indian Retail Industry

Table-1 Factor Loadings for Independent Variables					
	Items	Factor			
		1	2	3	4
(a)	<b>Physical Traits</b>				
1	Good Appearance	0.80	0.31	0.13	0.08
2	Pleasant Voice	0.81	0.17	0.20	0.17
3	Positive Self Image	0.86	0.10	0.24	0.06
4	Sound Health/ Physically fit	0.78	0.33	0.05	0.20
(b)	<b>Mental Traits</b>				
1	Level of Self Confidence	0.36	0.77	0.24	0
2	Resourcefulness	0.32	0.71	0.36	0.13
3	Good Imaginative Power	0.21	0.78	0.16	0.24
4	Ability to Initiate	0.1	0.8	0.2	0.33
(c)	<b>Personal Traits</b>				
1	Good Listening Ability	0.05	0.25	0.75	-0.01
2	Determination to Perform	0.09	0.22	0.7	0.24
3	Courage and Risk taking ability	0.43	0	0.7	0.02
4	Persuasiveness	0.32	0.22	0.41	0.21
(d)	<b>Social Traits</b>				
1	Empathy & Modesty	0.14	0.33	0.32	0.61
2	Ability to handle situation with Tact	0.22	0.26	0.45	0.51
3	Co-operative Nature	0.3	0.1	0.46	0.68
4	Ability to meet people/Extrovert	0.16	0.2	0.02	0.8
	Eigen Value	3.88	3.06	2.99	2.02
	Percentage variance Explained(69.96)	22.79	17.89	17.52	11.84
	Reliability (alpha)	0.92	0.88	0.78	0.74
	KMO measure of Sampling Adequacy		0.89		
	x <sup>2</sup> (d.f)		1210.26(136)		

**Note:**

Statistical procedures of factor analysis was utilized to ascertain the validity and reliability measures to ensure whether the reduced sets of items were similar to the number of concepts that were modeled initially. The analysis revealed a combined total variance explained of 69.96 percent. The variation taken by different traits comprises of physical traits (22.75%), mental traits (17.87%), personal traits (17.51%) and social traits (11.83%). The computation of Cronbach's alpha being well above the cutoff value of 0.70 indicates that all measures were reliable

An Empirical Study of Role and Significance of Salesmanship for Competitive Advantage with Special Reference to Indian Retail Industry

Table-2 Factors Loadings for Salesperson Performance(Dependent Variables)	
Items	Factors
Salesperson Performance	1
To generate high sales	0.88
Effective in increasing Market share	0.95
Potential to exceed Sales Target	0.9
Eigen Value	2.49
Percentage Variance Explained	82.14
Reliability(alpha)	0.88
KMO measure of Sampling Adequacy	0.71
x <sup>2</sup> (d.f)	198.430(3)

**Note:** Internal consistency test was done to determine the extent of agreement between respondents for each dimension. Higher reliability indicate higher score. The Cronbach's alpha being well above the cut off value 0.70, hence it indicates that all the measures were reliable .The alpha registered a value of 0.88.

Table-3 Characteristics of the Variables				
Variables	Minimum	Maximum	Mean	Std. Deviation
Physical Traits	3.21	7.00	5.36	0.62
Mental Traits	3.00	7.00	5.56	0.71
Personal Traits	3.00	7.00	5.47	0.80
Social Traits	2.00	6.74	5.38	0.83
Salesperson Performance	3.32	7.00	5.53	0.82

**FINDINGS**

From the sales persons profile it can be concluded that 73.4% were graduates while 13.6 % were post graduates. While 59.8 % salespersons were in the age group between 25-35 years and 25.1 % of them were in the age group of 46-55 years. It is evident from the profile that 61.2 % were males while 38.7 % were female respondents. Above 46.2% were having selling experience of 6-10 years and 29.9 % of them were having 2-5 years selling experience. Among them 48.2% were drawing salary between Rs. 15000-Rs. 30000 per month while 23.8% respondents were drawing less than Rs. 15000/month. In terms of Religion distribution 48.9% were Hindus while 25.8 % were Muslims.

The analysis revealed a combined total variance explained of 69.96 percent. The variation taken by different traits comprises of physical traits (22.75%), mental traits (17.87%), personal traits (17.51%) and social traits (11.83%). The computation of Cronbach's alpha being well above the cutoff value of 0.70 indicates that all measures were reliable.

Internal consistency test was done to determine the extent of agreement between respondents for each dimension. Higher reliability indicate higher score. The Cronbach's alpha being well above the cut off value 0.70, hence it indicates that all the measures were reliable .The alpha registered a value of 0.88.

All the independent variables such as Physical, mental personal & Social traits were found to be significantly correlated with the dependent variable ie sales person performance. Hence it indicates the achievement of predictive validity

Only Physical trait significantly (significance level below than 0.01) explain salesperson performance whereas mental, personal and social traits did not (significance levels over than the minimum accepted level of  $p < 0.05$ ). Hence this indicates that physical traits influence the sales person performance.

measure the central tendency, mean was applied and it indicates in the table that all variables were above their mid-point. The rating of mental traits registered the highest ( $M=5.56$ ) while the lowest was Physical traits (5.36). However salesperson's performance ie dependent variable's mean value was within the range of 5-6 in 7 point likert scale. This table suggests that all the variables exhibited a standard deviation of less than 1

#### CONCLUSION

The present research was carried out to study the selling traits important for the salesperson such as physical, mental, personal & social traits to influence the salesperson performance. On the basis of literature review, four hypotheses were framed and it is found that the support was found only to one hypothesis which demonstrated that there is significant relationship between physical traits and salesperson performance. The results from this study suggests that those salesperson who have positive self image combined together with good appearance, pleasant voice, good posture and sound health stands a good chance to influence the prospective buyers or it becomes easy to sell the product. The researcher is also of the opinion that it is only one can start the conversation with the prospective buyer when someone is ready to talk to you ,it is only than one can influence with mental, psychological/knowledge and other traits studied during the research.

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# An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

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*The job of teaching has inherent attributes which seek to motivate people to pursue it as a career choice. However these attributes might influence the motivation of school teachers in different ways. Since the motivation of the teachers have been recognized to be a influence for the effective implementation of the teaching-learning process in schools, it is imperative to study the influence of the job attributes on the motivation of school teachers so as to optimize teacher motivation in schools. Studies have been conducted on factors that influence people to take up a career in teaching but no study has been conducted on the influence of each attribute of the job of school teaching on the motivation of teachers. In order to design a school as a behavioral system which intrinsically motivates teachers to give their best it is imperative to study the attributes of the job of teaching and know how each attribute influences the motivation of teachers.*

*The present study seeks to do just that. The study included a random sample of teachers (N=111). The results of the survey were analyzed by SPSS 17.0. A principal component analysis extracted three factors: namely Security factors, operational factors and esteem factors. The study seeks to provide a detailed analysis of how the job attributes influence school teachers to give their best at work.*

**Keywords :** Motivation, Teacher, Job attributes, System, Factor score regression

## INTRODUCTION

The behavioral approach, the cognitive approach and the humanistic approach are the three approaches by which studies on human motivation have traditionally been conducted. The behavioral approach has been widely influenced and based on the works of psychologists like B.F. Skinner (Skinner, 1938, 1948) and is based on the fundamental concept of reinforced desired behavior, the cognitive approach, which has as its basis Jean Piaget's theory of equilibration, assimilation and accommodation (Piaget, 1964) and the humanistic approach as propounded by stalwarts like Abraham Maslow (1943) and Friedrich Herzberg (1959) wherein people are motivated to meet unfulfilled deficiency needs.

Brumback(1986) and Maehr(1984) showed that better student performance could be achieved by motivated teachers. Thus a systemic approach which takes into account all the attributes of the job of teaching is required. This study strives to explore the job of teaching and its attributes from an in-depth vertical and systemic approach.

## STUDY OF RELATED LITERATURE

A study of related literature first explored the broad studies of Friedrich Herzberg (1959) who in his study had described the factor work itself as a motivator or growth factor. Thomas Sergiovanni

## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

(1967) found that the factors related to the work itself were satisfiers. This finding was synchronous with Herzberg's two factor theory. With specific instances of studies related to teacher motivation Frase (1992) emphasized that the intrinsic factors related to the work itself and the job of teaching itself brought joy and satisfaction to teachers and acted as motivators rather than extrinsic rewards. He identified what he termed as work content factors which were essentially factors related to the work itself. Bonnie S. Billingsley, Lawrence H. Cross (1992) had concluded in their study that variables that were intrinsically related to the work itself were better predictors of job commitment and satisfaction than demographic variables like gender, age etc. A.J. Seniwoliba (2013) in his study found that even teachers who were dissatisfied with their salary, recognition, students' indiscipline were motivated and satisfied by the work itself. Thus it was concluded by most studies that work itself played a primary role in motivating teachers at work. However a systemic analysis of the various factors that constituted the work itself and their impact on the motivational levels of teachers was not really explored. It is this gap that the current study seeks to bridge.

After a detailed study of literature and a series of five interview sessions with school education experts, teachers and heads of schools it was concluded by the researchers that the following factors could be said to constitute and describe the inherent job attributes of work of school teaching .1. Job Satisfaction 2. Adequate Pay 3. Work Hours 4. Appraisal, recognition and rewards 5. Boss/ Supervisor 6. Security of Tenure 7. Safety at work 8. Organizational Structure 9. Merit based promotions 10. Future Prospects

## RESEARCH OBJECTIVES

The following research objectives were identified for the purpose of the study:-

1. To broadly identify the factors which constitute

the inherent attributes of the job of teaching.

2. To ascertain whether the work of teaching itself influences the motivation of teachers.
3. To classify and categorize the different attributes of the job of teaching based on the nature of their influence on the motivation of teachers.
4. To ascertain the influence of each component on the motivation of school teachers.
5. To design a system model incorporating the components as an intrinsic inherent work-attribute motivational system for school teachers.

## METHODOLOGY

This study can be described as a descriptive research study with no intervention on the part of the researcher. The study was conducted on a random sample of school teachers teaching in the districts of Darjeeling and Jalpaiguri in West Bengal (N=111). In order to enhance the reliability and validity of the study and the subsequent analysis of the results it was decided by the researchers to have a large sample size greater than 100. Teachers from the two mentioned districts of North Bengal were approached at random and when the number of respondents reached 111 it was decided that the analysis could be conducted on that sample size since it was adequate. The study was based on responses to a confidential questionnaire that was personally administered to the respondents. The sample consisted of teachers from a wide range of schools such as missionary managed English medium schools, individually managed private English medium schools, Hindi and Bengali medium schools both in the urban and rural areas. The rating scale and the questions were explained to the respondents directly by the researcher. The analysis of the resultant data was carried out by SPSS 17.0. The questionnaire used for the study had twelve questions which the respondents had to rate on a five point Likert-type scale. In the first two questions the respondents were asked to rate their

**An Empirical Study of the Influence of the  
Work Itself on the Motivation of School Teachers**

efforts to give their best at work in school and to rate their overall experiences with the various aspects of their work in school. The scale used here was; 1= Terrible 2= Not satisfactory 3= Satisfactory 4= Good 5= Excellent. These two questions represented the dependent variables. In the following ten questions the teachers' experiences with the various aspects of their work were rated on a five point Likert-type scale. This five point scale was; 1= Terrible 2= Not satisfactory 3= Satisfactory 4= Good 5= Excellent.. These ten questions represented the independent variables. At the first the stage the data was checked for reliability and validity. On ensuring its reliability and validity the data was subsequent quantitative and qualitative analysis was conducted and inferences were drawn.

Table 1 : Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001	111	1.00	5.00	2.4775	1.15086
VAR00002	111	1.00	5.00	2.4324	1.14114
VAR00003	111	1.00	5.00	2.5315	1.16634
VAR00004	111	1.00	5.00	2.6216	1.25085
VAR00005	111	1.00	5.00	2.5045	1.18991
VAR00006	111	1.00	5.00	2.6216	1.23623
VAR00007	111	1.00	5.00	2.4775	1.19732
VAR00008	111	1.00	5.00	2.7838	1.26782
VAR00009	111	1.00	5.00	2.8378	1.20258
VAR00010	111	1.00	5.00	2.5135	1.18984
VAR00011	111	1.00	5.00	2.6216	1.23623
VAR00012	111	1.00	5.00	2.6216	1.25809
Valid N (listwise)	111				

Table 2: Reliability Statistics for part part A of the questionnaire	
Cronbach's Alpha	N of Items
.955	2

Table 3 : Reliability Statistics for B of the questionnaire	
Cronbach's Alpha	N of Items
.947	10

Table 4 : Reliability statistics for the whole questionnaire	
Cronbach's Alpha	N of Items
.958	12

The overall Cronbach's Alpha for the overall study was .958. The Cronbach's alpha for section A of the questionnaire which included two questions which represented the dependent variables was .955 and the Cronbach's alpha for Section B of the questionnaire which contained the independent variables was .947. Thus the reliability statistics were accepted.

A correlation analysis with the dependent variable as given in question 1 which asked the respondents to rate their efforts to give their at work in school and question 2 which asked the respondents to rate their overall experience with various work related factors at school yielded a correlation coefficient of .914. Thus the effort to give ones best at work in school every day is highly correlated to ones experience with factors that constitute the work itself.

At the next step a principal component analysis was conducted with all the ten independent variables.

A thorough quantitative analysis of the acquired data brought forth that the KMO measure of sampling adequacy was .870 , chi-square was found to be 2593.510 .Thus the KMO and Bartlett's test showed that factor analysis was justified in this case . The principal component analysis extracted three factors with eigenvalues which greater than 1. After a principal component analysis with orthogonal varimax rotation 3 factors were extracted . The three factors which were extracted explained 97.905 % of the variances. It was seen from table 11 that variables 4,6,11,12 loaded onto component 1. Variables 3,5,7,10 loaded onto component 2 while variables 8,9 loaded onto component 3. The three components were named Comfort, Security and Esteem factors.

**An Empirical Study of the Influence of the  
Work Itself on the Motivation of School Teachers**

Table 5: Correlation between the effort to give ones best at work in school and the experience with factors related to the work itself.			
		VAR00001	VAR00002
<b>Effort to give ones best at work in school</b>	Pearson Correlation	1	.914**
	Sig. (2-tailed)		.000
	N	111	111
<b>Experience with factors related to the work itself at school</b>	Pearson Correlation	.914**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

Table 6 :KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.870
Bartlett's Test of Sphericity	Approx. Chi-Square	2593.510
	Df	45
	Sig.	.000

Table 7 : Communalities		
	Initial	Extraction
VAR00003	1.000	.968
VAR00004	1.000	.996
VAR00005	1.000	.972
VAR00006	1.000	.994
VAR00007	1.000	.972
VAR00008	1.000	.978
VAR00009	1.000	.978
VAR00010	1.000	.952
VAR00011	1.000	.988
VAR00012	1.000	.991

Extraction Method: Principal Component Analysis.

Table 8 Total variance explained			
Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.895	68.950	
2	1.476	14.759	
3	1.420	14.196	
4	.071	.709	98.614
5	.044	.439	99.053
6	.041	.405	99.459
7	.026	.263	99.722
8	.016	.159	99.881
9	.008	.084	99.964
10	.004	.036	100.000

Extraction Method: Principal Component Analysis.

Table 9 Total variance explained				
Component	Initial Eigenvalues	Extraction Sums of Squared Loadings		
	Cumulative %	Total	% of Variance	Cumulative %
1	68.950	6.895	68.950	68.950
2	83.709	1.476	14.759	83.709
3	97.905	1.420	14.196	97.905

Extraction Method: Principal Component Analysis.

An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

Table 10 Total variance explained			
Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.903	39.030	39.030
2	3.836	38.361	77.392
3	2.051	20.514	97.905

Extraction Method: Principal Component Analysis.

Table 11 Rotated Component Matrix <sup>a</sup>			
Variables	Component		
	1	2	3
JOB SATISFACTION	.307	<b>.918</b>	.178
ADEQUATE PAY	<b>.928</b>	.323	.177
WORK HOURS	.319	<b>.921</b>	.150
APPRAISAL, RECOGNITION AND REWARDS	<b>.931</b>	.319	.160
BOSS / SUPERVISOR	.322	<b>.917</b>	.166
SECURITY OF TENURE	.224	.183	<b>.945</b>
SAFETY AT WORK	.171	.191	<b>.955</b>
ORGANIZATIONAL STRUCTURE	.305	<b>.909</b>	.180
MERIT BASED PROMOTIONS	<b>.922</b>	.308	.208
FUTURE PROSPECTS	<b>.924</b>	.326	.174

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.a. Rotation converged in 5 iterations.

Table 12 : Extracted components from principal component analysis		
COMFORT FACTORS	SECURITY FACTORS	ESTEEM FACTORS
Job Satisfaction	Security of tenure	Adequate Pay
Work Hours	Safety at work	Appraisal, recognition and rewards
Boss/ Supervisor	Merit based promotions	
Organizational Structure		Future prospects

After the principal component analysis a principal component regression was conducted using the principal components as inputs. The multiple linear regression analysis was conducted taking the variable 1 which represented the motivation of the teachers to give their best at work in school as the dependent or predicted variable and the three components extracted by the principal component analysis as the independent or predictor variables. The results of the analysis are as follows :-

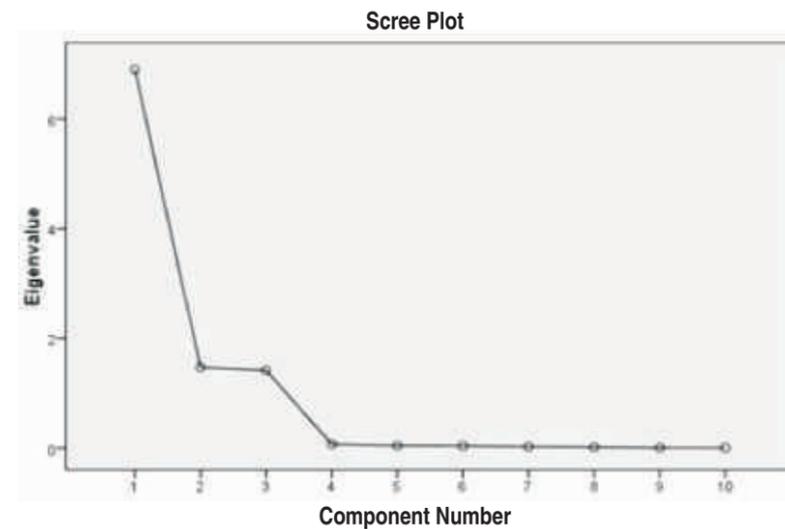


FIGURE 1 Screen Plot

An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

TABLE 13 : Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842a	.709	.701	.62931

a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: VAR00001

TABLE 14 : Model Summary						
Change Statistics						
Model	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.709	86.961	3	107	.000	1.862

b. Dependent Variable: VAR00001

TABLE 15 : Anova						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	103.318	3	34.439	86.961	.000a
	Residual	42.376	107	.396		
	Total	145.694	110			

a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: VAR00001

TABLE 16 : Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	2.477	.060	
	REGR factor score 1 for analysis 1	.597	.060	.519
	REGR factor score 2 for analysis 1	.619	.060	.538
	REGR factor score 3 for analysis 1	.448	.060	.389

a. Dependent Variable: VAR00001

TABLE 17 : Coefficients					
Model		t	Sig.	95.0% Confidence Interval for B	
				Lower Bound	Upper Bound
1	(Constant)	41.477	.000	2.359	2.596
	REGR factor score 1 for analysis 1	9.947	.000	.478	.716
	REGR factor score 2 for analysis 1	10.310	.000	.500	.738
	REGR factor score 3 for analysis 1	7.459	.000	.329	.566

a. Dependent Variable: VAR00001

Table 18 : Coefficients				
Model		Collinearity Statistics		
		Tolerance	VIF	
1	REGR factor score 1 for analysis 1	1.000	1.000	
	REGR factor score 2 for analysis 1	1.000	1.000	
	REGR factor score 3 for analysis 1	1.000	1.000	

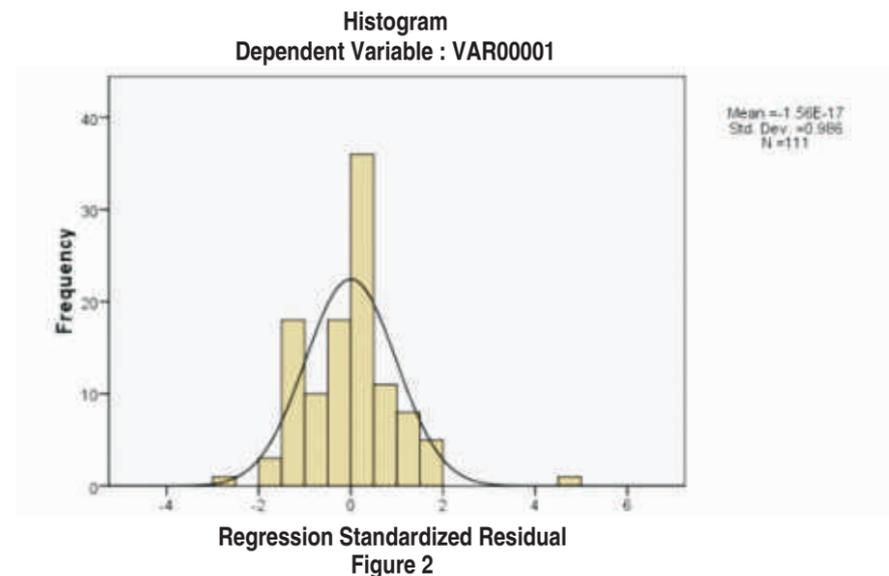
a. Dependent Variable: VAR00001

Table 19 : Collinearity Diagnostics					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	REGR factor score 1 for analysis 1
1	1	1.000	1.000	.00	.91
	2	1.000	1.000	1.00	.00
	3	1.000	1.000	.00	.00
	4	1.000	1.000	.00	.09

a. Dependent Variable: VAR00001

Table 20 : Collinearity Diagnostics				
Model	Dimension	Variance Proportions		
		REGR factor score 2 for analysis 1	REGR factor score 3 for analysis 1	
1	1	.09	.00	
	2	.00	.00	
	3	.00	1.00	
	4	.91	.00	

a. Dependent Variable: VAR00001



Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: VAR00001

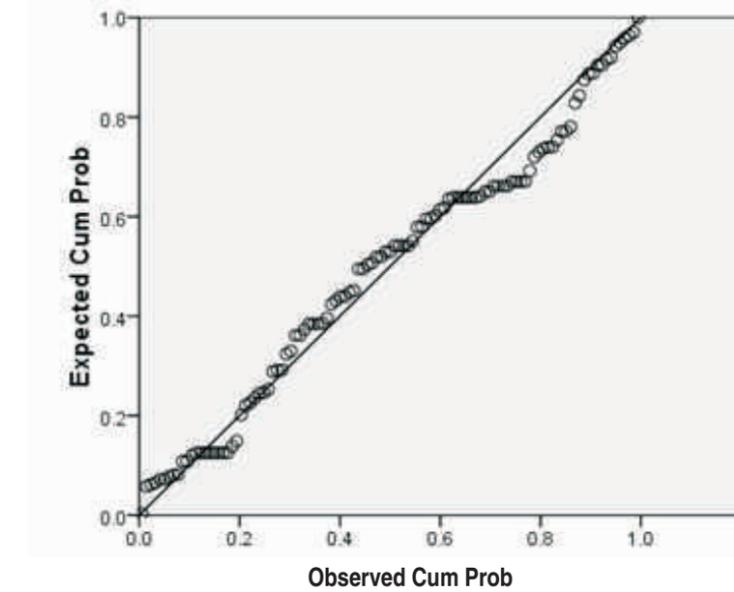


Figure 3

As per the results of the principal component regression which was conducted using the component scores as the predictor variables and the enter method a significant model emerged ( $F_{3,107} = 86.961, P < .0005, \text{Adjusted } R^2 = .701$ ). Durbin-Watson statistics = 1.862 so there was no significant auto-correlation, the conditionality Index was 1 which showed that there was no multicollinearity among variables. Figure 2 illustrates that the residuals are approximately normally distributed. The principal component regression brought forth the fact that all the three factors viz the Comfort factors and Security factors and Esteem factors are significant predictors of workplace motivation of school teachers.

Table 21		
Predictor variables	Beta	P
ESTEEM FACTORS	.519	P<.0005
COMFORT FACTORS	.538	P<.0005
SECURITY FACTORS	.389	P<.0005

## ANALYSIS AND INTERPRETATIONS

Question 1 was a dependent variable which asked the respondents to rate their efforts to give their best at work in school. This variable sought to ascertain the levels of workplace motivation of the teachers. In a similar vein Question 2 represented a dependent variable wherein the respondents were to rate their overall experience with the various factors which are intrinsically related to the work itself. Correlation analysis between the responses of these two variables showed significant correlation between the responses. Thus the motivation of the teachers is correlated to their experiences with the various factors which are intrinsically related to the work of teaching. This is in conformity to the findings of several previous studies in teacher motivation. The intrinsic factors that are related to the work itself motivate a lot of people to join teaching at the school level. These factors also motivate people to carry on in the profession of teaching for long periods of time and mostly till retirement.

After a principal component analysis of the ten independent variables that were taken to be representative of the work itself, three components were extracted.

- The first component was termed Esteem Factors. It comprised of 4 items, all of which were related to the individual esteem of a school teacher. These factors enhance teacher motivation by creating inherent attributes in the work which boost self esteem of the teachers. These factors were adequate pay, appraisal recognition and rewards, merit based promotions and future prospects.
- The second component represents Comfort Factors which consist of factors which make the work of teaching mentally and physically comfortable. These consist of Job satisfaction, work hours, boss/ supervisor and organizational structure. These factors are essential to increase workplace motivation in terms of directly improving efficiency and thus improving teaching efficacy.
- The third component represents Security factors. This component includes variables like which enhance workplace security both in terms of tenure of service as well as physical security and safety of the teacher. These variables satisfy the safety needs of the teachers.

The results of the principal component regression showed that the dependent variable which was the motivation of the teachers to give their best at work in school could be satisfactorily predicted by the component scores from the three components that were extracted by the principal component analysis while adhering to all the assumptions of a multiple regression analysis on model fit, autocorrelation, multicollinearity and normality of residuals.

The resultant model that emerged inferred that the motivation of the teachers are predicted by the esteem, comfort and security factors that were intrinsically present in the job of teaching. This may be due to a number of reasons. The job of teaching

has some inherent attributes which motivate people to join the profession and then remain in it. Broadly it is safe profession with security of tenure, there are paid holidays during the year when the school is closed and the work hours are more or less fixed. Teachers now draw a comfortable salary with regular increments and many schools have an appraisal, recognition and reward model. The most important appraisal and recognition and rewards however come from the students. As professionally managed schools emerge and the importance of school education is recognized teachers now have attractive future prospects with multiple options. The future growth options are not only in teaching but also in school management, education consultancy, research and higher learning, curriculum development and design as also in IT enabled teaching areas. The organization structures in schools vary from strictly hierarchical and rigid in traditional schools to horizontal and flexible in many modern and experimental schools. However in all kinds of set up the teacher has a near complete freedom in the classroom and that is the most important aspect of the job of teaching. Another important dimension or feature of school teaching is the job satisfaction that one gets from teaching young minds and watching them grow and become successful. It is this connection between the students and teachers that intrinsically motivates teachers through job satisfaction.

The findings show that schools should provide a safe working environment for teachers with a security of tenure. Schools also have to ensure adequate pay with optimal working hours. There should be mechanisms for identifying talent among teachers and hone those talents, care should be taken to recognize good performance and reward them. A competent, just and empathetic school leader is required to lead the school. An adequate organizational structure should be designed to ensure optimal motivation. Mostly schools should employ teachers who are intrinsically motivated by

the work of teaching and are satisfied with the choice of job or career. Augmenting these intrinsic characteristics of the job of teaching will go a long way to ensure that the work itself acts as a system to motivate the teachers.

The findings of the study can be represented in the form of a system model. The figure 4 represents the model wherein the three components; comfort, security and esteem represent the subsystems of the work-attribute motivational system for teachers. These four subsystems in turn consist of the various sub-sub systems that work in sync to create a systemic model for each sub system.

## SUMMARY AND CONCLUSION

In conclusion it is pertinent to summarize the results and align them in the context of the objectives that this study set out to achieve.

The first objective of the study was to broadly identify the factors that constitute the inherent attributes of the job of teaching. This objective was fulfilled by a detailed study of related literature as well as through a series of five interview sessions with heads of schools, school education experts and teachers. A set of 10 factors were identified and shortlisted for the purpose of further study. These

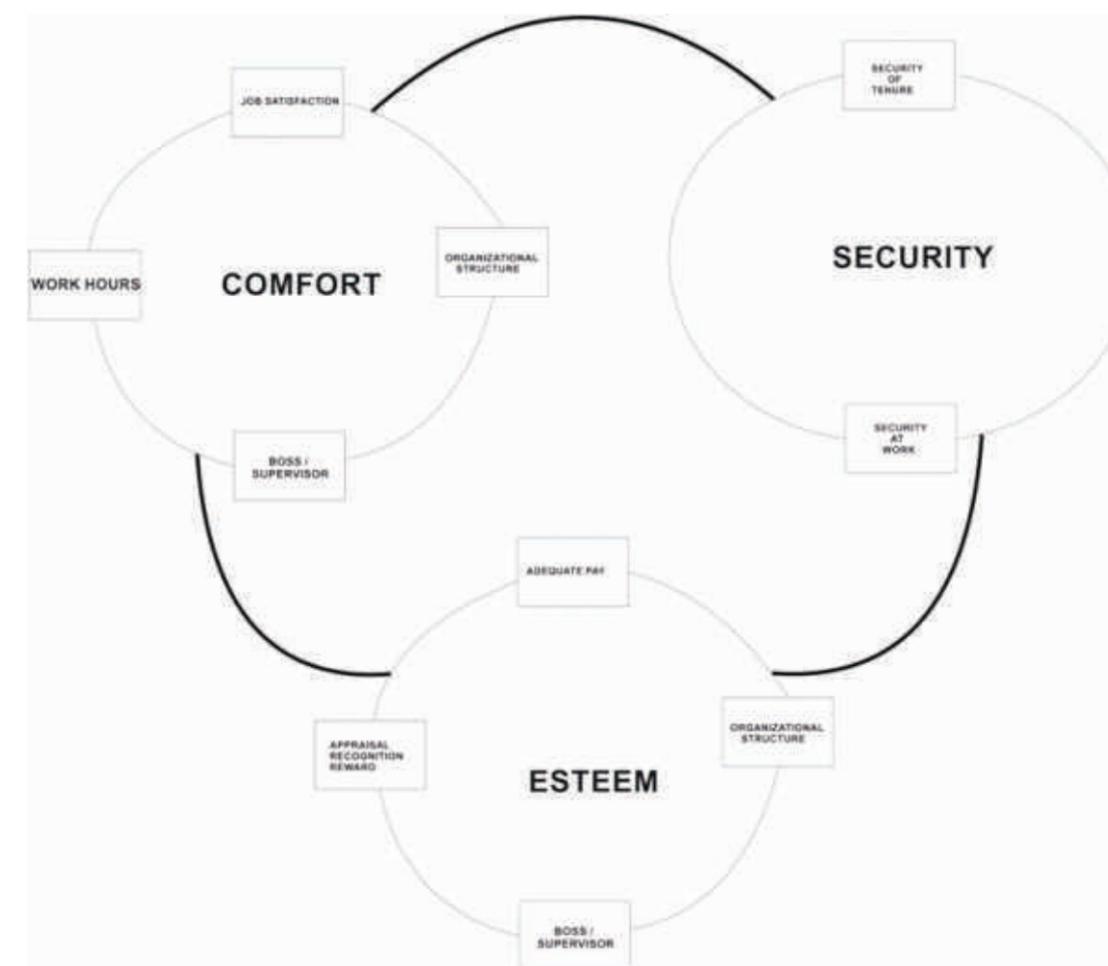


Figure 4 : Work-attribute motivation system for school teachers

were 1. Job Satisfaction 2. Adequate Pay 3. Work Hours 4. Appraisal, recognition and rewards 5. Boss/ Supervisor 6. Security of Tenure 7. Safety at work 8. Organizational Structure 9. Merit based promotions 10. Future Prospects.

The second objective of the study related to ascertaining whether the work of teaching itself actually influences the motivation of school teachers. This objective of the study was fulfilled by the correlation analysis between the motivation to give ones best at work everyday and the experience of the teachers with the work itself and its features. The study showed that there was a significant positive correlation between the experience of a teacher with the features of the work of teaching and their motivation to give their best at work everyday.

The third objective of the study was to classify and categorize the different attributes of the job of teaching based on the nature of their influence on the motivation of teachers. This objective was fulfilled by a principal component analysis which divided the factors into three components which were comfort, security and esteem.

The fourth objective of the study was to ascertain the influence of each component on the motivation of school teachers. This was done through a principal component regression analysis using the component scores as predictor variables. The principal component regression analysis showed that all the components viz. comfort, security and esteem were significant predictors of the motivational levels of the school teachers.

The fifth objective of the study was to develop a system model using the results and create a work-attribute motivational system for school teachers. This was done and is represented in Figure 4.

The present study explored the impact of the intrinsic characteristics of the work itself on the motivation of school teachers. This study was a descriptive research survey which was conducted among a random sample of 111 teachers from the

districts of Darjeeling and Jalpaiguri in North Bengal. Primarily it was noted that the motivation of teachers to give their at work in school had a positive correlation with their experience with the intrinsic characteristics of the work of teaching. A principal component analysis extracted three components which were subsequently named Esteem factors, comfort factors and Security factors. A subsequent principal component regression showed that all the three factors were significant predictors of teacher motivation. A system model was drawn up using these factors and their impact on the motivation of teacher. The present study is a comprehensive vertical study which analyzed the influence of the various factors related to the work itself on the motivation of school teachers. The motivation of teachers is very important for student performance (Brumback, 1986). In the modern world scenario where tough competition ensures that the motivation of students are a priority it is also recognized that motivated teachers are very important for effective school performance. Thus the very work of teaching in a school has to be developed and designed as a system to ensure optimal teacher motivation. School systems built around this core construct can develop into motivating systems wherein the systems have an automatic intrinsic nature to motivate organizations without any further interventions.

In order that such a system is developed and the efficacy of the teaching-learning process in the schools is optimized it is important that the very work of teaching is designed to motivate teachers. This paper provides a groundwork to design such systems.

The study however had its limitations. It had limitations of size in terms of a relatively small sample size, and was restricted to only two districts in India. There might have bias during translation and respondents might have had some inherent bias of their own. A wider study with a larger sample size is thus proposed for further research in the area.

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## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

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## An Evaluative Study on Internet Banking Security among Selected Indian Bank Customers

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*In the current scenario, due to huge attractiveness towards Internet banking, the usages of its services has revolutionized the entire banking sector by enabling customers to conduct fiscal contact through the Internet. However, there is some security lapse in this new process, which can be avoided by some simple safety measures. Internet banking has furthered few new dimensions to banking business/services by allowing their clientele to carry out financial transactions through the Internet mode. Banking institutions have taken several measures to ensure the safety measures to their customers while performing various transactions carried out through the internet mode. In this context, an effort is made to inspect and evaluate the collision of Internet banking security on the selected bank customers of Indian Bank in Coimbatore district. The study is carried out with the help of a suitable research instrument and 50 customers were selected and with the help of their responses analysis is made followed by few suggestions.*

**Keywords:** Internet Banking, Mobile Banking, Internet Security

### INTRODUCTION

In India, the banking services, banking technology products and its usages through the mode of internet banking have been remarkably increasing due to rapid developments in the Banking sector. It has also enabled the customers to execute bank related transactions through Internet system. The prevalent gain of Internet banking is that people can pay out the services sitting at home, to transact business dealing. Due to which, the bank customers does not have to visit in person to the bank. With the help of Internet banking services and its advances technology, many transactions can be executed by the customers virtually which benefits customers in time saving and quick work within short span of time. The transactions like balance inquiry, withdrawal, deposits, viewing the bank statement, record of recent transaction, etc. are to be processed, the Internet banking system facility proves to be very versatile.

### *Internet Banking In India: An Overview*

Internet banking system facilitates only one of its kind chances to record big business incidence in a universal market successfully. Its efficacy in disseminate the information about one's profitable activities at a reasonably cost effective manner is remarkable. Instant, perceptive information can be updated faster than any other media. A properly premeditated website can pass on more accurate and focused icon of a product or service than any other media. India now has third major internet population in the world after china and United Stated. India presents unmatched developmental

prospect for the internet segment in coming years. In our view India will likely see golden-haired period of the internet sectors between 2013 to 2018 with barely credible growth opportunity and worldly growth adoption for e-commerce.

## REVIEW OF LITERATURE

The literature in the vicinity of Internet Banking Security is mammoth, but the review of a few important works is made in the following paragraphs with an important objective to identify the research gap that exists at present.

Anne J. Broderick (2002) in their research work considered the challenges of the Internet service prominence and a product which has secluded design brings note worthy transformation among the customer interaction and behavior in the routine transactions. Guru (2002) in their work analyzed the state of affairs of online banking and its services. In the study, it also pays attention more towards the virtual banking system.

Karjaluo (2002) in his work, the author made an attempt to determine those factors that influence the formation of consumer attitude toward electronic banking. Damien Hutchinson, Matthew Warren (2003) in his work studies the financial service of electronic commerce, Internet Banking and its benefits to the customers. In the study, internet banking security measures and various techniques for privacy of customer's data has been found.

Rotchanakitumnuai and Speece (2003) in their research work stated corporate customers do not accept electronic form of banking, which can assist banks to implement this self-service technology more efficiently in the various banking transactions. Lympero and Chaniotakir (2004) evaluated the allusion of Internet - banking technology and the existence of different distinct factors which affect the market. Li and Worington (2004) in their working paper described the connectivity among the approval rate of internet banking and electronic connectivity activities in the business and industrial events.

Pikkarainen et al., (2004) in his research highlighted that electronic banking know-how had created new traditions of usages in the on a daily basis banking dealings especially via online banking direct methodology. The authors adopted technology approval model to control the online environment. Singh (2004) in his study examined the collision of online banking and internet banking trends. The study also concentrated on the latest banking technology products and services for the economic growth. Ankur Gupta (2006) in his study analyzed, the Consumer Internet Banking, with its capability to achieve each and every cranny and gap of the world holds great significance for a realm like India.

Flavian et al., (2006) in his study explored how customers' sensitivity of conventional bank manipulate their judgment to take up the services of the internet. The researchers found that if the customer trusts in unit and mortar bank then it was feasible that they feel more forced to use the online services offered by the same bank due to credibility of the customer in the traditional banking system. Lichtenstein and Williamson (2006) in their research explained the definite factors impinge on the consumer decision, whether or not to choose internet banking services in the Australian context. Nelubiri and Sinti (2006) in their research discussed the impact of internet banking on customers' stance, their needs and activities. The intent of the study was to see the internet banking adoption in Malaysia.

AbuShanab E, J.M. Pearson (2007) in their study described the rationale of the study is to investigate the key determinants of the adoption of internet banking in Jordan. Kamakodi et al (2008) in his work, discussed that, it is just about 15 years since the Indian banking sector was liberalized and exemplar shift happened in the Indian banking services. Uppal R.K (2008) described that in the Post - LPG (Liberalization, Privatization and Globalization) era and Information Technology (IT) era, revolution in Indian banks is captivating position with different parameters and the curves of banking services are with passion towards altering the face of banking, as banks are stepping towards e-banking from traditional banking.

Lee (2009) discussed, the factors influencing the espousal of internet banking, the TAM and TPB were incorporated and seeming risk and perceived assistance and put up were added to the research model. Anita Lifen Zhao (2010) in their study explained the roles of reliance and perceived the risk on client's/customer's usage purpose. Arpita Khare (2010) in his study described the importance of Technology in civilizing customer service levels in being used deliberately and progressively more by service organizations.

There are substantial amount of studies conducted at the Indian level and international level but, very few works are to be had here focusing on the Internet banking, its usage, internet banking safety measures and its perceptions, attentiveness level, satisfactions, attitudes, behavior of the internet banking, security issues, frauds and crime activities, and the impact on the banks, adoption of new technologies involved in the internet banking. But, studies relating to the Internet Banking Security specifically in the Southern Region of Tamil Nadu are extremely limited. Keeping this point of view, an attempt has been made to study on Internet Banking Security among Selected the Indian Bank Customers

## STATEMENT OF THE PROBLEM

In the present state of affairs, the banking sector has been seen a mammoth progress and the popularity with respect to the Internet banking services and its products. This development has led to the large number of internet banking transactions which are helped for the faster and more convenient mode of transactions to the bank customers. Nowadays, information technology takes the chore of underneath and raising service efficiency in all businesses. Banking industry is one of the businesses that have brought IT to help with banking transactions and increase banking services, opportunities to its customers. Today we see millions of websites over internet, which are made for internet banking as a part and parcel of the routine life. This facilities helped millions

of customers to perform their transaction anytime any ever easily, quickly, smoothly with perfections. And for carrying out banking transactions through the Internet, one needs to have some basic knowledge about computers and the Internet, which to some extent, limits the number of people willing to avail this facility. Many people who are not comfortable with computers and the Internet find it difficult to use this service.

## NEED OF THE STUDY

01. To know the awareness of internet of Internet Banking Security system;
02. To know the usage and perception of Internet Banking securities;
03. To understand the importance of Internet Banking transaction; and
04. To analyze the safe and security level of Internet Banking transaction among the customers.

## OBJECTIVES OF THE STUDY

The central objectives of the present study are -

01. To analyze the customer's perceptions awareness of Internet banking security;
02. To understand the problems faced by customers while using internet Banking services; and
03. To know impact of the internet banking securities among the selected customers in Coimbatore.

## SCOPE OF THE STUDY

This study provides a guide to the current structure of the Internet Banking Security and highlights how people are aware of using Internet banking, and their perception and satisfaction towards Internet Banking with new technologies and its functioning. This helps to know in details about development in banking industry with advancement in technology. It also helps in understanding different services

offered in Internet banking. Ultimately this would help in understanding the benefits of Internet banking to customers as well as banking industry. The present study tries to cover the factors affecting the passion towards among the awareness, perception, satisfaction towards the customer and the impact relating to the Internet Banking.

### Sample Design

The Multi Stage Sampling Technique adopt for selection of respondents for the study. In four stages the customers of Indian Bank, ADU Campus, and Coimbatore were selected. It is observed that about 1647 Indian Bank branches in India, out of which 710 Indian Bank branches in Tamilnadu, 37 Indian Bank branches in Coimbatore, out of the 37 Indian Bank branches, only ADU Campus(Avinashilingam Institute for Home Science and Higher Education for Women) was purposively selected for the study. Avinashilingam Institute for Home Science and Higher Education for Women (ADU Campus) one Indian Bank were selected. Sampling Size - In the present study the only 50 customers were taken as sample size.

### Methodology

The present study will be based on analytical and exploratory nature. Accordingly, the uses of data have to be made of both primary as well as the secondary data. The relevant reports viz., RBI monthly bulletins, Magazines, news papers, business dailies, books and journals, e-media and other literature available in this field constitute Secondary sources for the present study. The awareness, perception, satisfaction, and others impacts of Internet Banking Security is studied with the help of research instrument of structured questionnaire for customers will be used to collect the data from them using Internet Banking. The primary data has been collected, through a separate pre-tested Questionnaire from 50 Internet Banking customers, in Tamilnadu division of Coimbatore. The Internet Banking users were selected from ADUC Branch, Coimbatore.

### Statistical Tools and Techniques

To analyze the collected data, various statistical techniques and tools such as averages, frequency distribution tables, and normal distribution will be used as per the requirement of the data and for the analysis purposes. In order to compare two methods, it is often important to know whether the variability's for both methods are the same or if the standard deviations of two populations are equal. Chi- square is used to check the goodness of fit the model. The information collected will be analyzed and presented in a logical way to arrive at meaningful interpretation. This study will use suitable statistical tools such as Mean, Median, Standard deviation with Co-efficient of variation, Correlation and regression, factor analysis etc. and different tools including tables, diagrams etc., will be used to analyze both the primary as well as secondary data and to make the presentation more effectively. The aforesaid test and statistical techniques have been used to analyze the data and others Test by using SPSS software package in addition to percentages, averages and the IBM - AMOS 20.0 version Software is used.

### Hypotheses of the Study

- $H_{01}$ : Internet banking has no associate relationship with traditional Banking System;  
 $H_{a1}$ : Internet banking has associate relationship with traditional Banking System;
- $H_{02}$ : Internet banking Security has no strong impact on the Selected Customers;  
 $H_{a2}$ : Internet banking Security has strong impact on the Selected Customers;

### LIMITATION OF THE STUDY

The following are the limitation of the study:

- This study covers selected customer of Indian Bank, ADU campus, Coimbatore.
- This study is purely based on available primary and secondary data.
- The sample size for the study is limited to 50 customers.

## ANALYSIS AND INTERPRETATIONS

Table -1.1 Socio Economic Profile of the selected Internet Banking customers, Coimbatore

Sl. No.	Category	Description	Gender		No. of Respondents	(% of Respondents)
			Male	Female		
01.	Age	20-30	16	09	25	50
		31-40	07	08	15	30
		41-50	02	04	06	12
		51-60	03	-	03	06
		60 and above	01	-	01	02
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
02.	Gender	Male	29	-	29	58
		Female	-	21	21	42
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
03.	Qualification	Up to SSLC	04	-	04	08
		PUC	02	04	06	12
		Graduate	09	08	17	34
		Post Graduate	06	06	12	24
		Professional Degree	08	03	11	22
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
04.	Occupation	Agriculturist	-	01	01	02
		Business	11	03	14	28
		Professional	02	03	05	10
		Employee in Public Sector	05	01	06	12
		Employee in Private Sector	08	08	16	32
		Student	02	05	07	14
		Retired Employee	01	-	01	02
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
05.	Monthly Income	Below 10,000	02	06	08	16
		10,000-20,000	08	06	14	28
		20,000-30,000	12	05	17	34
		30,000-40,000	03	03	06	12
		40,000-50,000	02	01	03	06
		50,000-1,00,000	01	-	01	02
		1,00,000 and above	01	-	01	02
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
06.	Marital Status	Single	17	10	27	54
		Married	12	11	23	46
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
07.	Family Members	Up To 3	07	05	12	24
		4-6	21	14	35	70
		6 and above	01	02	03	06
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>
08.	Type Of Account	Savings A/C	17	19	36	72
		Current A/c	12	02	14	28
<b>TOTAL</b>			<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>

Source: Survey Data, February - March, 2014

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

From the above table, it indicates Socio Economic profile of the selected Internet Banking users in Coimbatore. In that 50% of the people between the age group of 20 - 30 in Coimbatore district use Internet Banking Transaction, it also reveals that 58% of the male in Coimbatore district prefer to use Internet Banking Transaction, it also clear that graduates are mostly use Internet Banking, 32% of the private employee use Internet Banking, 34% of the middle Income people use Internet Banking, it also indicates that majority of Internet Banking Users are Single say 54%, savings account holders are mostly use Internet Banking say 72%.

**Table - 1.2 Internet Banking Awareness Level of Indian Bank Customers, Coimbatore**

Sl. No.	Become Aware through various Modes	No. of Respondents		Percentage of Respondents	
		No.	%	No.	%
01.	Advertisement	16	32		
02.	News Paper	04	08		
03.	Parents	04	08		
04.	Relatives	06	12		
05.	Television	05	10		
06.	Friends	06	12		
07.	Bankers	09	18		
	<b>TOTAL</b>	<b>50</b>	<b>100</b>		

Source: Survey Data, February – March, 2014

From the table, it indicates that Internet Banking awareness level of Indian Bank customers, Coimbatore. It shows that 32% of the people were aware about Internet Banking facility through advertisement, it also reveals that 18% of the people in Coimbatore aware of Internet Banking Facility through Bankers while it is only 8% of the people aware of newspaper and their Parents and 12% of people aware of their Relatives and Friends and 10% of people aware of Television.

**Table - 1.3 Awareness Level of Internet Banking Security among the Selected Customers of Indian Bank, ADU Campus**

Sl. No.	Types of Security /Protection Mode	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
		01.	Security Code	19	38	21	42	05	10	03	06
02.	Password protection	23	46	21	42	05	10	01	02	00	00
03.	Transaction Security	14	28	20	40	09	18	05	10	02	04
04.	Confidentiality	06	12	12	24	07	14	15	30	10	20
05.	Authentication Security	04	08	09	18	10	20	16	32	11	22
06.	Hardware Security	05	10	09	18	08	16	14	28	14	28
07.	Database Security	09	18	16	32	02	04	12	24	11	22
08.	Memory Protection	07	14	20	40	04	08	13	26	06	12
09.	File Security	10	20	22	44	06	12	05	10	07	14

Source: Survey Data, February – March, 2014, (Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

From the above table indicates that awareness level of Internet Banking Security among the selected customers in ADU campus. It is reveals that 42% of the people agree to aware of security code for using

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

Internet Banking Transaction, 46% of the people strongly agree to aware of Password Protection, 40% of the people agree aware of Transaction Security, 24% of the people agree to aware of confidentiality security, 18% of the people agree to aware of Hardware security, 32% of the people agree to aware of Database security, 40% of the people agree to aware of Memory Protection and 44% of people agree to aware of file Security. It concludes that, maximum people aware of password protection security.

**Table - 1.4 Benefits of Traditional Banking System**

Sl. No.	Banking Services / Facilities	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
		01.	Interaction with Banker	07	14	21	42	02	04	18	36
02.	Easy Deposit and Withdrawal	03	06	12	24	04	08	22	44	09	18
03.	Collection Of Cheque	08	16	22	44	01	02	13	26	06	12
04.	Demand Draft	14	28	25	50	01	02	09	18	01	02
05.	Security	10	20	32	64	03	06	04	08	01	02
06.	Security Lockers	17	34	20	40	02	04	06	12	05	10

Source: Survey Data, February – March, 2014

From the above table indicates that benefits of Traditional Banking system. It is reveals that 42% of the people agree the benefits of Interaction with Banker, 44% of the people disagree the benefits of Easy deposit and withdrawal, 44% of the people agree the benefits of Collection of Cheque, 50% of the people agree the benefits of Demand Draft, 64% of the people agree the benefits of security and 40% of the people agree the benefits of security lockers. It is observed that maximum people benefited in security level of Traditional Banking.

**Table –1.5 Benefits of Internet Banking System**

Sl. No.	Internet Banking Benefits	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
		01.	Time Saving	47	94	03	06	-	-	-	-
02.	Any Time Banking	41	82	09	18	-	-	-	-	-	-
03.	Any Where Banking	39	78	09	18	02	04	-	-	-	-
04.	Easy Accessible	38	76	10	20	02	04	-	-	-	-
05.	No Queue	14	28	36	72	-	-	-	-	-	-
06.	Easy Of Monitoring	05	10	33	66	09	18	03	06	-	-
07.	Friendlier Rates	05	10	11	22	08	16	25	50	01	02

Source: Survey Data, February – March, 2014, (Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

From the above table indicates that Benefits of Internet Banking system. It is reveals that 94% of the people Strongly agree the benefits of Time saving, 82% of the people strongly agree the benefits of Any time Banking, 78% of the people strongly agree the benefits of Any Where Banking, 76% of the people strongly agree the benefits of Easy Accessible, 72% of the people agree the benefits of no queue, 66% of the people agree the benefits of Easy of Monitoring and 50% of the people disagree the benefits of friendlier rates. It is observed that maximum people benefited in time saving of Internet Banking.

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

**Table –1.6 Usage of Internet Banking Services**

Sl. No.	Usage of Internet Banking Services	SA		A		N		D		SD	
		No	%								
01.	Secured Transaction	-	-	02	04	03	06	25	50	20	40
02.	Quick Settlement	21	42	28	56	01	02	-	-	-	-
03.	Electronic Fund Transfer	13	26	33	66	02	04	02	04	-	-
04.	Electronic Clearing Services	12	24	31	62	03	06	04	08	-	-
05.	Electronic Payment Services	11	22	22	44	02	04	11	22	04	08
06.	National Electronic Fund Transfer	16	32	24	48	04	08	03	06	03	06
07.	Real Time Gross Settlement	11	22	25	50	06	12	04	08	04	08
08.	Core Banking System	03	06	13	26	02	04	17	34	15	30

Source: Survey Data, February - March, 2014. (Note: SA - Strongly Agree, A - Agree, N - Neutral, D-Disagree, SD – Strongly Disagree)

From the above table indicates that usage of Internet Banking services. It observes 50% of people disagree the usage of secured transaction, 56% of people agree the usage of quick settlement, 66% of people agree the usage of Electronic Fund Transfer, 62% of people agree the usage of Electronic Clearing services, 44% of people agree the usage of Electronic Payment Service, 48% of people agree the usage of National Electronic Fund Transfer, 50% of people agree the usage of Real Time Gross Settlement, 34% of people disagree that core Banking System. It is concluded that maximum people accepted the usage of Electronic fund transfer.

**Table – 1.7 Factor Influencing the Internet Banking Facility**

Sl. No.	Description	SA		A		N		D		SD	
		No	%	No	%	No	%	No	%	No	%
01.	Convenience	43	86	07	14	-	-	-	-	-	-
02.	Friends / Relatives Advice	31	62	18	36	-	-	01	02	-	-
03.	Personal Of Bank Manager	05	10	34	68	07	14	04	08	-	-
04.	Popularity Of Banks	07	14	36	72	07	14	-	-	-	-
05.	Quality Of Service	07	14	34	68	06	12	03	06	-	-

Source: Survey Data, February - March, 2014. (Note: SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD – Strongly Disagree)

From the above table – 5.7 indicates that influencing factor of Internet Banking Facility. It shows that 86% of people strongly agree the influencing factor of convenience, 62% of people strongly agree that factor of Friends and Relatives, 68% of people strongly agree the factor of Personal of Bank manager, 72% of people strongly agree the factor of Popularity and Bank Manager, 68% of people strongly agree the factor of quality of services. It is clear that most of the people influencing the factor of convenience.

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

**Table – 1.8 Internet BankingUsers by Application of Various Browsers**

Sl. No.	Type of Browser	MP		P		MLP		LP		NAP	
		No	%	No	%	No	%	No	%	No	%
01.	Internet explorer	02	04	03	06	05	10	33	66	07	14
02.	Google Chrome	05	10	28	56	03	06	12	24	02	04
03.	Mozilla Firebox	41	82	08	16	-	-	01	02	-	-
04.	Opera	01	02	09	18	01	02	33	66	06	12
05.	Netscape	01	02	03	06	03	06	22	44	21	44
06.	Safari	-	-	-	-	11	22	02	04	37	74

Source: Survey Data, February - March, 2014  
(Note: MP - Most Preferred, P – Preferred, MLP – Most Likely to Preferred, LP – Least Preferred, NAP – Not At All Preferred)

From the above table indicates that different users of Internet Banking securities by the application of various browsers. It shows that 66% of the people Least preferred of Internet Explorer, 56% of the people Preferred the Google chrome, 82% of the people Most preferred of Mozilla Firebox, 66% of the people Least Preferred of Opera, 44% of the people least preferred and also 44% of people not at all prefer Netscape, 74% of people not at all preferred Safari. It is clear that most preferred browser of Internet Banking was Mozilla Firebox.

**Table – 1.9 Operating System Used for the Internet Banking Transaction and Security**

Sl. No.	Type of Operating System	MP		P		MLP		LP		NAP	
		No	%	No	%	No	%	No	%	No	%
01.	Window7	17	34	29	58	02	04	01	02	01	02
02.	Window8	11	22	28	56	01	02	10	20	-	-
03.	Linux Mint	04	08	13	26	05	10	25	50	03	06
04.	Linux Live CD	02	04	07	14	02	04	19	38	20	40
05.	Mac	15	30	10	20	01	02	08	16	16	32
06.	Ubuntu (Operating system for Desktop)	02	04	01	02	03	06	31	62	13	26
07.	Windows XP Professional	11	22	28	56	03	06	06	12	02	04
08.	Macintosh OSX	-	-	-	-	-	-	25	50	25	50
09.	Windows 8.1	03	06	09	18	02	04	16	32	20	40
10.	Windows XP	36	72	12	24	-	-	02	04	-	-
11.	Fedora	01	02	08	16	05	10	19	38	17	34
12.	Android	05	10	04	08	10	20	15	30	16	32

Source: Survey Data, February – March, 2014.(Note: MP – Most Preferred, P – Preferred, MLP – Most Likely to Preferred, LP – Least Preferred, NAP – Not At All Preferred)

From the above table indicates that various operating system of Internet Banking transaction and security. It shows that 58% of people prefer to use window 7, 56% of people prefer to use windows8, 50% of people least prefer to use Linux Mint, 40% of people not at all prefer Linux Live CD, 32% of people not at all prefer Mac, 62%

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

of people least prefer to use ubuntu,56% of people prefer to use windows XP professional, 50% of the people not at all prefer Macintosh OSX, 50% of the people not at all prefer to use Windows 8.1, 72% of the people Most Prefer to use Windows XP, 38% of the people least prefer to use Fedora, 32% of the people not at all prefer to use Android. It is clear that 72% of the People most preferred to use windows XP.

**Table – 1.10 Operating System updating and Security Patches**

Sl.No.	CATEGORY	GENDER		No. of Respondents	PERCENTAGE (In %)
		MALE	FEMALE		
01.	Yes	20	15	35	70
02.	No	07	04	11	22
03.	Can't say	02	02	4	8
	<b>Total</b>	<b>29</b>	<b>21</b>	<b>50</b>	<b>100</b>

Source: Survey Data, February – March, 2014

From the above table indicate that updating and security patches of operating system. It is reveals that 70% of the people aware of updating with security patches. 22% of the people not aware of the updating and security patches.

**Table – 1.11 Anti-Malware Preference tools for using Internet Banking Security**

Sl. No.	Type of Anti-Malware	MP		P		MLP		LP		NAP	
		No	%	No	%	No	%	No	%	No	%
01.	Anti-Virus	17	34	18	36	04	08	08	16	03	06
02.	Firewall	20	40	27	54	-	-	03	06	-	-
03.	Anti – Spyware	08	16	07	14	05	10	10	20	20	40
04.	Spyware Blaster	07	14	03	06	02	04	20	40	18	36
05.	AVG Anti Root kit	01	02	04	08	01	02	09	18	35	70
06.	Comodo Firewall Pro	02	04	05	10	20	40	-	-	23	46
07.	Windows Defender	-	-	06	12	03	06	19	38	22	44
08.	Malicious Software	04	08	06	12	10	20	19	38	11	22
09.	McAfee Virus	05	10	11	22	01	02	19	38	14	28
10.	Microsoft Security	05	10	09	18	07	14	11	22	18	36

Source: Survey Data, February – March, 2014, (Notes: MP - Most Preferred, P – Preferred, MLP – Most Likely to Preferred, LP – Least Preferred, NAP – Not At All Preferred)

From the above table indicates that various anti-malware tools of Internet Banking security. It shows that 36% of the people prefer to use anti – virus, 54% of the people prefer to use firewall, 40% of the people not at all prefer anti – Spyware,40% of the people least prefer to use Spyware Blaster, 70% of the people not at all prefer AVG anti Root Kit, 46% of the people not at all prefer Comodo Firewall pro,44% of the people not at all prefer to use Windows Defender, 38% of the people least prefer to use Malicious Software, 38% of the people Least prefer to use McAfee Virus, 36% of the people not at all prefer to use Microsoft Security. It is clear that most of the people prefer to use firewall.

**An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers**

**Table – 1.12 Frequency of Internet Banking Transaction**

Sl. No.	CATEGORY	No. of Respondents	PERCENTAGE (In %)
01.	Occasionally	13	26
02.	Frequently	33	66
03.	Never	03	06
04.	Very Often	01	02
	<b>Total</b>	<b>50</b>	<b>100</b>

Source: Survey Data, February – March, 2014

From the above table indicates that frequency Internet Banking Transaction. It shows that, 26% of the people occasionally use the Internet banking, 66% of the people frequently use the Internet Banking, 6% of the people never using the Internet Banking, 2% of the people very often to use Internet Banking.

**Table –1.13 Frequent Changes in the Internet Banking Password**

Sl. No.	CATEGORY	No. of Respondents	PERCENTAGE (In %)
01.	Monthly	22	44
02.	Quarterly	15	30
03.	Half Yearly	11	22
04.	Yearly	02	04
	<b>Total</b>	<b>50</b>	<b>100</b>

Source: Survey Data, February - March, 2014.

From the above table indicates that frequent changes in the Internet Banking password. It shows that 44% of the people changing our password in Monthly, 30% of the people changing our password in quarterly, 22% of the people changing our password in Half Yearly , 4% of the people changing our password in yearly basis. It is concluded that maximum people changing our password in monthly basis.

**Table – 1.14 Purpose for Using Internet Banking Services among the Selected Customer**

Sl. No.	Description	SA		A		N		D		SD	
		No	%								
01.	Online Ticket Booking	37	74	11	22	02	04	-	-	-	-
02.	Online Bill Payment	37	74	09	18	03	06	01	02	-	-
03.	Balance Enquiry	36	72	11	22	03	06	-	-	-	-
04.	Request for Cheque Book	02	04	06	12	09	18	18	36	15	30
05.	Income Tax/TDS Payment	09	18	22	44	07	14	10	20	02	04
06.	Service Tax/Central Excise	11	22	17	34	07	14	13	26	02	04
07.	Insurance Premium Payment	02	04	11	22	06	12	23	46	08	16
08.	Online Shares Trading	09	18	10	20	07	14	15	30	09	18
09.	TNEB Payments	27	54	15	30	04	08	04	08	-	-
10.	Online Shopping	28	56	19	38	-	-	03	06	-	-

Source: Survey Data, February - March, 2014.

(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers

From the above table indicates that purpose for using Internet Banking services. It shows that 74% of the people strongly agree the services of online ticket booking, 74% of the people strongly agree the services of online bill payment, 72% of the people strongly agree the services of Balance Enquiry, 36% of the people disagree the services of Request for a cheque book, 44% of the people agree the services of Income Tax Payment, 34% of the people agree the services of service Tax, 46% of the people disagree the services of Insurance premium payment, 30% of the people disagree the services of online shares Trading, 54% of the people Strongly agree the services of TNBE Payments and 56% of the people strongly agree the services of online shopping. It is observed that, maximum people accept the services of online ticket Booking and Online Bill payment.

Sl. No.	Description	SA		A		N		D		SD	
		No	%								
01.	Hacking Attacks	10	20	25	50	04	08	06	12	05	10
02.	Phishing	15	30	25	50	03	06	03	06	04	08
03.	Malware	12	24	19	38	06	12	07	14	06	12
04.	Illegal Activities	04	08	13	26	08	16	14	28	11	22
05.	Transaction Activities	05	10	11	22	01	02	08	16	25	50

Source: Survey Data, February – March, 2014.  
(Note: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree)

From the above table – 1.15 indicates that technical problems and difficulties while using Internet Banking Facility. It shows that 50% of the people agree to affect the problems of hacking attacks, 50% of the people agree to affect the problems of Phishing attacks, 38% of the people agree to affect the problems of Malware, 28% of the people disagree to affect the problems of Illegal activities and 50% of the people strongly disagree to affect the problems of Transaction Activities. It is concluded that maximum people affect the problems of hacking attacks and phishing.

Testing of the Hypothesis

(A). Test of Hypothesis – I

01. H01: Internet banking has no associate relationship with traditional Banking System.

Ha1: Internet banking has associate relationship with traditional Banking System.

An Evaluative Study on Internet Banking Security  
among Selected Indian Bank Customers

Table – 116 Correlation between Internet Banking and Traditional Banking

Correlations														
Description	Correlation	IWB	Dw	CC	DD	security	SL	TS	ATB	AWB	EA	NQ	EM	FR
IWB	Pearson Correlation	1	0.52	-0.81	-.261	.039	.104	-.086	-.203	-.212	-.021	-.061	.014	.208
	Sig. (2-tailed)		.721	.578	.067	.787	.472	.553	.158	.139	.886	.674	.921	.147
DW	Pearson Correlation	.052	1	-.029	.099	-.034	.353*	.048	-.128	-.023	-.222	-.031	-.346*	-.101
	Sig. (2-tailed)	.721		.843	.492	.816	.012	.743	.375	.874	.121	.830	.014	.483
CC	Pearson Correlation	-.081	-.029	1	.015	.157	.071	-.141	-.026	-.018	.138	.012	.209	.008
	Sig. (2-tailed)	.578	.843		.917	.275	.625	.328	.858	.902	.341	.933	.145	.957
DD	Pearson Correlation	-.261	.099	.015	1	-.077	-.239	.040	.123	.209	.339*	-.155	-.069	-.304*
	Sig. (2-tailed)	.067	.492	.917		.593	.094	.781	.395	.145	.016	.284	.633	.032
Security	Pearson Correlation	.039	-.034	.157	-.077	1	-.052	-.120	.077	-.090	.229	.109	.140	.032
	Sig. (2-tailed)	.787	.816	.275	.593		.718	.405	.596	.534	.110	.452	.333	.825
SL	Pearson Correlation	.104	.353*	.071	-.239	-.052	1	-.111	-.286*	-.121	-.246	.149	-.053	.191
	Sig. (2-tailed)	.472	.012	.625	.094	.718		.443	.044	.403	.086	.302	.714	.184
TS	Pearson Correlation	-.086	.048	-.141	.040	-.120	-.111	1	.539**	.520**	.254	-.030	.170	-.105
	Sig. (2-tailed)	.553	.743	.328	.781	.405	.443		.000	.000	.075	.836	.237	.467
ATB	Pearson Correlation	-.203	-.128	-.026	.123	.077	-.286*	.539**	1	.764**	.317*	.176	.015	-.243
	Sig. (2-tailed)	.158	.375	.858	.395	.596	.044	.000		.000	.025	.221	.918	.089
AWB	Pearson Correlation	-.212	-.023	-.018	.209	-.090	-.121	.520**	.764**	1	.274	.140	.133	-.266
	Sig. (2-tailed)	.139	.874	.902	.145	.534	.403	.000	.000		.054	.332	.358	.062
EA	Pearson Correlation	-.021	-.222	.138	.339*	.229	-.246	.254	.317*	.274	1	-.298*	.504**	.056
	Sig. (2-tailed)	.886	.121	.341	.016	.110	.086	.075	.025	.054		.036	.000	.697
NQ	Pearson Correlation	-.061	-.031	.012	-.155	.109	.149	-.030	.176	.140	-.298*	1	-.334*	-.136
	Sig. (2-tailed)	.674	.830	.933	.284	.452	.302	.836	.221	.332	.036		.018	.347
EM	Pearson Correlation	.014	-.346*	.209	-.069	.140	-.053	.170	.015	.133	.504**	-.334*	1	.445**
	Sig. (2-tailed)	.921	.014	.145	.633	.333	.714	.237	.918	.358	.000	.018		.001
FR	Pearson Correlation	.208	-.101	.008	-.304*	.032	.191	-.105	-.243	-.266	.056	-.136	.445**	1
	Sig. (2-tailed)	.147	.483	.957	.032	.825	.184	.467	.089	.062	.697	.347	.001	

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

Source: Survey Data, February – March, 2014  
(Note: IWB – Interaction with Banker, DW – Deposit and withdrawal, CC collection of cheque, DD – Demand Draft, SL – Safety Lockers, TM – Time Saving, ATB – Any Time Banking, AWB – Any Where Banking, EA – Easy Accessible, NQ – No Queue, EM – Ease of Monitoring, FR – Friendlier Rates)

Friendlier Rates is a congestion control mechanism designed for unicast flows operating in an Internet environment and competing with Transmission Control Protocol (TCP) traffic. It works by maintaining a window of packets that have not yet been acknowledged. This window is increased by one packet every round trip time if no packets have been lost, and is decreased by half if a packet loss is detected.

The value of Pearson correlation arrange from -1 to +1 with negative numbers representing a negative correlation (as one variable increases, the other variable decreases) and positive numbers representing a positive correlation (as one variable increases, the other also increases). The closer the value is to -1 or +1 the stronger the association is between the variables. The hypothesized a positive relationship between the Traditional Banking system and Internet Banking system. Since the

Pearson and correlation value was correlated in (.957) for friendlier rates to collection of cheque, (.921) for Interaction with banker to easy monitoring, (.917) for demand draft to collection of cheque, (.886) for easy accessible to Interaction with banker, (.843) for deposits and withdrawal to collection of cheque, (.858) for any time Banking to collection of cheque, (.787) for security to interface with Banker and it is noteworthy, so we can say that it supports the proposition Ha1.

**(B). Test of Hypothesis – II**

H02: Internet banking Security has no strong impact on the selected Customers.

Ha2: Internet banking Security has strong impact on the selected Customers.

The value of Pearson correlation arrange from -1 to +1 with negative numbers representing a correlation (as one variable increases, the other variable decreases) and positive numbers representing a positive correlation (as one variable increases, the other also increases). The closer the value is to -1 or +1 the stronger the association is between the variables. The hypothesized a positive relationship between the Internet Banking Security and its influencing factors. Since the Pearson and correlation value was correlated in (.920) for transaction security to memory protection security, (.887) for authentication security to file security, (.798) for password protection security to database security, (.758) for security code generators to hardware security, (.722) for privacy security to safety measures, system generators and it is considerable, so we can say that it supports supposition Ha2.

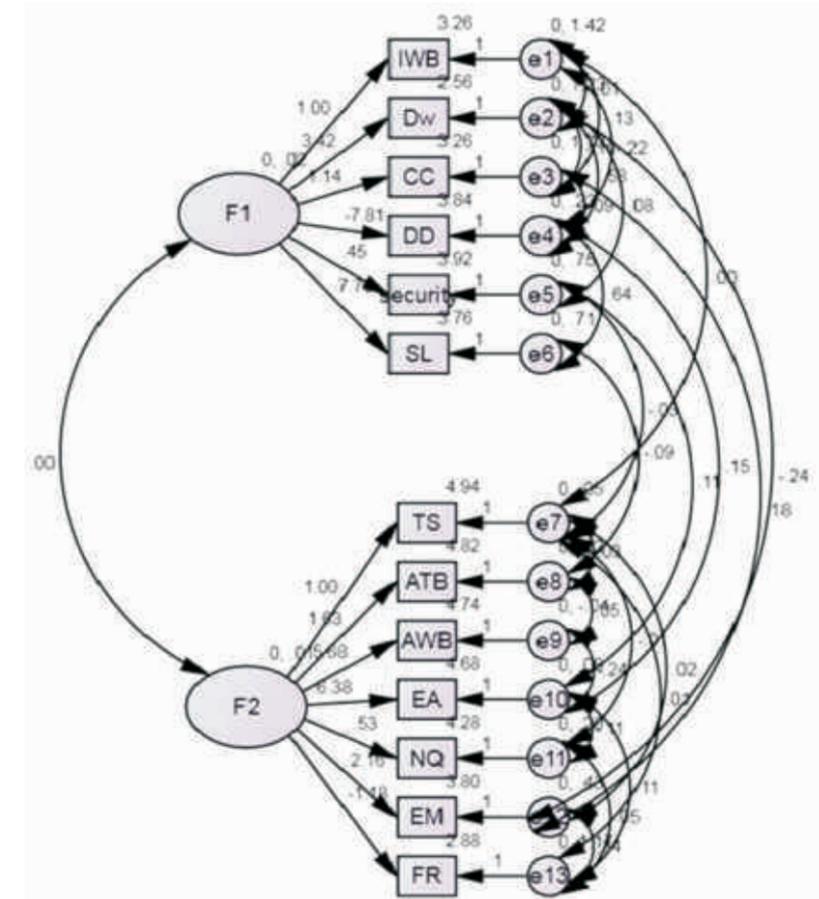
**Table – 1.17 Correlation between Internet Banking Security and its influencing factor**

Description	Correlations	Correlations								
		SCG	PPS	TS	CS	AS	HS	DS	MPS	FS
SCG	Pearson Correlation	1	-.122	-.046	-.052	.060	-.045	-.039	-.035	-.280*
	Sig. (2-tailed)		.399	.753	.722	.679	.758	.786	.808	.049
PPS	Pearson Correlation	-.122	1	.064	.154	-.183	-.198	-.037	-.145	.139
	Sig. (2-tailed)	.399		.661	.285	.203	.169	.798	.314	.334
TS	Pearson Correlation	-.046	.064	1	.064	-.144	-.251	-.427	-.015	.029
	Sig. (2-tailed)	.753	.661		.661	.318	.079	.002	.920	.840
CS	Pearson Correlation	-.052	.154	.064	1	-.068	-.091	-.266	-.082	-.207
	Sig. (2-tailed)	.722	.285	.661		.637	.529	.062	.573	.148
AS	Pearson Correlation	.060	-.183	-.144	-.068	1	-.166	-.055	-.216	.021
	Sig. (2-tailed)	.679	.203	.318	.637		.248	.704	.132	.887
HS	Pearson Correlation	-.045	-.198	-.251	-.091	-.166	1	.266	.072	.076
	Sig. (2-tailed)	.758	.169	.079	.529	.248		.062	.622	.599
DS	Pearson Correlation	-.039	-.037	-.427**	-.266	-.055	.266	1	.253	-.304*
	Sig. (2-tailed)	.786	.798	.002	.062	.704	.062		.076	.032
MPS	Pearson Correlation	-.035	-.145	-.015	-.082	-.216	.072	.253	1	-.157
	Sig. (2-tailed)	.808	.314	.920	.573	.132	.622	.076		.277
FS	Pearson Correlation	-.280*	.139	.029	-.207	.021	.076	-.304*	-.157	1
	Sig. (2-tailed)	.049	.334	.840	.148	.887	.599	.032	.277	

\* Correlation is significant at the 0.05 level(2 – tailed)  
\*\* Correlation is significant at the 0.01 level (2 – tailed)

Source: Survey Data, February – March, 2014  
(Note: SCG – Security Code Generators, PPS – Password Protection Security, TS – Transaction Security, CS – Confidential Security, AS – Authentication Security, HS – Hardware Security, DS – Database Security, MPS – Memory Protection Security, FS – File Security)

**Model of the Study**  
Associate Relationship between Traditional Banking and Internet banking



Source: Survey Data, February – March, 2014  
(Note: F1=Traditional Banking, F2 = Internet Banking)

**Table – 1.18 SUMMARY RESULTS OF MEASUREMENT MODEL**

Model	$\chi^2$	df	P – Value	RMSEA	PGFI/PCFI	NNFI	CFI	RFI	CMIN/DF
H <sub>1</sub>	46.508	39	0.001	0.06	.467	.380	.935	.519	1.193

Source: Survey data, February - March, 2014

The Chi-Square ( $\chi^2$ ) value of 46.508 with the 39 degree of freedom is at the 0.05 (5%) significant level: its p – value is 0.001. This finding suggests that model fits the data acceptably in the population from selected bank customers in the TamilNadu state drew their sample. Corroborating evidence is provided by the RMSEA fit statistics – the obtained

value of 0.008 is less than the cutoff 0.08. Similarly, the Tucker Lewis Index (TLI)/CMIN - DF result of 1.193 is considerably above the 0.95 threshold denoting satisfactory model fit.

The acceptable threshold for the values of GFI, CFI and NFI should be greater than 0.90 and RMSEA are

recommended up to 0.05 and acceptable up to 0.08. (Geffen, Straub and Boudreau, 2000). All the measures indicate an acceptable fit and exceed within the common acceptance levels as suggested by Hair et. al (2006).

In the above Model F1 and F2 causes the scores observed on the measures variables Traditional Banking and Internet Banking respectively. Causal effects are represented by single-headed arrows in the path diagram. F1 and F2 can be conceptualized as the variance the four indicators share (i.e. what the four indicators have in common). Since the chi - square test of absolute model fit is reported, along with its degrees of freedom and probability value.

## FINDINGS OF THE STUDY

The major findings of the study is listed below -

01. 32% of the respondents were aware about Internet Banking Security through advertisement whereas 18% of the respondents are alert through their Bankers.
02. 46% of the respondents were conscious of password protection security whereas 8% of the respondents only attentive of authentication security.
03. 64% of the respondents harmonize that security was more benefited in traditional Banking whereas 12% of the respondents only be of the same mind that Easy deposit and withdrawal was benefited.
04. 94% of the respondents agree that Time Saving was more benefited in Internet banking whereas 11% of the respondents only consent that friendlier rate was benefited.
05. 86% of the respondents were strongly accept that convenience was most influencing factor in Internet Banking whereas 10% of the people only accept that personal of Bank manger was influencing factor.
06. 74% of the respondents were mostly using the purpose of online ticket booking and online bill

payment in Internet Banking whereas 4% of the respondents only using Request for a cheque book and Insurance premium payment purposes.

07. 66% of the respondents were used the services of Electronic fund transfer in Internet Banking whereas 4% of the respondents only used the services of Secured transaction.
08. 82% of the respondents agree to use Mozilla firebox was Internet Banking Browser whereas 2% of the respondents only agree to use Opera and Netscape.
09. 72% of the respondents agree to use of windows XP was operating system in Internet Banking whereas 4% of the respondents only agree to use Linux Live CD and Mac.
10. 70% of the respondents were updating our operating system whereas 22% of the respondents were not updating our Operating system.
11. 54% of the respondents used the firewall was Anti - Malware tools in Internet Banking security whereas 6% of the respondents used spyware Blaster was Anti Malware tools.
12. 66% of the respondents were frequently using the Internet Banking transaction whereas 6% of the respondents were never use the Internet Banking transaction.
13. 44% of the respondents were changing our password in monthly basis whereas 4% of the respondents were changing our password in yearly basis.
14. 50% of the respondents were agree to affect the problems of hacking attacks and phishing attacks whereas 22% of the respondents only affect the problems of transaction activities.

## CONCLUSION

To sum up, the current investigation study paid special attention on Internet Banking Customers in the Coimbatore district to divulge the most recent

growth in the Internet banking services, its facts and perspicacity of Internet Banking security measures. The outcome of the research work on the Internet banking helped to identify the precautions checklist open to quite a lot of exciting issues in the internet banking era. Furthermore, a supreme and powerful security policy employed by the banks and legislation instituted by local or state governments should be in use and obligatory in order to improve security in Internet banking systems. In addition, the banks should provide enhanced evidence to the business processes or mechanisms as new and improved hi-tech security measures such as Internet scam protection, hacking detector and anti-virus protections etc..These upgrades can provide better discretion to both existing and prospective Internet banking customers. Finally, these research efforts help us to be acquainted with the awareness and sensitivity level of Internet Banking customer in the Indian bank, Coimbatore.

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# Impact of Share Buybacks on Earnings Per Share: Some Empirical Evidences

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*Share Buybacks are the reversal of issue of equity or a program initiated by the board of directors to authorize the management to acquire up to a specified number of shares of the company. Share buybacks are substantially used to manage the earnings of the firms. Buybacks produce an accounting effect, where the earnings remain unaffected but the number of shares outstanding is reduced leading to a rise in the EPS. EPS is a measure of profitability for the shareholder. Empirical evidences assert the fact that EPS is an earnings benchmark and executives use buyback for improving reported earnings. This paper is dedicated to investigate the impact of share buybacks undertaken on the earnings per share of the companies and to analyze the earnings dilution or enhancement effect of EPS influenced by share buybacks on a sample of ten companies listed at the National Stock Exchange of India Limited. The findings assert that Indian companies are using buybacks for managing their EPS for financial reporting but they are also focusing on operating profit magnification. The mean EPS value post buyback is on higher side which indicates a rise in the EPS in the Indian companies after the announcement of share buybacks. It is evident that managing the reported earnings through the employment of share buyback is undertaken by the companies in India.*

**Keywords:** EPS, Share buybacks, Reported earnings, National Stock Exchange of India Ltd.

## INTRODUCTION

Corporate restructuring is armed with tools to provide new directions to the business like mergers and acquisitions, business alliances, spin-offs, sell-offs, leveraged buy-outs, share buybacks. Share Buybacks are the reversal of issue of equity or a program initiated by the board of directors to authorize the management to acquire up to a specified number of shares of the company. Share buyback is when the company can utilize its reserves to buyback equity either for extinguishing them that leads to reduction in share capital and accretive to earnings and book value per share, or to be kept as treasury stock for re-issue in future strengthening promoters' stake. However, the vitality of such financial decision lies in its manifestations of transformations brought into financial statements in the years ahead. Share buybacks are substantially used to manage the earnings of the firms. Buybacks produce an accounting effect, where the earnings remain unaffected but the number of shares outstanding is reduced leading to a rise in the EPS.

EPS is a key statistic, highly used to measure financial performance and stock valuation. Share buybacks are frequently induced by a desire to increase EPS. When CFOs asked “why they repurchase stock”, the most often cited reason was “improving EPS in numbers” (Badrinath, Varaiya and Ferling (2001), Brav et al. (2005)). Buybacks are effective in preventing the dilution of earnings. A substantial body of empirical literature connotes that investors reward the firms that document consistent earnings growth and meet or beat analysts' forecast. Simultaneously, there exists

dichotomous view among scholars about EPS, who believe, buyback produce only mechanical effect while the real motive of shareholders value creation takes a back seat. The underlying fact is discussed by various academicians and laureates who claim the different opinions regarding shareholder value creation through improving EPS with the employment of buyback.

EPS is a measure of profitability for the shareholder. The long-term shareholders are interested in knowing the earnings accrued to them by the firms and having a sustainable rise in EPS. Retrospection into the area unfolds mixed and ambiguous results with respect to usefulness and value of repurchase programs and the subject area remain under-researched.

Stakeholders attach value to reported financial performance especially EPS. Numerous academicians have taken this issue and considerable number of researchers suggest that EPS being sensitive for shareholder is managed with the use of buybacks (Badrinath, and Varaiya(2001) Hribar, Jenkins and Johnson(2006), Bens, Nagar, Skinner and Wong(2003), Dhanani and Roberts(2009))

## REVIEW OF LITERATURE

There are anecdotal as well as empirical evidences that highlight that executives use buyback for historic EPS growth rate or for benchmark-beating purposes. When stock prices are also sensitive to reported EPS, companies have incentives to manage reported EPS. Bens, Nagar, Skinner and Wong(2003) examined and found that executives buyback decisions are influenced by their incentives to manage their diluted EPS, when earning fall short of the desired level to maintain the past growth rate of diluted EPS. They assert that EPS is an important earnings benchmark and executives are sensitive towards its financial reporting. The application of tobit regression resulted in positive and statistically significant coefficients on measure of managerial incentives to repurchase when earnings fall below required level. Their findings reveal that EPS dilution is a key consideration is managerial equity

financing and payout decisions. Thus, accounting rules have economic consequences.

Hribar et al.(2006) found the evidence of large number of accretive stock buybacks of firms' quarterly EPS forecasts among the corporations that would have missed analysts' forecasts without the repurchase. The investor discounts the information and is greatest for buybacks that help the firms' to meet or beat the EPS forecasts. They found clustering of accretive repurchases among firms with small negative ex-ante (pre-repurchase) earnings forecast errors. This is consistent with the use of stock repurchase as an earnings management device. Firms exhibit increased tendency to engage in stock repurchases, when EPS would fall short of analysts' forecast. They exhibit and give one potential explanation of the reason why managers use repurchases as EPS benchmarking to avoid large share price penalty or "earning torpedo". Their findings indicate that market does not properly push up the stock of the firm that meet or beat analysts' EPS forecast.

At the same time, there are evidences, where investors overlook the hidden agenda of buybacks. Voss(2012) illustrated the mechanical effect of EPS and concluded that investors ignore the actual motive of EPS-induced repurchase and the investors are encouraging firms to continue such practice.

Most of the survey based research provides support for EPS motivated buybacks. Brav et al.(2005) conducted a survey from the CFOs of the U.S corporations and 76.1 % of the respondents cited increasing EPS is an important factor affecting their shareholder buyback decisions. Again two different yet notable angles were expressed by executives; One school of thought purports that buyback reduces number of outstanding shares which automatically increases the EPS, the other set of executives opine EPS enhancement induced buyback is done only when funds could not earn the desired cost of capital. Hence, the EPS induced buyback is intentionally done by some executives.

Dhanani and Roberts(2009) reported similar results that the financial managers of non-investment

companies demonstrated that EPS level are of importance to investors. Almost 76% respondents agreed that repurchase programs are used in this capacity as earnings are distributed across a small number of shares.

Badrinath, Varaiya and Ferling(2001) conducted a study over a sample of firms and results implied that repurchase firms are effectively bridging the gap between their EPS growth rates and with their peers who do not buyback. They clearly accorded that the firms which got the most rev-up for their EPS growth are those which are under-performing, under-leveraged and less-profitable.

Weisbenner (2000) connected the form of executive compensation as potential explanation for the growth in share repurchases. He examined that the total options and executives stock options are contributing to dilution of EPS. He found the results that size of stock option program is a strong predictor of the company's share repurchase activity and is more apt for higher stock returns focusing over preventing dilution of earnings.

There are scholars who opine that EPS increases should be attributed to enhancement in operating performance. Companies are resulting from use of buybacks intending to artificially magnify the EPS and report consistently superior results. Instead of focusing on reported results, companies should make effort to create value for the firm.

Dobbs and Rehm(2005) outlined that there is a fine difference in increasing the underlying value and increasing the reported earnings with the employment if buyback. The reason is that the return on operating income does not magnify and the P/E ratio drops ultimately, when the excess cash is paid in the form of buyback. Nevertheless, buyback is advantageous to saving tax penalty on excess cash. While allowing to reach the EPS targets without looking at the long-term health of the companies, board runs the risk of promoting only short-term effects of buyback. Thus, executives shall chalk out a significant point of difference between fundamental value enhancement with the improvement in performance and purely

accounting effect of buyback on EPS, Then only, they can use buybacks efficiently.

Oded and Michel(2008) showed that shareholders are well off under all the policies but the EPS is largely maximized through share buybacks. But the decision to use surplus cash for share buyback has no effect on the overall wealth of the shareholders existing at the time zero. They stated that in imperfect markets buybacks are beneficial in maximizing overall wealth when firms believe one or the another reasons-undervaluation or generation of excess cash given optimum mix of assets. Repurchases are good news because the excess cash is returned to shareholders and there is change in mix of risky assets to total assets yielding a higher return on investments by the company in future. They believe achieving higher EPS requires firms to maintain at least the same level of margins as in the previous years.

In India, Mishra(2004), Gupta(2006), Raval(2012) conducted a few studies with regard to impact of buyback over Indian companies. Almost all of them found the evidence that majority of the companies witnessed marked increase in EPS. Our motive is to check Indian companies on EPS parameter and find out the underlying reasons for the same.

## OBJECTIVES

This paper is dedicated to unfold the following objectives:

1. To investigate the impact of share buyback announcement on the earnings per share of the companies.
2. To analyze the earnings dilution or enhancement effect of EPS influenced by share buybacks.

## HYPOTHESIS DEVELOPMENT

In order to highlight the contentious issue of companies undertaking buybacks with the objective of reporting superior performance to stakeholders,

the present chapter attempts to examine whether the listed companies employ buybacks for the purpose of managing reported earnings and whether there is improvement in EPS of the companies subsequent to buyback or not. Accordingly, the null hypothesis that is to be tested is as follows:

*Ho: There is no impact of share buyback announcement on earnings per share of the companies.*

### Data and Sample Selection

Data used for the measurement of impact of buybacks over EPS is secondary data collected from the annual reports of the listed companies. The dataset comprises randomly selected ten companies listed on the National Stock Exchange. Both tender and open market share buybacks were included in the sample. This was purposely done to make sample a better representative of the population. The diluted EPS before extraordinary items was taken. Diluted EPS was chosen instead of basic EPS as because investors place more weight on diluted EPS as a measure of performance (Core et al., 2002). Two companies which changed their accounting year were replaced to arrive at the final sample.

The period of study remains from 1st April, 2010 to 31st March, 2014 covering a four year span representing a sufficiently wide time-duration with normal business conditions. The earnings per share of the companies are examined from companies' annual reports.

In arriving at the final sample following criteria was satisfied:

- The sample companies are listed on National Stock Exchange at the time of announcement of intention of buyback.
- Companies announcement their buyback during the period 1st April 2010 to 31st March 2014.
- Date of announcement of buyback is taken from SEBI website.

## METHODOLOGY

The research methodology used for the examination of EPS and buybacks to know the statistical significance is Paired t-test. Paired t-test is the statistical parametric test which is used to test the difference between the means of the pair of observations before the happening of an event or experiment and after the happening of event or experiment. Here, companies form the elements and they are related to one another by declaration of earnings per share each year and simultaneous announcement of buyback. The t-test will measure whether the mean EPS of various companies before going for buyback is significantly different from mean EPS of various companies after the buyback. The values of sample mean have been tested at 5 % level of significance. The t-test based on paired observations is defined by the following formula:

$$t = \frac{(\bar{d}\sqrt{n})}{S}$$

Where,

t = test statistic

$\bar{d}$  = mean of the differences

n = sample size

S = the standard deviation of the differences

Paired t-test can be applied when the conditions that data has been following normal distribution is met. This is important as in case of deviation from the normal distribution, the statistical test applied would not provide robust result.

Both graphical and statistical tests for normality were conducted. Histogram and normality plots were used to identify deviations. Besides this, the normality test of a given variable could be checked by Shapiro -Wilk test. Shapiro Wilk test is highly used in case of small sample sizes i.e; 50 units. Shapiro -Wilk test presumes the null hypothesis that the variable is following normal distribution. By applying this test, data was found to be non-normal. Thus, for data to be suitable for statistical test, log

transformation over the absolute values of EPS was applied. It satisfied the normality condition and the transformed variable of EPS is used for t-test. All the analysis has been performed with due diligence in IBM SPSS 16.0 and MS-EXCEL.

### Empirical Results:

Table 1 shows the EPS in the year before the buyback announcement and EPS in the year after the buyback announcement for all the sample companies. Year of buyback is different for different companies. It can be observed that the series generally follows a trend of upward shift in EPS and the number of companies with positive EPS exceeds the number of companies with negative EPS. This trend may be because

management is cautious in reporting financial performance as it is watched carefully by investors, financial managers and other stakeholders. Apart from this, the equity shrunk from execution of the buyback which could have helped the firm in pushing up the EPS.

The next step is to check the normality of the data. Under the conditions data does not follow normal distribution; data-smoothing techniques are employed to make the data suitable for statistical test. We have employed Shapiro-Wilk test for test of normality for small samples with less than 50 observations. All the analysis is performed in the IBM SPSS 16.0. The results for Shapiro-Wilk test are given below:

**Table 1: Diluted EPS of the Sample Companies**

Sr. No.	Sample Companies	Diluted EPS before buyback (Rs.)	Diluted EPS after buyback (Rs.)
1	PANACEA BIOTECH LTD.	11.22	21.35
2	HINDUSTAN COMPOSITES LTD.	14.82	32.64
3	HINDUSTAN UNILEVER LTD.	10.08	10.56
4	PVR LTD.	6.01	10.46
5	J.K LAXSHMI CEMENT LTD.	4.83	8.89
6	KRBL LTD.	2.93	6.22
7	THE GREAT EASTERN SHIPPING COMPANY LTD.	9.58	13.48
8	MASTEK LTD.	11.42	10.84
9	GEODESIC LTD.	18.96	25.67
10	JAGRAN PRAKASHAN LTD.	6.64	7.05

Source: Computed

**Table 2: Results of the Shapiro-Wilk test before transformation**

Tests of Normality			
Shapiro-Wilk			
	Statistic	df	Sig.
EPS_BEFORE_BUYBACK	0.96408	10	0.831202
EPS_AFTER_BUYBACK	0.843516	10	0.048614
a. Lilliefors Significance Correction			

Source: Computed

**Impact of Share Buybacks on  
Earnings Per Share: Some Empirical Evidences**

The results connote the non-normality of data for EPS before buyback and lies at borderline for EPS after buyback. Hence, it was suitable to undertake log transformation of data for further statistical test. The log transformation is executed over the series which makes the data smooth for statistical purpose. The significance value for Shapiro-Wilk's test comes to 0.83 and 0.04 for EPs before the buyback and EPS after the buyback. Table 3 clearly demonstrates the result and the value of test statistic for Shapiro Wilk test.

Table 4 represents the sample statistic resulting from performing t-test over the given dataset. The mean value of the log transformed values of EPS after buyback is greater than EPS after buyback indicating a general increase in EPS among sample companies. The standard deviation value returned is 0.86 and 0.49 respectively for EPS before and EPS after the buyback. The series does not follow normal distribution in true sense, but it approximating to normal distribution.

Table 5 presents the result of the t-test performed on the log transformed values of EPS before buyback and EPS after buyback. The test returns the t-statistic as 4.14, the significance value as 0.003. The significance value exhibits that the difference in paired observations is statistically significant at 5 % level of significance which implies that the EPS after the buyback is statistically significant than EPS before the buyback. Hence, the null hypothesis cannot be accepted. Thus, It is evident that the earnings management effect of buyback is found in Indian companies for the sample companies. It is observed that most of the companies explicitly mentioned their objective of enhancing EPS have been successful in utilizing buyback for such purpose. The mean EPS value post buyback is on higher side. However, it would be wrong to state companies only mechanically increased their EPS. Most of the companies for which EPS magnified had increased their operating profit. Together, I can say Indian companies are using buybacks for managing their EPS for financial reporting but they are also focusing on operating profit magnification.

**Table 3: Results of the Shapiro-Wilk test after transformation**

Tests of Normality			
Shapiro-Wilk			
	Statistic	df	Sig.
LOG_EPS_BEFORE_BUYBACK	0.967104	10	0.862774
LOG_EPS_AFTER_BUYBACK	0.930048	10	0.448365
a. Lilliefors Significance Correction			

Source: Computed

**Table 4: Results of the Paired Sample t-test**

Paired Sample Statistics			
	Mean	N	Std. Deviation
LOG_EPS_AFTER_BUYBACK	2.544671968	10	0.551715
LOG_EPS_BEFORE_BUYBACK	2.139798968	10	0.557305

Source: Computed

**Impact of Share Buybacks on  
Earnings Per Share: Some Empirical Evidences**

**Table 5: Results of Paired Sample t-test of Earnings per Share**

Paired Samples Test	t	Sig. (2-tailed)
LOG_EPS_AFTER_BUYBACK - LOG_EPS_BEFORE_BUYBACK	4.14	0.003

Source: Computed

**CONCLUSION**

The paper is dedicated to explore the impact of buyback over EPS in Indian companies. In order to infer the effect on EPS consequence to buyback a sample of ten companies was randomly chosen from National Stock Exchange representing different sectors. The analysis covers the companies declaring buyback from 1st April, 2010 to 31st March,2014. In order to unfold the effect of buyback over EPS, Paired t-test was chosen. The data was found to be non-normal which was transformed by applying log transformation over the series. Shapiro-Wilk test has been applied to test normality.

The output pertaining to buyback over EPS has demonstrated a noticeable increase in EPS post-buyback. The difference stands statistically significant at 5 % level of significance.Hence, the null hypothesis that there is no impact of buyback over EPS could not be accepted.Accordingly it can be concluded that EPS in Indian Companies is influenced by buyback and buybacks are used by executives to manage reported earnings.It is evident that earnings management effect of buyback is found in Indian companies for the period under investigation. Further, it is observed that most of the companies explicitly mentioned in their buyback documents about their objective of enhancing EPS and have been successful in utilizing buyback for such purpose. Our study is in consonance with Earnings management hypothesis supporting the evidence of Bens et al.(2003),Gupta(2006).

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# Improving Hospital Turn Over Time in Stop Over

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The purpose of the case study is to identify and provide effective tools to reduce down the turnaround time in stop over unit in Hospitals. Stop over Units (SOU) provide an intermediate level of care between the Intensive Care Units (ICUs) and the general medical-surgical wards. Since SOUs are comparatively having less staff than ICUs, they are less costly to operate. However, they are also unable to provide the level of care required by the bedridden patients.

Due to the reduced staffing requirements in the SOU, Critical patients who are treated in the SOU are not be able to receive the high level monitoring and care as provided in the ICU, resulting in substantial degradation of the quality of care. Hence, not only ICUs provide care for the sick patients, they can also be considered 'flexible servers' in the sense that they can also treat moderately severe patients. It was found that the inadequate patient information, lack of communication and lack of co-ordination are the major leading causes of delay in transfers from Stop over units to the respective floors. The issues can be resolved if corrective measures are taken on time.

**Keywords:** Intensive Care Unit, Male Surgical Ward, Staff Nurse Ratio, Coronary Artery Bypass Graft, Consultant, Bed Tracking System, Discharge, Surgery, Housekeeping, Green Slip, Red Slip

## INTRODUCTION

The ABC hospital has inpatient capacity of 342 beds inclusive of 53 critical beds in different specialties. The services offered are comprehensive, covering, investigation and diagnosis to therapy, surgery and post-operative care. The inpatient services are complemented with a day centre, out-patient facilities and an exclusive centre for health check for executive. With over 70 hospitals based consultant, unique consultant's features of the hospital is that is always an experienced specialist on hand to initiate treatment without delay. The various specialties covered are Cardiology, Cardiothoracic Surgery, Neurology, Neurosurgery, Oncology, General Medicine and General Surgery; etc. The diagnostic facilities offered by the Hospital are comprehensive to include Laboratory services, Imaging, Cardiology, Neurology and Pulmonology. The laboratory services are available round the clock and include biochemistry, haematology, microbiology, serology and histopathology, transform medicine. Imaging forms a key part of the diagnostic facility at the hospital. The Department offers wide services from general radiography, ultra sonography and mammography to high end services like magnetic resonance imaging (MRI), spiral CT scanning and digital subtraction angiography, along with intervention procedures and nuclear imaging

Staff nurse ratio in ICU- 1(Nurse):1(Patient) with one senior consultant and junior resident doctor & one head nurse. In 30 bedded MSW (Male surgical

## Improving Hospital Turn Over Time in Stop Over

Ward) ratio - 1(Nurse):3 or 4(Patients), one head nurse and the general Nurse Availability flow in hospital-Morning time (maximum), Afternoon time (Moderate) and Night time (Least). In ICU there is 6 housekeeping member and the male surgical ward consist 2 housekeeping staff. The stop over unit (SOU) or step down unit is the most important physical aspects of the ABC hospital, it avoids the over congestion of patient traffic in the ICU ward. Here, stabilized patients are transfer to post surgical room; i.e. MSWard to provide intermediate and moderate care.

The ABC hospital was able to maintain the minimum standardized bed transfer protocol. The average stop over unit was 18 patients per day.

## THE CASE STUDY SCENARIO

On 23rd of August 2014, Mr. John has arrived for the CABG (Coronary artery bypass graft) surgery in ABC Hospital. After the third day of surgery, Mr. John was stabilizing to normal state in ICU. Then the junior resident doctor Simon has verbally told the ICU head Nurse Miss Lopaz to immediately shift the patient Mr. John to MSW (Male surgical ward) at the afternoon hour. Meanwhile Miss Lopaz has gone outside from the ICU for a cup of coffee and every day she felt herself tired and miserable to manage entire

53 critical beds. Around 12.30 pm on 26th of August 2014, all the morning shift staff nurses was about to leave the ICU ward, in between Miss Lopaz enters the room and called the staff nurse Miss Julie, who was taking care of the patient Mr. John and told her to shift that patient in MSWard on the allotted bed no. 42. But Julie was in such a hurry and excited mode to go home to celebrate her birthday party, and then she encountered with Layla staff nurse of the MSWard and hand over the situation of shifting John from ICU to surgical ward in the given allotted bed. John was brought down to MSWard and shifted him to bed no. 41 because the bed 42 was not ready, linen shortage was there and one of the housekeeping staff was on leave. Here, Layla decided to shift John on bed 41 and she was unaware that bed no. 41 was occupied by other patient.

The head nurse of the general ward came and injected John with an antibiotic medication. Afterward, Mr. John developed an adverse allergic reaction; he was feeling discomfort and continuously complaining about the chest pain. The staff nurse Layla tried to settle down the problem, but she couldn't handle it and situation becomes more critical.

*As a Hospital Administrator, how will you handle this crisis to save the brand image of the ABC hospital?*



## CHALLENGES

- Lack of co-ordination within the departments.
- Communication distortion was seen among the doctors, head nurse and staff nurses.
- Beds were not ready for the next patient on time.
- Shortage of manpower was seen in the Male Surgical Ward.
- Shortage of beds linen.
- The working hours for the most of the housekeeping staff did not match the peak work flow of patients discharge.
- Roles and responsibilities were not clear amongst the nurses.
- MSWard was lessening with the nurse staff as comparison to ICU ward.
- Staff nurses of the MSWard have to handle the bedridden patients as well as taking the pressure of the off patient outcomes for more efficiency.
- Poor monitoring part of the head nurse in the ICU which ultimately leads to degradation of quality service.

## RECOMMENDATION

1. **Standardized protocol:** - There should be standardized protocol which can be followed by the staff to put an end to this casual attitude of staff and allows transfer of beds on time, rather than as per the convenience.
2. **Innovative low cost strategy to speed up cleaning process:** - Two jars can be placed at the nurses' station – one to represent clean beds and the other to represent dirty. Once a patient is checked out, the nurse put a bright red slip of paper with the patient's room number into one of the jars. When housekeeping staff finished cleaning and preparing the room for an incoming patient, they removed the slip from the first jar and put the green slip in the second

jar with the same room no. on it. The green slip in the jar served as a highly visible reminder to the unit clerk that an open bed was available and ready to be used.

3. **Standardization of nursing units:** - Once the nursing units are standardized there will be an automatic improvement in communication.
4. **Responsible person:-** A person in each department should be made responsible for the transfers who would be accountable for unusual delays.
5. **Purchase of Electronic bed tracking system:-** This solution is not only for stop over units but can help in the overall transfers of bed efficiently. Bed tracking systems help intake staff assigns patients to units more quickly, with a better fit to the unit that has the services they need. The systems can be designed to anticipate a patient's discharge date based on diagnosis and other characteristics, which helps care coordinators make sure patients remain on Track for discharge. The tools also help hospitals identify and plan for times when patient demand may exceed available resources. Strategies such as borrowing nurses from other units can be employed before turning patients away.
6. Information systems on bed utilization and availability
7. Essential features of an effective and fully developed information system on bed utilization and availability .the system:
8. Provides rapid access to comprehensive, timely and accurate data on current bed utilization and availability across every inpatient bed. This will include:
  - Whether a bed is occupied or available
  - Who is occupying the bed, their date of admission and their expected date of discharge and whether discharge is overdue
  - Whether the bed is occupied by an outlying

patient

- The type of ward on which the bed is located (e.g. medical or surgical)
- Whether the bed is in a bay or in a single room Whether the bed is in a male or female bay Whether the bed is in an elderly / adult or pediatric facility Is linked to a diary facility for scheduling inpatient beds for elective patients when they are invited in, for their day of admission and their expected lengths of inpatient stay.
- Records patterns of bed utilization
- Availability over time to allow strategic review of bed complement and configuration.

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# A Historical Analysis of Segregation of Untouchable Castes in North India from circa A.D. 600-1200

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*An attempt has been made in this paper to identify the untouchable castes or social groups and examine their changing social and ritual status during the early medieval period on the basis of the literary and epigraphical evidence. While there was a significant rise in the number of untouchables and their segregation during this period, there is no unanimity amongst the law givers on the number untouchables and the extent of their "polluting" influences leading to their segregation. However, the enumeration and description of these new untouchable castes in various texts is helpful in understanding the social and ritual status assigned to them whereby a decline in their position is clearly evident. While discussing the untouchability of the untouchables, the disabilities and social taboos associated with both old and new untouchable groups have been discussed. The orthodox brahmanical outlook was challenged and confronted by some new religious movements which preached equality of all human beings. Consequently, exceptions were made to the rules of untouchability by the law-givers and leaders of brahmanical religion, side by side, with its apparent climax in the early medieval period, as evident in the prescribed segregatory practices, presenting a contradictory picture with regard to the position of untouchables.*

**Keywords:** Untouchables, untouchability, dharmshastra, occupational castes, early medical Indian society, Brahmanical social norms, ritual status, purification rites

## INTRODUCTION

The period from A.D. 600 to 1200 witnessed further ramifications of the caste system and proliferation of untouchable castes in Northern India. One may easily notice the increase in the number of untouchable castes during this period. The spirit of exclusiveness and the notions of purity, pollution and segregation were reflected not only in the creation of new untouchable groups, but also in the restrictions imposed on the degraded and despised lot, on their free movement, partaking of meals, intermarriage and intermingling with the privileged and ritually superior castes. The social and ritual distance between a 'touchable' and an 'untouchable' and also between one untouchable caste and another was prescribed, codified and carried to the extremes by the later Smṛti writers and the commentators. The period A.D. 600-1200 witnessed the systematization of the rules regarding untouchability and the intensification of the process that bred much spite between one social group and another leading to segregation of untouchables.

This segregation was a natural corollary to the disabilities and taboos which were designed to be associated with the "untouchables". What were these disabilities and taboos and how different were these from those prescribed by the languages in the earlier period. Is there any dichotomy between the rules contained in the dharmasastra and the observance of these rules in actual life? These are some of the questions, which are investigated in this paper.

## UNTOUCHABILITY : TEMPORARY AND PERMANENT

Untouchability was deemed as arising in various ways; by birth, by the pursuit of improper or impure occupations, by being guilty of certain acts which were prohibited and were regarded as sinful, by adherence to heretical religious sects and by certain physical impurities. However, the distinction between an untouchable person whose impurity passes from one generation to another, and another person who is considered impure only for a short period or who has the option of getting rid of his impurity and polluting influence by performing penance and undergoing purificatory rights, is clear in the writings of various law givers from our period. To have a clearer understanding of the purity-pollution complex, we shall examine various categories of untouchables with special reference to the restrictions imposed on associating with them and the nature of disabilities associated with them.

## UNTOUCHABILITY ARISING OUT OF PERFORMING SINFUL ACTS

Manu says that those who are guilty of killing a brahmana, stealing a brahmana's gold or drinking intoxicating drinks should be excommunicated and no one should dine with them or teach them or officiate as priests for them, nor should one enter into matrimonial relationships with them and they should wander over the world excluded from all Vedic dharmas<sup>1</sup>. However, Manu also prescribes certain penances for them whose performance would restore their original caste status and make them touchable once again<sup>2</sup>.

The Vrddha Gautama Smṛti says that if a person has his food without offering prayers then his status is reduced to that of a candala for ten years<sup>3</sup>. But, here in this case also, the law giver has prescribed ways of getting rid of this temporary status of a candala (sic)<sup>4</sup>. The distinctive examples of temporary untouchability arising out of association with those

who are considered to be permanently impure can be seen in the injunctions laid by various law-givers on touching an untouchable, accepting food and water from him or entering into sexual relationship with him. It is interesting to note that while penances and purificatory rights are prescribed for all such persons from a touchable caste who become an untouchable after doing any of the above mentioned things, no such prescriptions are made for those untouchable groups who are condemned to that position by birth. Angira says that after touching a rajaka, carmakara, nata, dhivara and buruda, a dvija can regain his touchability and purity simply by sipping water with his right hand<sup>5</sup>. He also says that a dvija who eats part of the food already eaten by candala has to do paraka vrata (fasting for twelve days continuously) for his purification whereas the kṛchha vrata (a day's fasting) is prescribed for a sudras who eats the left over from a candala's meal<sup>6</sup>. According to Angira, even if a person touches an ajapala, a mahisi or vrsalipati by mistake, out of sheer ignorance, he becomes impure and he regains his purity only after bathing with his clothes on<sup>7</sup>. Apastamba says that if an antyaja stays in a dvija's house without the dvija having any knowledge about the 'antyaaja' status of the guest, then the dvija becomes impure after knowing that the person staying with him was an antyaja<sup>8</sup>. In these circumstances, the dvija regains his touchable status after performing the candrayana or the Parakavrata. In similar circumstances, if the householder is a sudras, then he also becomes untouchable until he performs the Prajapatya vrata<sup>9</sup>. Apastamba also prescribes differential penances for the members of the four varnas who drink water given by a candala<sup>10</sup>. Similarly, on being touched by a candala, the dvijas and the sudras alike become impure and they can regain their purity after performing certain purificatory rights prescribed by Apastamba<sup>11</sup> wherein the longest period of penance is prescribed for the brahmanas and none for the sudras except giving dana to the brahmanas. According to Deavala, if a brahmana, ksatriya, vaisya or sudra women is taken away by an antyaja, and she does not suffer maltreatment or accept food that is not edible then she becomes pure once again after three nights

otherwise she has to perform Paraka vrata to regain her pure status<sup>12</sup>. According to Vrhadyamasmriti, if a dvija has sexual intercourse with a candala woman then he has to perform aghmarsana vrata and survive on milk for a fortnight to become pure<sup>13</sup>.

Yama also says that on coming into contact with a nati, sailusika, rajaki, venujivani and carmopajivni, one becomes pure only after performing candrayana vrata<sup>14</sup>. Temporary untouchability is also said to be arising out of eating grains and food of asat sudras<sup>15</sup> and the penance prescribed for regaining purity is candrayana vrata. The Yamasmriti says that if a brahmana, out of ignorance, eats the food given by a candala, then he becomes pure only after having cow's urine and a dish made of barley for fifteen days<sup>16</sup>. Yama goes on to prescribe various kinds of penances and purificatory rights for those who become untouchable as a result of coming in contact with someone who is regarded as a permanent source of pollution.

## UNTOUCHABILITY ARISING OUT OF FOLLOWING CERTAIN OCCUPATIONS

It is clear from the references to untouchability in the texts preceding c. A.D. 600 that while certain occupations were regarded as filthy and low, we do not come across any reference to suggest that those who followed these occupations were en-masse regarded as untouchables with their touchability passing from one generation to another<sup>17</sup>. Moreover many of the occupational groups which followed the "low and disapproved" occupations were not condemned to the rank of untouchables in the period before A.D. 600<sup>18</sup>. However in the period of our study, we not only get references to the impure occupations, but also find injunctions and prohibitions being prescribed for the followers of these occupations, many of whom are now condemned as untouchable castes.

Samvarta quoted by Apararka says 'On touching a fisherman, a deer-hunter, a hunter, a butcher, a bird-catcher and a washerman' one must first bathe and

then take one's meal. Apararka also prohibits food given by a thief, an acrobat, bard, musician, usurer, physician, goldsmith, blacksmith, weaver, dyer, hunter, washerman, wine-seller, oilseed-presser and charioteer, astrologer, bell-maker, smuggler, painter, leather-worker and wine-maker<sup>19</sup>. Angira says that on touching a rajaka, a carmakara, a nata (an acrobat), dhivara and a buruda, a dvija becomes pure after sipping water<sup>20</sup>. The Vrddha Gautam Smriti says that a physician and a wine-seller should not be included in the list of people who are fed after the death of a person in the rituals that follow<sup>21</sup>. The same says that one should not feed a gayaka (singer), nartaka (dancer), plavaka (boatman), vadaka (player of musical instruments), kathaka and bodhaka in sraddha<sup>22</sup>. In the Sankha Smriti the law-giver says that if a brahmana accepts food given by an actor, a physician, a deer hunter, a thief, a leather-worker, a bamboo-worker, goldsmith and a thug, then he should perform vrata for one month to regain his purity<sup>23</sup>. Lohita says that food grains given by the following should not be used in sraddha of a dvija: suta, rathakara, taksa, malakara, tantuvaya, saucika, nata, thief, a rebel and one who has obtained wealth by selling his daughter<sup>24</sup>. The Markandeya Smriti says that one should not act as a priest for a swarnakara, rathakara, suta and lohakara<sup>25</sup>. The Smrtyarthasara prescribes purificatory rights for people who accept food given by singer, carpenter, physician, acrobat, weaver, crown-maker, potter, tree and horse-seller, seller of dairy products, salt and sugar (trader), a bamboo-worker, a prostitute, goldsmith, actor, dyer, dancer, blacksmith, tailor and painter<sup>26</sup>.

In the Jain text Nisitha Curni, the following three categories of untouchables have been mentioned:

- i. Jatijumgita or people condemned by their caste.
- ii. Kammajumgita or those condemned because of work they followed and
- iii. Sippajumgita or those following condemned arts and crafts.

When we consider the last two of the three categories we find that the peacock tamers, barbers, acrobats,

pole-dancers, hunters, fowlers, butchers and fisherman have been mentioned as following condemned work<sup>28</sup>, while the leather-workers, washerman, dealers in silken clothes, calico-printers and wine-sellers have been mentioned as people following low or condemned crafts<sup>29</sup>.

While it is true that some of these occupations were regarded as lowly and filthy, the whole scale degradation of the people who followed these occupations to the rank of untouchable castes can be gleaned through the ever expanding list of untouchable castes. An attempt by the Smriti writers to explain the origin of each of these castes by applying the theory of miscegenation is a clear example of the brahmana's ingenuity which was reflected in the hardening attitudes towards ritual purity and pollution<sup>30</sup>. The spirit of exclusiveness and exaggerated notions of ceremonial purity were carried to such an extreme by the Smriti writers and commentators from the early medieval period that the sudras also came to be regarded as untouchables and source of pollution<sup>31</sup>.

## UNTOUCHABILITY OF THE SUDRAS: A NEW DEVELOPMENT DURING THIS PERIOD

Some of the orthodox writers of the Smritis went so far so as to hold that on touching even a sudra, a dvijati has to bathe<sup>32</sup>. Some<sup>33</sup> thought that only the sudras of inferior types were untouchables, but others<sup>34</sup> extended the observance of the practice of untouchability to sudras in general prescribing different means of purification. The Smrtyarthasara prescribes purificatory rights, if a vessel made of brass or bronze is touched by an asat Sudra<sup>35</sup>. A verse of Brahmanda Purana quoted in the Smrticandrika says "After touching the saivas, pasupatas, lokayatikas, nastikas, those twice-born who have taken up duties not meant for them and the sudras, one should get into water with all the garments on."<sup>36</sup> Angira says that even the intelligent and meritorious people are condemned, if they eat food given by the

sudras, sit with a sudra, remain in touch with a sudra or try to gain knowledge from a sudra<sup>37</sup>. He says that food grains given by a sudra are like blood and should not be eaten<sup>38</sup>. The Samvarta Smriti says that who one who accepts food or water given by a sudra becomes impure and he regains his purity only after keeping a fast for twenty-four hours and performing other purificatory rights<sup>39</sup>. The Vrddha Gautama Smriti includes the sudra in the list of impure men and women<sup>40</sup>. Similarly Lohita Smriti puts sudras in the same category of untouchable castes whose foodgrains can't be accepted in a sraddha<sup>41</sup>. Markandeya says that not only grain given by a sudra but also that which has been touched by a sudra should not be eaten<sup>42</sup>.

Under these circumstances, the traditional view that a person could take food from a sudra who was his slave, his cowherd, his family friend or his share-cropper was modified by some and even rejected by others. Thus Aparaka<sup>43</sup> and Haradatta<sup>44</sup> opined that it was applicable only in times of extreme distress caused by natural calamities and Devannabhata regarded it as forbidden in the Kali Age<sup>45</sup>. Apararka quotes a law giver to say that food given or touched by all sudras except purchased slaves was prohibited<sup>46</sup>. It is also said that food given by dasa, napita, gopala, kumbhakara and krsivala, these five sudras is acceptable<sup>47</sup>. Angira and Yama say that foodgrains given by dasa, napita, gopala, kulamitra and ardhasiri is edible<sup>48</sup>. In the Laghu Visnumriti the sudras have been classified as sraddhis and the others who are different from the sraddhis are bhojya sudras i.e. food given by them is edible while the rest are abhojya whose food cannot be accepted by a twice-born<sup>49</sup>.

The degradation of the sudras to the rank of untouchables and the references to various occupational groups under new labels of untouchable castes did not lead to the creation of a homogenous group of untouchables in which every group was treated equally contaminating and impure. As pointed out earlier, the degree of untouchability and pollution associated with each of the untouchable castes was defined and this formed

the basis for differentiation of different categories of untouchables. The ritual and social distance was defined and delineated not only between the brahmanas and the despised and condemned lot but also between each of the low social groups who were said to be causing different degrees of pollution and contamination even amongst the rank of untouchables. The sole untouchable group of candalas in Manu is a point of reference, at the bottom of the scale which is depressed further in the post-Gupta times. Though the sudras were themselves regarded as untouchables, yet the Angiras Smrti reveals that even the sudra was required to perform a penance after drinking water from the well or pot of a candala. It is interesting to note that differential penances and purificatory rights prescribed for members of different varna who come in contact with a candala. Thus while the most difficult vrata is prescribed for a brahmana, the ksatriya is supposed to perform a vrata half as difficult as that prescribed for a brahmana, the vaisya one third and the sudra one fourth of the penances prescribed for the brahmana<sup>51</sup>. This scheme is also followed by Atri who prescribes dana and fasting for three nights for a sudra who eats a candala's food<sup>52</sup>. Apastamba says that if an antyaja enters the house of a dvija or a sudras, then a sudras also becomes impure and he should perform prajapatya vrata to regain his purity<sup>53</sup>. While prescribing penances for the four varnas who touch a candala, Apastamba says that since the sudras are devoid of any mantra, vrata and tapa, therefore they should inform the dvijas and give dana to them<sup>54</sup>.

The differentiation in the degree of untouchability arising out of various categories of untouchables other than sudras is also witnessed in the writings of law givers. Parasara considers the castes of leather-workers, washerman, bamboo-workers and hunters as only half degraded than the candala and the svapaka<sup>55</sup>, and Vijnanesvara quotes Madhyamangiras as making a clear distinction between candala and the svapaca on the one hand and the carmakara and the rajaka on the other<sup>56</sup>. The Laghu Harita Smrti prescribes a lighter penance for touching the food which has been touched by a nata,

rajaka or medaka than by a candala<sup>57</sup>. Similarly, while three krcchra prajapatya vratas are prescribed for a brahmana who establishes physical relationship with a candala woman, candrayana vrata is prescribed for him if he does the same with a sailusa, rajaka, venu or carmapajivi (all antyaja) women<sup>58</sup>. The Smrtyarthasara prescribes fasting as a penance for touching a sudras, fasting for three nights and kaya vrata for touching a candala and its half for touching a rajaka etc. (sic)<sup>59</sup>. Similarly, different purificatory rights are prescribed for accepting water or food, touching and looking at different categories of untouchables<sup>60</sup>.

However the candalas remains the most despised condemned and depressed and grave anxiety and horror are expressed at having any kind of contact with them. The rules of derivative pollution become more stringent and the touch-taboo is extended to be passed on to three persons who, in a sequence, come into contact with the first one actually touched by a candala etc. (sic), one after another. Thus, if a person who is not an untouchable, gets touched by a candala or any other untouchable and he touches another touchable, who, in turn, touches the third touchable and the third touches a fourth one, then it is prescribed that the first should bathe wearing his clothes and recite Vedic or Gayatri mantra 108 times, the second after bathing in the same manner should recite the mantra 54 times; the third should also bathe wearing his clothes and recite the mantra 27 times but the fourth person gets purified only after taking a bath<sup>61</sup>. The intensification of the practice of untouchability may be inferred from the opinion of the law givers about the polluting nature of the candala.

## THE CANDALA AND HIS POLLUTING INFLUENCE TOUCHES NEW HEIGHTS

Apararka<sup>62</sup> and Vijnanesvara<sup>63</sup> take a different line form Manu<sup>64</sup>, Yajnavalkya<sup>65</sup> and Visnu<sup>66</sup> and regard even the shadow of a candala impure and polluting if he came within the length of a cow's tail but such a view was not expressed by Medhatithi or

Kullukabhatta. However, Sridhara in Smrtyarthasara does not even specify the distance and says that it is necessary to bathe with the garments on if the shadow of a candala and svapaka falls on others<sup>67</sup>. According to Parasara, a candala embodies in his person various kinds of pollution for a dvija and also for a sudra<sup>68</sup>. He is said to be infecting the roads, and water drawn from a well or vessel touched by him is not allowed<sup>69</sup>. The Atri samhita says that if a candala woman enters the house and stays there incognito, then that house should be burnt<sup>70</sup>.

The attitude of the early medieval Smrti writers and commentators regarding the polluting influence of the candala is attested by Bana<sup>71</sup>, Alberuni<sup>72</sup>, Kalhana<sup>73</sup> and Hemacandra<sup>74</sup>.

Banabhatta in his Kadambari (A.D. seventh century) talks about the touch taboo associated with the candala described as the low born<sup>75</sup>. There is the famous story of a candala girl coming to the court of the king Sudraka and the king looking at her from a distance as she was unfit to be brought closer to him<sup>76</sup>. The Kadambari also describes the nisada, sabara, pulinda and svaposaka as matanga or candala whose untouchability is clearly established<sup>77</sup>.

Alberuni also talks about the antyajias who were placed below the sudras in the social scale and who rendered various kinds of service. However, he says that the antyajias were not reckoned among the castes but only as practitioners of a certain craft or profession who were organised in their respective guilds and who did not live near the villages and towns of the four varnas (brahmana, ksatriya, vaisya and sudra). The occupational groups which were regarded as antyajias included the fuller, shoemaker, juggler, basket and shield maker, sailor, fisherman, hunter of wild animals and of birds, and the weaver. These groups fully intermarried with one another except the fuller, shoemaker and the weaver, for 'no others would condescend to have anything to do with them'. Alberuni also talks about the people called hadi<sup>78</sup> (singers of ballads), doma (domba), candala and badhatau<sup>79</sup> (hunters and

fowlers), who were not reckoned among any caste or guild and were considered as illegitimate progenies of sudra males and brahmana females. These 'degraded outcastes' were treated as one social group who were distinguished only by their occupations.

The Desi-nama-mala of Hemacandra indicates that the candalas used a stick called jhahhari and the dombas, another called khikkhiri, by striking which they made themselves known and the people thus avoided coming into contact with them<sup>80</sup>. The segregation of the candala is evident in the use of the terms antya, bahya, antyayoni and antyavasayin by numerous law-givers. Usanas says that a candala should tie a thong around his neck and should not enter the village in the afternoon<sup>81</sup>. The segregation of the candala is evident from the rules laid by Usanas about his place of residence. He says that he should stay away from the village and should reside in the eastern direction, outside the village. If he doesn't stay there permanently and if he is not stable then he should be killed<sup>82</sup>. The segregation of the candalas and some other untouchables too, is also talked about in the Laghu Harita Smrti as well, where the lawgiver says that if one comes to know of the place of residence where the antyas and the patitas live in hiding, one has to keep three Krcchra vratas to get purified<sup>83</sup>.

What is most striking is the prescription regarding a menstruating woman coming in contact with the candala. While the polluting influence of a menstruating woman is mentioned side by side with the candala and other untouchable castes and is a running theme in the writings of early medieval writers, it is surmised that a rajasvala (menstruating woman) should avoid the candala, and if she touches a candala she becomes impure, as in more impure than before and has to keep fasting for three nights to regain her purity<sup>84</sup>. To highlight the impurity and pollution stemming from a menstruating woman, Apastamba says that she is a candalini on the first day of her periods, a brahmaghatini on the second day, a rajakion the third and she regains her purity only on the fourth day<sup>85</sup>. However, she is considered superior and purer than the candala even on the first

day when the candala status is temporarily assigned to her. Purificatory rights are prescribed for a rajasvala not only for touching a candala but also for touching an antyaja and svapaka<sup>86</sup>. Thus it is interesting to note that while many law givers regard the temporary untouchability of a menstruating woman arising out of her physical impurity, as polluting and as contaminating as the permanent and hereditary untouchability of a candala or an antyaja and prescribe almost similar purificatory rights for those coming in contact with either of the two, the candala or antyaja are considered to be more despised and impure than the menstruating woman<sup>87</sup>.

## UNTOUCHABILITY ARISING OUT OF PHYSICAL IMPURITIES

The impurity of certain people during a particular period and their polluting influence has been often cited by scholars who try to explain or justify the notions of untouchability on the basis of religious and ceremonial purity and impurity.

Kane says

"A man's nearest and dearest women relatives such as his own mother and wife or daughter are untouchable to him during their monthly periods. To him the most affectionate friend is untouchable for several days when the latter is in mourning due to death in the latter's family"<sup>88</sup>.

While it is true that the law-givers prohibit contact with these people who are regarded as source of pollution, it must not be forgotten that their polluting influence is temporary, time bound and limited. After the period of asauca, the touchable status is restored on the family which had gone through asauca. It is also true that a woman after giving birth to a child was treated as impure and contact with her was prohibited but her impurity leading to her seclusion cannot and should not be treated at par with the segregation of those women who were permanently condemned for their polluting influence emanating from their lineage

and occupation. Temporary inaccessibility can't be equated with permanent untouchability and the seclusion of the pure and touchable for a definite period is certainly different from the exclusion of socially deprived and despised lot whose untouchability is hereditary in nature and whose position in the society is irretrievable.

In a Jain text<sup>89</sup> of circa 7th-8th century A.D., it has been clearly stated that there were two forms of worldly segregation:

- i. for a definite period and
- ii. for the whole life.

As an example of the temporary segregation, the author refers to the typical Indian custom of segregating those families for a period of ten days where a death or birth had taken place<sup>90</sup>. Whereas various despised castes like that of the nada, varuda, chimpaga, cammara and dumba have been cited as examples of the permanent segregation by those who considered themselves ritually and socially superior<sup>91</sup>.

### *Untouchability Arising Out of Adherence to Heretical Religious Sects*

Religious hatred also led to the degradation of followers of some religious sects and cults to the rank of untouchables. Mitaksara<sup>92</sup> and Apararka<sup>93</sup> quote Brahmanda Purana to say that "after touching the saivas, pasupataslokayatikas, nastika, those twice born who have taken up duties not meant for them, and the sudras, one should get into water with all the garments on. The Smriticandrika also expresses similar views about the untouchability of the followers of these religious sects<sup>94</sup>. Apararka also quotes a verse of Vrddha-Yajnavalkya that on touching candalas, pukkasas, mlecchas, bhillas and parasikas and persons guilty of mahapatakas one should bathe with the clothes on<sup>95</sup>. The Vrddha Harita Smrti says that a brahmana who worships Siva becomes like a sudra and if he worships Yaksa and Bhuta, he at once becomes a candala<sup>96</sup>. It also says that Durga, Gana and Bhairava, these are to be worshipped by the pratilomas and the anulomas<sup>97</sup>

and Yaksa, Raksasa and Bhuta are worshipped by the candala who eats meat and drinks alcohol<sup>98</sup>. Siva is worshipped by the sudra<sup>99</sup> according to Vrddha Harita Smrti. Thus we see that association with saiva, tantric and sakta cults is abhorred and said to be defiling and contaminating. The hatred for the followers of these cults is also evident in the passage from Brahmanda Purana which is elaborated by Apararka<sup>100</sup>. He says that when the daityas (monsters) were defeated by the devatas (Gods) some of the defeated became kapaladhari (those who hold a skull in their hands), some of them started roaming naked, some shaved their heads, some started wearing saffron coloured clothes and some others covered their bodies with human bones and hair. Obviously, here, the reference is being made to the followers of tantric or non-conforming religious cults who are equated with the monsters and who are abhorred by the brahmana law-givers. Atri prohibits physical contact with a kapalavratadhari and keeps him in the same category as that of candala, mleccha and svapacas<sup>101</sup>. The Brhannaradiya Purana states that a man who bows down to linga or an image of Visnutouched by a sudra is doomed forever<sup>102</sup>. The Smrtiyarthasara also prescribes purificatory rights for a person who touches a saiva, sakta, pasupat and a lokayata<sup>103</sup>. It says that the kapalikas are also like rajakas, carmakaras, bhillas, vyadhas, sailusas, natas, burudas, kaivartas, medas and mlecchas<sup>104</sup>. The Smrtiyarthasara also prohibits acceptance of food touched by an avadhut and brackets him with the candala and the pulkasa<sup>105</sup>.

The contempt for the followers of new religious sects was not without reason. The orthodox brahmanical religion with its narrow caste outlook was challenged by rival schools of religious thought in the early medieval period. Nevertheless, in practice, it does not seem to have gathered any momentum. However, faced with the challenges posed by the new religious sects and cults, the brahmanical law-givers were quick to make exceptions to the rules of untouchability to ensure continued patronage of a large number of devotees of the dominant brahmanical religion. Generally, no blame was

deemed to have been incurred by mixing with the untouchables in festivals, in battles, in religious processions, in calamities or invasions of the country or village, in the presence of great men, etc. The Smrtiyarthasara<sup>106</sup> even permitted the untouchables to enter temples which is very striking. Surprisingly, while on the one hand, some lawgivers are seen making an attempt to widen the social base of the brahmanical religion by introducing an element of flexibility through provisions like exceptions to the rules of untouchability, some Puranas, on the other, talk of the exclusion of the sudras from places of worship. The Brahannaradiya Purana<sup>107</sup> says that a man who bows down before a linga or an image of Visnu touched by a sudra will suffer forever. Thus, references to complete segregation remain abound and the picture does not seem to have changed significantly during A.D. 600-1200 in North India.

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<sup>3</sup> Vrddha Gautama Smrti, V.62

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<sup>5</sup> Angira Smrti, V.17

<sup>6</sup> Ibid, V.27

<sup>7</sup> Ibid, V.123

<sup>8</sup> Apastamba Smrti, III.1

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<sup>15</sup> Ibid., III.10,11

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<sup>22</sup> Ibid, V.75

<sup>23</sup> Sankha Smrti, XVII. 36-40

**A Historical Analysis of Segregation of Untouchable Castes in  
North India from circa A.D. 600-1200**

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- <sup>33</sup> Quotations in the Mitaksara and Apararka, III.30, 292; Brahman, da Purana quoted in the Smrtichandrika, Ibid.
- <sup>34</sup> Smrtyarthasara, 78, Ibid.; Kane, op.cit., p.174
- <sup>35</sup> Ibid, p.71
- <sup>36</sup> Kane, op.cit., p.174
- <sup>37</sup> Angira Smrti, V.73
- <sup>38</sup> Ibid., P.78
- <sup>39</sup> Samvarta Smrti, V.29
- <sup>40</sup> Vrddha Gautama Smrti, V.19,20
- <sup>41</sup> Lohita Smrti, V.394-6
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- <sup>43</sup> Apararka on Yajnavalkya, I.168, p.244.
- <sup>44</sup> Haradatta on Gautama Dharmasutra, XVII.6
- <sup>45</sup> Smrticandrika, I, p.12
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**A Historical Analysis of Segregation of Untouchable Castes in  
North India from circa A.D. 600-1200**

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**BRIEF PROFILE OF THE AUTHOR**

**Malay Neerav**, an alumnus of St Stephen's College, Delhi and School of Oriental and African Studies, University of London, specialized in the History of Ancient India at the postgraduate level. After his initial research at the University of Delhi, on Untouchability in Ancient India, Mr Neerav was awarded the Felix Scholarship for research and teaching at the University of London. He has done a pioneering work on the "Proliferation and Segregation of Untouchable castes in North India" between A.D. 600 and 1200. Mr. Neerav has been invited by several universities abroad to deliver lectures including the University of Cambridge, University of London and University of Wisconsin, Whitewater, U.S.A. He has also delivered lectures on study skills for the Distance

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Mr Neerav has also worked as a consultant editor to the World Bank and has edited several volumes dealing with the different environmental issues in India.

He has received several awards including the most coveted the "St Stephen's College Centenary Medal for Character Combined with Learning". Mr Neerav has also distinguished himself as an ace broadcaster and broadcast journalist. He has served as a consultant editor to the BBC World Service and a senior analyst for several other media groups including Prasar Bharti, Zee Media and Network 18. He has the distinction of covering many international events including Olympics. He has produced many documentaries and features for the BBC. His series on environmental issues in India was widely acclaimed and his radio feature on Indian Population was selected as the Best Radio Programme by the World Population Council.

# Equitization of State Owned Enterprises in Vietnam – A Case Study of Vietnam Airlines Company Limited

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This case has been compiled from secondary published sources to illustrate the equitization efforts undertaken by Vietnam Government to improve economic growth. In order to boost the financial and operational strength of the consequently low performing State Owned Enterprises (SOE), the Vietnam Government is equitizing its public sector to push the economy towards a market driven structure.

Though these SOE's have abundance of funds, but their operational efficiency remains at abysmally low level. Thus, equitization is a move towards reforming these sectors towards a more sustainable development. To understand where Vietnam stands in its move towards privatization, we examine a case example of Vietnam Airlines, which came up with an IPO in 2014.

Per Vietnam Prime Minister, Mr. Nguyen Tan Dung "We should successfully equitize 432 state-owned enterprises as set out in the adopted project. This must be considered a major political task for the government."

**Keywords:** Vietnam, Government, SOE, Equitization, Vietnam Airlines, Restructuring, Improved efficiency, Funds, IPO, Stock market, Privatization

## INTRODUCTION

In Vietnam, equitization refers to partial privatization, wherein the government issues shares of the state-owned enterprises to private investors and transforms them into joint stock company. However, in large SOEs and certain sectors, the government continues to hold a controlling stake.

### The need for equitization

In the 1980s, Vietnam was struggling with economic crisis and an enormous poverty trap on account of decades of war, economic mismanagement, unemployment, hyper-inflation, famine, inefficiencies in production, imbalances in demand and supply, cessation of Soviet aid, trade prohibition by the west, and an ever-growing debt situation.<sup>[1]</sup>

SOEs in Vietnam grabbed a large share of the country's aggregate investments; enjoyed favorable tax rates; received preference in government contracts, access to land, export quota, credit facilities; and benefits of cross-subsidization between profit-making and loss-making SOEs. However, their contribution to GDP and aggregate investment is lesser when compared to Non-state and Foreign-invested enterprises. These SOE's utilize 60% of all bank credits and 70% of ODA funds but account for only 35% of national production.<sup>[2]</sup>

Most SOEs operated with unclear objectives, poor management, and soft budget constraints, with easy access to loans from banks, which were in turn

encouraged by the government to lend money to them without collaterals. The ownership responsibilities and control duties are ambiguous in SOEs and have multiple stakeholders (ministries, such as Ministry of Finance, Ministry of Social Affairs) who monitor the SOE. This therefore results in long decision making time, wastage of resources, and inefficiencies in the organization. Further, the overall corporate framework of Vietnamese SOEs has been weak, with a lack of vision and their role in the development of the economy. They have also not been able to catch up with good corporate governance practices and there was a lack of transparency in the enterprises.<sup>[3]</sup>

To save the country from near-bankruptcy, it was then decided in December, 1986 to transition from its then 'centrally managed system' dependent on state subsidies to a 'socialist-oriented market economy' wherein competition would be encouraged between the private sector and the state in non-strategic

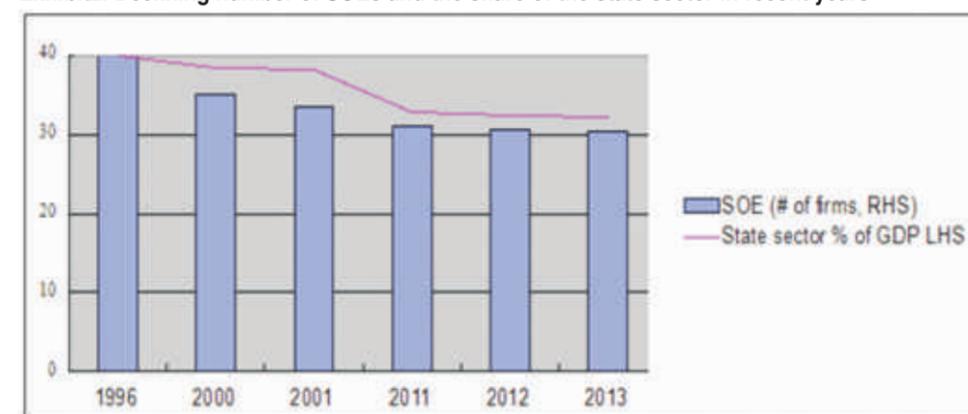
sectors. This top-down reform program was named as 'DoiMoi'. Under this program, state played a decisive role in the economy, and encouraged the private sector to engage in commodity production. The shadow market of unregulated enterprises played a significant role in the initiation of this program.<sup>[4][5]</sup>

The no. of SOEs decreased significantly in the country from 12,084 in 1989 to 6,000 in 1992, on account of merging and shutting down small, inefficient concerns. The government retained a few large dominant SOEs, while equitizing the large no. of smaller SOEs. However, in the period 1992-99, only around 600 SOEs were equitized. By the end of 2005, there were 3,400 SOEs remaining with ~2,000 SOEs equitized over the period 2000-05. The no. of SOEs reduced to 1,200 in 2010, and further to less than 1,000 by 2014 out of which 432 more SOEs are planned to be equitized by 2015.<sup>[6]</sup>

Exhibit 1: Investments by SOE



Exhibit 2: Declining number of SOEs and the share of the state sector in recent years



Source: WTO, OECD, World Bank, CEIC, HSBC<sup>[7]</sup>

## THE PERCEIVED BENEFITS OF EQUITIZATION

The Government hopes to recover the Vietnamese economy with a speedy pace of privatization. The restructured market structure hopes to bring the following benefits:

1. Increase in revenue: The divestment is expected to bring in healthy cash to the government which it can utilize in financing the deficit in the budget or other important projects.
2. Increase in overall efficiency of the economy: Restructuring would improve the efficiency and performance of the SOE's, which form an integral part of any national economy.

### *Will the 2007 missed opportunity be grabbed this year?*

In 2007 Vietnam joined World Trade Organization, which presented an opportunity for Vietnam to expand its capital market by carrying out equitization on a large scale, however, the opportunities were missed with the world recession mostly to blame.

In 2011-2012, major reforms were started in the earnest with the Prime minister focusing on two major goals to revive the sluggish economy. The first one being the restoration of macroeconomic stability, while the second one involved

restructuring across SOE's, banking, and public investment programs.

In 2014-2015, the government plans to vigorously carry out restructuring initiatives. It has laid a Resolution No.15/NQ-CP, which entails restructuring, reforming and enhancing operational efficiency of SOEs<sup>[8]</sup>.

## VIETNAM AIRLINES COMPANY LIMITED: AN INTRODUCTION

Headquartered in Hanoi, Vietnam Airlines is a flag carrier of Vietnam. The airline was founded in 1956 by the name 'Vietnam Civil Aviation'. The airlines has operations in 17 countries and flies to 52 destinations (21 domestic, 28 international, 3 charter/seasonal). Vietnam Airlines Corporation was established as a state-owned organization by merging the airlines with 20 other service companies, with Vietnam Airlines being the center.

While the core business of the company remains passenger transport; it also focuses on allied areas via its subsidiaries, such as airline catering (Vietnam Airlines Caterers), maintenance and overhauling of aircrafts (Vietnam Airlines Engineering Company), and cargo (Vietnam Airlines Cargo). The airline division flew 13.6 million passengers in 2013 and has

**Table 1: The Story so far: (The journey towards equitization)**

Year	Event
1986	Introduction of DoiMoi program
1992	Beginning of the Equitization program
1994	Establishment of 18 General Corporations (GC) and 64 Special Corporations (These are large conglomerates incorporating ~2,000 SOEs operating in strategic industries)
1995	Enacting the SOE Law (Amended in 2003) - Improved SOE rights, obligations, operating mechanisms, financial management, etc.
1996	Issuance of a formal decree on equitization
1998	First set of 18 SOEs were equitized
2005	Incorporation of State Capital Investment Corporation (SCIC) - Represents state interests in enterprises and invest in key sectors to strengthen the dominant role of the state sector
2009	128 new wholly state-owned enterprises added

10,180 employees (As of March 2014). The Group structure consists of: (a) The Head Office consisting of divisions and departments; (b) Dependent Units: Consisting of 14 dependent units, 32 branches, and representative offices at 20 countries and territories creating an integrated supply chain. (c) 18 subsidiaries with a shareholding of more than 50%, and 8 associates with a shareholding between 20% and 50%.

Its sales channels consist of: (a) Direct sales at Vietnam Airlines offices and international branches; (b) Indirect sales through Passenger Sales Agents and General Sales Agents (PSA and GSA) designated by Vietnam Airlines, or via the BSP agents and tour operators. As of December 31, 2013 there were 32 representative offices in 20 countries and regions, 14 GSAs, joined BSP/ARC systems of 38 countries for ticket sales and distribution. There are 3 regional offices as a part of the domestic sales network, responsible for ticket sales, distribution

and promotion to ~200 domestic agents. Online sales account for ~6.3% of the total revenue, while the sales agent network contributes to ~90% of the ticket revenue.

## FINANCIAL OUTLOOK

The company has a chartered capital of 14.1 trillion VND (671.4 million USD). It owns 100% of Vietnam Air Service Company, a regional airline in southern Vietnam; 70% of Jetstar Pacific Airlines, a low-cost carrier; and 49% of Cambodia Angkor Air, the flag carrier of Cambodia.

The airline's rate of borrowing on equity is 4.3 times and long-term debt on equity is 3.17 times, both higher than the aviation industry average. Despite having higher ratios, the company managed to have a high solvency and stable sources of capital available due to the operating principles of airlines, wherein cash inflows is quite early with the sale of

**Table 2: Timeline: Vietnam Airlines**

Year	Event
1956	The Civil Aviation Administration was established by the Government of Vietnam, marking the beginning of Vietnam's civil aviation industry
1993	Separated from the Civil Aviation Administration of Vietnam to become a state-owned enterprise and the flag carrier of Vietnam
1995	Establishment of Vietnam Airlines Corporation with the merger of Vietnam Airlines and 20 other aviation companies
2002	Vietnam Airlines introduced its logo: the Golden Lotus in an attempt towards branding
2003	Restructuring of Vietnam Airlines Introduced a fleet renovation program, commencing its first Boeing 777 flight
2006	Became an official member of IATA
2009	Set-up Cambodia Angkor Air – a joint venture with the government of Cambodia with a share capital of \$100 million resulting in 49%
2010	Re-registered its legal entity to a one member Limited Liability Company wholly-owned by the Government of Vietnam Became the 10th official member of the global alliance SkyTeam
2012	Received transfer of the state capital (68.46%) in Jetstar Pacific Airlines from the Government of Vietnam, thus becoming the majority shareholder of the company
January 2013	The Ministry of Transport approved March 31, 2013 as the valuation date of Vietnam Airlines equitization
May 2014	The Ministry of Transport approved the valuation result of Vietnam Airlines
September 2014	The Prime Minister approved the Equitization Plan of Vietnam Airlines

tickets, while transport services are provided later with many service charges to be paid during the time of flight.

The company does not aim to pay dividend for the 2015-2018 period. The average aircraft depreciation period considered by Vietnam Airlines is 12-15 years, lower than the industry average of 15-20 years, resulting in higher depreciation costs than other carriers. Therefore, its current profit is yet to fully reflect its business efficiency.

The company is aiming at a revenue growth of 14-20% for the holding company by 2018 and after tax profit of 2.99 trillion dong owing to investment in new fleet with the help of which fuel costs can be reduced by 25% and costs for checking, repairing and maintaining by 15-20% resulting in an increased gross profit margin. Also, the new fleet will help upgrade its services to premium higher-paid ones.

"The Vietnamese market has huge growth potential but with low-cost carriers and foreign full-service carriers becoming more intrusive, Vietnam Airlines has challenges to overcome as it starts to accelerate expansion." - Brendan Sobie, Analyst, CAPA-Centre for Aviation.

### Vietnam Airlines Equitization

Vietnam Airlines laid down its equitization plans considering floating an initial public offering (IPO) since 2008. Eventually, in November 2014, the company sold more than 49 million shares<sup>[9]</sup> worth 1,093 billion VND (52.05 million USD), representing a 3.48% stake, at its IPO at the HCM City Stock Exchange<sup>[10]</sup>. The shares were purchased by 1,575 individual investors and two institutional investors at an average price of 22,307 VND (1.06 USD). The two institutional investors together bought 98% of the total offering volume (Techcombank - 52% and Vietcombank - 46%)<sup>[11][12]</sup>, while the retail investors were left with just 2% of the equity. Both these banks are also amongst the biggest creditors of Vietnam Airlines (By the end of 2013, Vietnam Airlines had a borrowing of over three trillion dong from Vietcombank and over one trillion dong from Techcombank).<sup>[13]</sup>

With the company's lucrative investment plans, including its expansion in fleet by up to 116 aircrafts by 2018, there will be opportunity for banks to increase their profits from offering credit, because by becoming shareholders, both aforementioned banks will have more advantages. The shareholder banks can also launch other services such as collecting 100% of ticket sales at booking offices of the airline, offering comprehensive personal financial packages to officials and staff of the company and its subsidiaries.

Due to a huge demand for foreign currency, the carrier has long-term loans in foreign currencies, which account for nearly 70% of its long term debts. Since, being a legal entity that is not allowed to exchange foreign currencies, the company needs to go through banks for its transactions.

Post the IPO, the Vietnamese government will retain a controlling 75% stake in Vietnam Airlines. Further, 20% stake will be reserved for strategic partners, 3.5% public equity via the IPO route, and the remaining 1.5% is set aside for company employees.<sup>[14]</sup>

*occur, but when it did finally list...it was a mere \$51.3 million capital raise, not enough to even buy a new plane."*

\*Per the State Owned Enterprises Law 2003, a State Owned Enterprise (SOE) is an economic organization in which the state keeps the whole charter capital or some shares, or contributes controlling capital, and it is established in the form of a state company or a joint-stock company or a limited liability company.

### The Way Forward

Vietnam severely needs to speed up its equitization plan and make the process more efficient. The only way forward for the country to grow economically would be to have the current debt-struck public sector enterprises be run by more efficient management that can turn-around businesses, generate employment as well as profitability. Presently, the management of public enterprises and the selling of public assets continue to be mismanaged in the country.

The major selling point for Vietnamese equitization plans is the undervaluation of its economy, as it remains the most undervalued country compared to all other ASEAN economies.<sup>[17]</sup> However, the Vietnamese equitization process has various drawbacks/challenges that it needs to overcome for the successful running of the equitized enterprises and also to attract strategic investors for the enterprises, more specifically Foreign Direct Investments.<sup>[15][16]</sup>

Foremost, Vietnam should consider revising its ownership limit of 49% and 30% in case of banks. Currently, foreign investors are keen on investing in Vietnam companies which hold huge potential, but are constrained by this rule.

The government needs to take steps to ensure transparency and initiate effective corporate governance mechanisms in the SOE sector. Also, the asset valuation models need to be revised as they are inconsistent with no uniform accounting standards between enterprises, and a firm's economic performance is found to be varied amongst different economic regimes.

The government also needs to provide incentives and conduct seminars for employees/managers working in SOEs to motivate them as to how the post-equitized entity would be more beneficial to them in terms of work, monetary benefits, and career

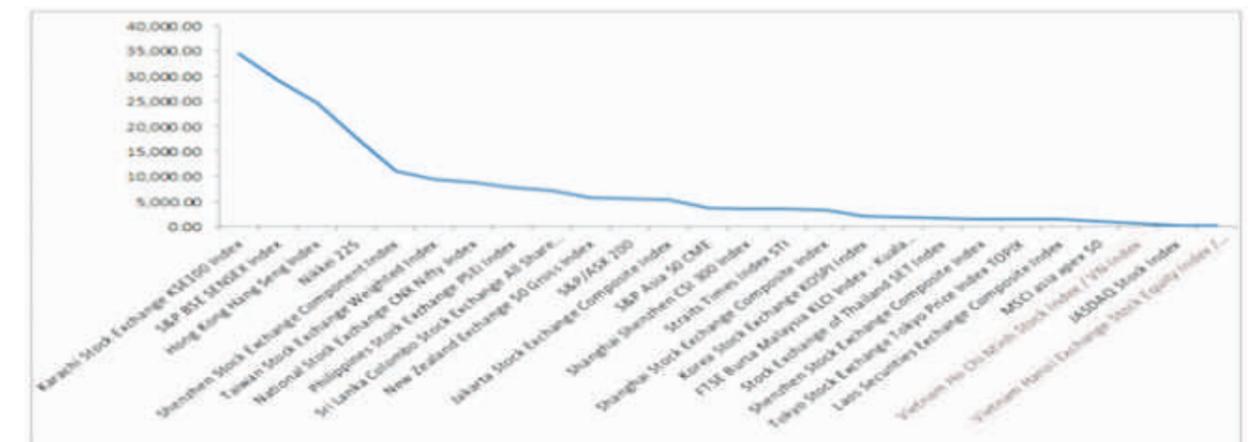
growth. Currently, there is opposition from employees as equitization accompanies fear of job-losses, as well as greater accountability to private investors in contrary to state, while managers oppose the same for the loss of privileges associated with managing a state enterprise<sup>[18]</sup>.

The government also needs to focus on resolving administrative difficulties associated with equitization in Vietnam. Such issues currently faced by the equitization process in the country include, disagreement in parties claiming ownership of SOE assets, the presence of decisive voting rights with the government post-equitization. Further, the proceeds from equitization are controlled by the central authorities, therefore facing opposition from local people's committees.

The Vietnamese government also needs to smoothen and fasten the pace of initiating trading on the stock market post IPO. Presently, the companies raising funds in an IPO often take months or even years to start trading on the stock market. For foreign investors, the challenges are even more as they find it difficult to increase exposure due to foreign ownership restrictions and high valuations.<sup>[19]</sup>

*"What is the point of having a stock market if the rules are more restrictive than those for nonpublic companies?" - Kevin Snowball, Chief executive, PXP Asset Management*

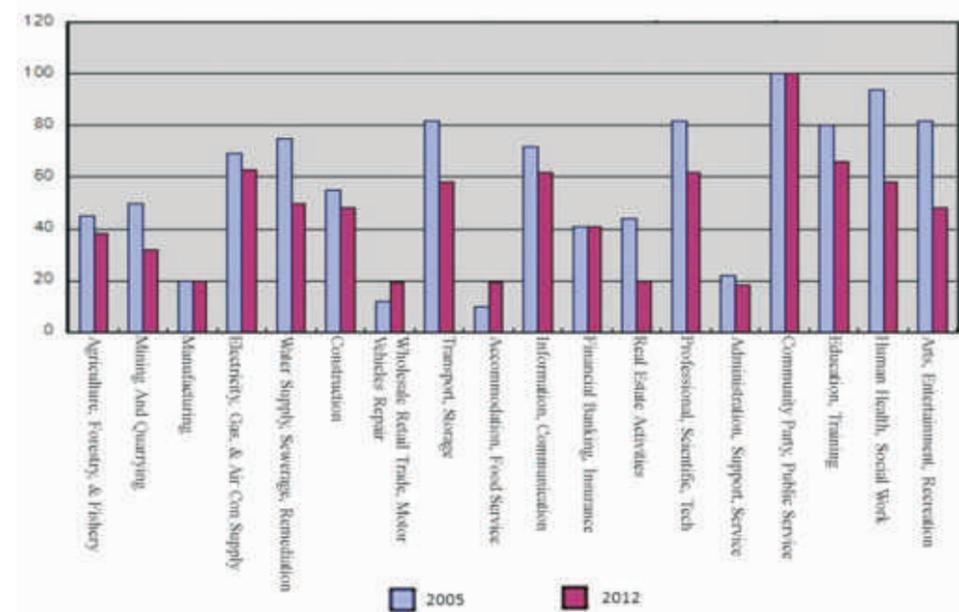
Exhibit 3: Key Asia Pacific Stock Indexes



Source: Bloomberg

Appendix

Table 4: Declining share of state investment as a % of total investment



Source: CEC, HSBC

Table 5: Key Privatization efforts in the Aviation Sector (Asia)

Airlines	Country	Year of Privatization
Biman Bangladesh Airlines	Bangladesh	2007
Air China	China	2004 (Indirect control through parent company till date)
Japan Airlines	Japan	1987
China Airlines	Taiwan	1993
Philippine Airlines	Philippines	1992, 1996, 1999
Sri Lankan Airlines	Sri Lanka	1998, 2000
Malaysia Airlines	Malaysia	1985, 1994
Pakistan International Airlines	Pakistan	1992, 2004
Singapore Airlines	Singapore	1985, 1987
Thai Airways International	Thailand	1992, 2003

Table 6: Key Privatization efforts in the Aviation Sector (Rest of the World)

Airlines	Country	Year of Privatization
Qantas	Australia	1992
Cyprus Airways	Cyprus	2000
Austrian Airlines	Austria	1988, 1989, 1990
B&H Airlines	Bosnia and Herzegovina	2008
Air Canada	Canada	1989
LAN Airlines	Chile	1989
Lufthansa	Germany	1994 (Remaining shares sold in 1997)
El Al	Israel	2004
Alitalia	Italy	2008 (Indirect control through a state owned company)
Aeromexico	Mexico	2007
Air New Zealand	New Zealand	1989 (Partially re-nationalized in 2001)
British Airways	United Kingdom	1987
Turkish Airlines	Turkey	1990, 2004, 2006
Ukraine International Airlines	Ukraine	1996, 2000
Estonian Air	Estonia	1996
Finnair	Finland	1989
Air France	France	1999, 2004
KLM Royal Dutch Airlines	Netherlands	1986, 1998, 2005
Air Lithuania	Lithuania	2004
Latvian Airlines	Latvia	1995
Swiss (Swiss International Air Lines)	Switzerland	2005
British Airways	United Kingdom	1987
Aero Peru	Peru	1993, 1994
Olympic Airlines	Greece	2009
Saudi Airlines	Saudi Arabia	2013
Kenya Airways	Kenya	1996
Air Namibia	Namibia	2002

Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited

**Table 7: Vietnam Airlines - Board of Management**

Designation	Name
Chairman	Mr. Pham Viet Thanh
President & CEO	Mr. Pham Ngoc Minh
Executive Vice President	Mr. Phan Xuan Duc Mr. Le Hong Ha Mr. Trinh Hong Quang Mr. Duong Tri Thanh Mr. Trinh Ngoc Thanh Mr. Nguyen Ngoc Trong

**Table 8: Subsidiaries of Vietnam Airlines**

Subsidiary Name	Vietnam Airlines' Ownership	Principle Activities
Vietnam Air Petrol Company Limited (VINAPCO)	100%	Aviation fuel Trading
Vietnam Airlines Engineering Company Ltd (VAECO)	100%	Aircraft repair and maintenance
Abacus Distribution Systems (Vietnam) Ltd	90%	Automated reservation service
Cambodia Angkor Air	78.67%	Air transportation
Jetstar Pacific Airlines JSC (JPA)	67.83%	Air transportation
Vinako Forwarding Co., Ltd (VINA KO)	65.05%	Forwarding, ground handling and Warehousing services
Aviation Construction JSC (AVICON)	64.54%	Civil construction
Noi Bai Catering Services JSC (NCS)	60%	In-flight Catering
Vietnam Airlines Caterers Ltd	100%	In-flight catering
Noi Bai Cargo Terminal Services JSC (NCTS)	55.13%	Cargo services
Tan Son Nhat Cargo Services Company Limited (TCS)	55%	Cargo services
Air Services Supply Joint Stock Company (AIRSERCO)	52.99%	General aviation services
Aviation Information and Telecommunications JSC (AITS)	52.73%	IT services
Viet Flight Training (VFT)	51.52%	Pilot training
Tan Son Nhat Cargo Services and Forwarding Co., LTD (TECS)	51%	Cargo, Forwarding services
Noibai Airport Services Joint-Stock Company (NASCO)	51%	Air transportation support services
Aviation labor supply and import – export joint stock company (ALSIMEXCO) and tourism service	51%	Aviation Labor import-export
Aviation Printing Joint Stock Company (AVIPRINT)	51%	Printing and packaging services

Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited

**Table 9: Vietnam Airlines - Post IPO Ownership Structure**

	%	No. of shares	Total Value (Billion VND)
The State	75.00	1,057,638,000	10,576.38
Public Issue	3.48	49,009,008	490.09
Foreign State Investors	20.00	282,036,800	2,820.36
Employees	1.48	20,795,100	207.95
Union	0.05	705,092	7.05
<b>Total</b>	<b>100</b>	<b>1,410,184,000</b>	<b>14,101.84</b>

**Table 10: Vietnam Airlines - Assets (FY 2013 - In Million VND)**

Assets	Historical cost	Depreciation & Amortization	Residual value
Tangible fixed assets	11,160,908	4,286,970	6,873,938
Owned aircraft	9,343,240	3,207,173	6,136,067
Plants and Buildings	285,009	109,132	175,877
Equipment and machinery	430,923	202,268	228,655
Vehicles	855,143	609,808	245,335
Tools and other fixed assets	246,593	158,589	88,004
Leased fixed assets	41,513,874	13,278,243	28,235,631
Intangible fixed assets	391,017	187,301	203,716
Land use right	57,054	-	57,054
Other intangible fixed assets	333,963	187,301	146,662
<b>Total</b>	<b>53,065,799</b>	<b>17,752,514</b>	<b>35,313,285</b>

**Table 11: Vietnam Airlines - Revenue Structure**

Revenue (In Million VND)	2009	2010	2011	2012	2013
Total revenues	23,202,718	35,604,454	44,874,845	49,577,019	52,828,835
Air transportation	21,922,250	33,943,447	43,234,000	48,453,993	51,366,955
Passenger	20,037,708	30,499,337	38,623,615	43,064,227	45,407,388
Cargo	1,764,709	3,142,849	4,000,781	4,380,574	4,376,687
Air charter	119,833	301,261	346,598	521,18	924,309
Others	-	-	-	488,012	658,571
Ancillary revenues	1,280,468	1,661,007	1,640,845	1,123,026	1,461,880
Technical & Comm support	538,512	599,022	687,008	720,212	775,221
Commission	44,926	55,019	47,205	50,136	39,928
Unused ticket & Asset leasing	350,024	419,535	484,989	168,249	441,965
Others	347,006	587,431	421,643	184,429	204,766
Deductible revenue	-141,814	-262,584	-347,161	-434,895	-368,775
<b>Net revenue</b>	<b>23,060,904</b>	<b>35,341,870</b>	<b>44,527,684</b>	<b>49,142,124</b>	<b>52,460,060</b>

Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited

**Table 12: Vietnam Airlines - Financial and Operating data**

Balance Sheet Data (In Million VND)	2009	2010	2011	2012	2013
Total assets	32,130,797	38,513,744	48,546,212	55,499,526	59,336,454
Equity	6,753,009	8,445,488	8,266,960	9,291,848	10,015,808
Total Liabilities	25,376,196	30,066,247	40,277,881	46,206,403	49,319,904
Short-term debts	2,251,654	4,608,207	4,511,909	6,862,131	6,653,146
Long-term debts	17,226,441	17,489,772	26,559,662	29,653,646	31,189,127
Receivables	7,031,118	9,245,357	10,107,716	8,255,221	11,662,524
Short-term receivables	2,964,749	5,574,404	6,166,206	4,790,976	6,519,753
Long-term receivables	4,066,369	3,670,953	3,941,510	3,464,245	5,142,771
Total employee expense	1,212,995	1,806,406	1,850,370	1,991,033	1,860,550

Profit & Loss Data (In Million VND)	2009	2010	2011	2012	2013
Total revenues	24,688,574	37,498,039	47,745,526	51,112,836	54,017,133
Net revenues	23,060,904	35,341,871	44,527,685	49,142,124	52,460,060
Total expenses	-24,553,926	-37,172,268	-47,708,926	-50,974,666	-53,859,458
Pre-tax profit	134,648	325,770	36,600	138,170	157,675
After-tax profit	134,648	314,116	36,600	138,170	147,426
Income tax expense	428,414	394,142	611,079	731,240	

Cash flow Data (In Million VND)	2009	2010	2011	2012	2013
Cash from operating activities	1,899,733	431,527	-1,654,204	5,061,176	2,499,334
Cash from investing activities	-10,285,209	-2,689,672	-2,340,579	-10,340,068	-4,528,518
Cash from financing activities	7,701,968	1,543,119	3,634,491	5,441,344	1,308,282

Operational Ratios	2009	2010	2011	2012	2013
Long-term debt/Equity	2.57	2.09	3.23	3.2	3.14
Total Liabilities/ Equity	3.76	3.56	4.87	4.97	4.92
Equity/Total Assets (%)	21.02	21.93	17.03	16.74	16.88
Total Liabilities/Total Assets (%)	78.98	78.07	82.97	83.26	83.12
Long-term assets investment ratio (%)	83.61	76.11	82	86.64	85.49

Liquidity ratios	2009	2010	2011	2012	2013
Current ratio	0.66	0.74	0.64	0.45	0.48
Quick ratio	0.55	0.67	0.6	0.42	0.45
Total liquidity ratio	1.27	1.28	1.21	1.2	1.2

Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited

Profitability ratios	2009	2010	2011	2012	2013
Return on Asset	0.42%	0.82%	0.08%	0.25%	0.25%
Return on Equity	1.99%	3.72%	0.44%	1.49%	1.47%
Return on Sales	0.58%	0.89%	0.08%	0.28%	0.28%
Total Asset Turnover	0.72	0.92	0.92	0.89	0.88

**Table 13: Vietnam Airlines - Financial Outlook (2014 - 18)**

Financial Data (In Billion VND)	2014	2015	2016	2017	2018
Sales and revenue	59,295	67,824	81,650	95,484	110,07
Sales returns and allowance	287	327	404	467	541
Net revenue	59,009	67,496	81,246	95,017	109,53
Cost of goods sold	52,560	59,303	69,698	80,927	94,054
Net sales and revenue	6,449	8,194	11,549	14,090	15,479
Financial income	364	401	427	455	487
Financial expense	2,809	2,923	3,697	4,149	4,636
Selling expense	2,904	3,457	4,288	4,906	5,577
Administration expense	1,401	1,568	1,658	1,778	1,892
Profit (loss) from operating activities	-301	647	2,333	3,711	3,860
Other income	670	728	868	969	1,049
Other expense	27	31	38	45	54
Other profit (loss)	642	697	830	924	995
Net profit (loss) before tax	341	1,344	3,163	4,635	4,855
Corporate tax	-	211	602	920	961
Net profit (loss) after tax	341	1,132	2,561	3,716	3,894
Return on Sales - ROS (%)	0.57%	1.96%	3.83%	4.81%	4.37%
Return on Equity - ROE (%)	2.37%	8.75%	14.42%	18.97%	18.27%
Return on Asset - ROA (%)	0.52%	1.62%	3.33%	4.54%	4.50%
Labor Cost	4,361	5,293	5,976	6,873	7,676

Asset (In Billion VND)	2014	2015	2016	2017	2018
Current Assets	13,443	16,077	17,156	18,234	24,382
Cash and cash equivalent	3,620	5,176	5,338	8,986	13,817
Non-current Assets	52,345	66,622	77,936	83,760	83,376
Fixed Assets	37,717	51,276	61,052	68,277	70,962
Total Assets	65,788	82,726	95,118	102,023	107,788

**Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited**

<b>Asset Structure</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Current Assets	20.40%	19.40%	18.00%	17.90%	22.60%
Cash and cash equivalent	5.50%	6.30%	5.60%	8.80%	12.80%
Non-current Assets	79.60%	80.60%	82.00%	82.10%	77.40%
Fixed Assets	57.30%	62.00%	64.20%	66.90%	65.90%
Total Assets	100%	100%	100%	100%	100%

<b>Capital (In Billion VND)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Current liabilities	21,240	24,688	25,527	27,142	30,812
Bank loans and current portion of long-term debt	9,953	11,625	9,437	7,875	8,276
Non-current liabilities	30,154	42,672	47,660	50,443	50,399
Long-term debt	30,037	42,539	47,500	50,256	50,184
Equity	14,394	15,366	21,932	24,437	26,576
Total Capital	65,788	82,726	95,119	102,022	107,787

<b>Capital structure</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Current liabilities	32.30%	29.80%	26.80%	26.60%	28.60%
Bank loans and current portion of long-term debt	15.10%	14.10%	9.90%	7.70%	7.70%
Non-current liabilities	45.80%	51.60%	50.10%	49.50%	46.80%
Long-term debt	46%	51%	50%	49%	47%
Equity	21.90%	18.60%	23.10%	23.90%	24.60%
Total Capital	100%	100%	100%	100%	100%

**Table 14: Post IPO Strategic Direction Outlined by the Company**

Maintain our leading position in the national airline industry. We aim at superior economic performance accompanied by effective implementation of political tasks assigned by the State, including maintaining our key position in the industry, offering services to a wider public and serving as a preliminary force for national security.
Position ourselves among top airlines of ASEAN region with regards to scale, and hold the pivotal role in the air transport of the CLMV sub-region; Strive to position Vietnam Airlines in the market as a reputable brand name.
Follow customer-driven strategy for constant services quality improvement; prioritize safety, quality, operating performance, capital preservation and development in business; promote the combination of services with cultural elements to create a distinctive cultural identity among our peer group; expect to have our products and services ranked at a fair level of the region in 2015, embracing Vietnamese cultural identity while meeting the international standards of a 4-star airline; and become a favorite airline in Asia in terms of in-flight quality and ground services in 2020.
Pursue sustainable development through selectively investing in innovative technology, such as technical infrastructure for repair and maintenance, aerospace industry, specialized training facilities and synchronization services at the airport, especially passenger terminal, cargo terminal and infrastructure at the base airport.
Take advantage of the internal resources and creating excellent crew of pilots, engineers, staffs and experts with professional elite, high labor productivity to operate and manage a large-scale professional airline; expand both domestic and international cooperative ventures; renovate the management process for a more scientific, modern, and united system as well as to promote the synergy values throughout the company.
Strive to become one of the most attractive employers in Vietnam for its image of an industry with high technology and international integration; for the inspirations at work and for its excellent remuneration package including high and stable income, training opportunities and career development.

Note: Financial year for Vietnam Airline Company ends December 31 every year

**Equitization of State Owned Enterprises in Vietnam –  
A Case Study of Vietnam Airlines Company Limited**

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# Book Reviews

## Discovering Statistics Using SPSS

Sage Publications  
Author: Andy Field  
Second Edition

The idea of writing Book review on the book "Discovering Statistics Using SPSS" by Andy field came to my mind when one day I was talking to one of my Phd student, who was very afraid of data analysis, as she was not from mathematical background. When I was doing my Phd somebody suggested me this book and I find it extremely helpful. This is an excellent book for researchers who are beginners and is extremely valuable for those who are afraid of mathematical calculations and statistics. The Book contains sixteen chapters in total and each chapter is explained in a story form so as to make it easy for the readers who have begun with the research yet not much familiar with the intricacies of it. Andy has been quiet successful in explaining the so called heavy subject with light explanations.

Chapter 1 focuses on understanding the basic

terminology of statistics as to make a strong foundation for understanding the rest of the book and further analysis. Chapter 2 meets the fundamental need of research beginners and it focuses on basics of software SPSS. As many beginners might not be aware of the procedure for entering data and creating variable in SPSS and so on. This chapter seems like making a child understand how to write A, B, C in SPSS, as simply explained.

Chapter 3 goes a little ahead, while still playing with data continues in the chapter, the major focus is on exploring variables and understanding nature of data and categorizing it into parametric and non parametric data and also understanding the hypotheses. After beautifully explaining the variables and their nature, next part of the book deals with understanding relations among the variables through correlation and regression. From simplest linear regression to complex logistic regression has been simplified with examples. I couldn't find any other book explaining this analysis in

simplest form. Further the book extends on explaining hypothesis testing using both parametric and non parametric tests along with Multivariate Analysis including Factor Analysis and MANOVA. Factor Analysis has been dealt with great depth but only focus is on Exploratory factor Analysis. To summaries, those who want to understand the basics of research and those who are at the initial stages of research and for those who requires intricate analyses, this book can be of extreme help.

The book has been very well planned and starts with the basics and ends with in depth analysis using the social science package SPSS. The chapters are easily explained with small quizzes at the end, so as to make the readers recall of their readings and also bibliographic part is magnificent.

### Dr. Anu Sahi

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## Old Europe and New Asia Strategies, Challenges, Responses

Author: Krishnan Srinivasan  
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Year of Publication: 2016  
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Disintegration of Soviet Union accompanied by weakening of United States hegemony has transmuted the world into a relative multipolar system. Europe and Asia have emerged as the two most significant poles under this framework. Against the backdrop this book delves on the various contemporary interactions between Europe, specifically the European Union, and the emerging prominent economies of Asia, particularly China and India. It compares Asian economies with that of European Union in terms of strategic partnership, the prevailing economic and financial crises, climate change, political environment and the existing institutional reforms. It also highlights the difficulties encountered in this partnership and emphasizes on the fact that Asia and Europe could be natural partners if they overcome their internal weaknesses. This book explores the limitations of the present in Europe-Asian relations, and the potential for the future.

The ending of cold war era accompanied by disintegration of soviet union which was in itself a watershed moment from the global prospective, it's direct consequence was that it allowed scope for different economies of world to make a headway in the global economy. Europe and Asia grabbed this moment and emerged as two most significant poles of the transformations. Their importance was further accentuated by the weakening of US hegemony. It ultimately transmuted the world into a relative multi polar system.

The author gives a detailed account of the strategic partnership between Europe and Asia in 12 Chapters. The foreword to the book has been written by Wang Yiwei. He is a former diplomat, presently Professor of International Studies at Renmin University, Director of Institute of International Affairs, Director of centre of European studies, and the Director of the China - European Academic Network.

He mentions that the book provides a 'candid examination' of the present opportunities and Challenges of Europe and Asian Strategic Relations. He commentates that Europe has 'slipped from the centre stage to the periphery' of the International Relations because of the ongoing Euro zone crisis and thus it is beneficial for Europe to establish

closer economic ties with Asia. He emphasized that if Europe overcomes the remnants of its negative colonial legacy and American Influence, it could reinvent itself as a significant world player by building closer ties with Asian economies.

Chapter 1-The book begins with a chapter on "Europe and the globalized world." The chapter discusses the legitimacy of European Union as an international player at world forums. It brings to light the fact that the individual players like Germany and France are not willing to give up their candidature for European Union to step in their shoes. It author warns the nation states in European Union of the fact that if they fail to cooperate in making European Union (EU) a world leader, they would become mere spectators in a G-2 world shaped by the United States and China as Europe is no longer a fulcrum in the global system of international relations. The chapter ends with a very valid question that whether EU without any legal identity at the international institutions can play a significant role in shaping the future of the new world order.

Chapter 2 -The chapter talks about the new emerging economies of Asia drawing attention to the fact that economic power is behind every political dominance and bolster the notion

that economic ties transmutates into strategic relations in the long run. It also discusses the regional trade blocs and international lending agencies. It explores the Association of South East Asian Nations(ASEAN) which will be celebrating its golden anniversary in 2017. At the end the chapter underlines the fact that there will be a shift in the spending power from west to the new emerging economies of Asia who will act as an engine of new demand growth.

Chapter 3- The chapter gives a detailed picture of the political landscape of Asia. In this context the chapter elaborates the situation prevailing in two major economies of India and China in depth. It also discusses the problems faced by the two countries and argues about the various feasible solutions to overcome these problems.

Chapter 4- This chapter portrays European Union as a region surrounded by issues like aging population, fiscal crunches, economic slowdown, the black future of euro, austerity measures, vaguely defined European social model and immigration problems. The chapter also talks about the Euro zone crises and the current economic situation in Europe. The need for fiscal prudence has led to political and social upheaval in countries worst hit by the crises. The chapter also offers probable solution to the

ongoing crises taking a holistic view by focusing on the cultural aspects as well by incorporating the role of Islam in accommodating European culture.

Chapter 5- This chapter deliberates on the origin and the spread of globalization from western hemisphere to the eastern hemisphere. The chapter stresses on the fact that the new emerging economies of Asia are demanding greater role and responsibilities in redefining the structure in a new globalized world. The author admits that there is a flourishing trade relations between Europe and emerging economies of Asia like India and China are, but trade relations in the long run, can be separated from strategic relationships. The two are intertwined.

The author points out that now the time is right for Europe to devise a new Strategy for Asia. Though Asia is facing problems in the form of weak multilateral structure and wide variety of governance system, still it manages to produce some of the fastest developing economies of the world. Engagement on new terms between the two giants is the need of the hour. A system redesign is needed as the emerging economies are now demanding a place at the high table in the existing international agreements. The chapter ends with a caution that

“comprehending Asia is not an exotic luxury but a matter of necessity”.

Chapter 6- In this chapter the author briefly examines the EU-China comprehensive strategic partnership. It also discusses the direction of trade between these two partners. The chapter ends with a special focus on need for cooperation and existing opportunities in nuclear and technological sector.

Chapter 7- The Chapter starts with pointing out the similarities between European Union and India and mentions the potential areas for cooperation. It elaborates the obstacles in EU-India relations and also gives sufficient coverage to important topics like cultural patterns, strategic partnership, development assistance and defense ties. At the end the author vividly describes the need and feasibility of a free agreement between the two.

Chapter 8- This Chapter discusses the critical global issues that could have long lasting ramifications on contemporary strategic partnership in a multipolar world. It starts with briefly highlighting the salient feature of Trans Pacific Partnership which, if ratified, might change the future trading scenario. Later on the chapter also delves on contemporary issues like human rights, reserve currency, genetically modified organism, energy and climate

change. It also covers the various climate change conferences. It elaborates the role of EU and Asian economies during the conferences. At the end the chapters also covers their role in United Nations and other international Institutions like World Bank and IMF.

Chapter 9- It deals with the current geopolitical scenario prevailing in South Asia and South East Asia. It highlights the role of United States as an important extraneous factor that can cast its spell on the EU and Emerging Asia dialogue. Further it tries to explore the possibility of any dialogue between EU and Emerging Asia without domineering presence of USA and whether the two poles could play a positive role in shaping the New World Order.

Chapter 10- The chapter beautifully describes the colonial legacy carried by Asian economies. It has left them with poignant memories. It aptly depicts the significance of colonial past as it was very brutal and oppressive and has left indelible scars on the face of Asia.

It warns that if this legacy is carried forward and Europe fails to bridge the gap between the existing culture, the dialogue between the two parties would fall apart.

Chapter 11- The chapter stresses on the cultural disparities prevailing in the two continents. It advocates that Europe should formulate 'common shared values of morality and global governance' and try not to act alone but in conformity with the global community. It warns Europe that its continued insistence on imitation of western culture, values and norms for non western economies does not augur well for the future of Europe - Emerging Asia Dialogue.

Chapter 12- In the last chapter the author concludes that by 2025 the picture at world arena will change, demeaning the role of USA and Europe. It will become far more interactive and Asia will certainly play a significant role in the new multi polar system.

This book is one of its kinds in emphasizing the need for a

Europe - Emerging Asia partnership for shaping the future course of international events. The author has appropriately described the prevailing controversial legal status of European Union and its current internal crises. The book also sheds light on the growing influence of the Emerging Asian Economies like India and China in the New World Order. The book suggests that for making the world more interactive and participative, there is a need for redefining of western values, culture and norms so that the Asian economies agree to have an environment of mutual trust and cooperation with the western powers. The book is suitable for researchers and scholars in the area of international relations and diplomats. The book can act as a helpful medium in analyzing the limitations of the current Europe -Asia relations and ways of mending these relations in future.

**Tavishi**

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