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# Accessing the Construct and Content Validity of Uncertainty Business Using Sem Approach- An Exploratory Study of Manufacturing Firms

By Anbalagan Krishnan, Ravindran Ramasamy

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**Abstract** - Construct and content validity is necessary to provide purified data for any exploratory research study. The commonly widely used in any exploratory research study is Cronbach Alpha to analyze data validity. However more robust analysis like Confirmatory Factor Analysis (CFA) in Structural Equation Modeling provides more rigorous analysis of model power in relation to construct and content validity. This paper provides insight of this construct and content analysis using the CFA approach by analyzing the Business Environmental Uncertainty research variable. To achieve the intended research objective, the BEU is explored in the context of Malaysian manufacturing sectors. Detailed illustration of the validity, analysis using the CFA approach together with the Cronbach Alpha was provided. The result analysis indicates to improve the model power in relation to the validity any manifest variables below the threshold require to be dropped. Moreover the Cronbach Alpha value is not much affected although some of the manifest variables do not significantly contribute to the research variable. In conclusion, a recommendation was give for future research to test the data validity.

**Keywords** : Convergent Validity , Loading Factor and Variance Explained.

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# Accessing the Construct and Content Validity of Uncertainty Business Using Sem Approach- An Exploratory Study of Manufacturing Firms

Anbalagan Krishnan<sup>α</sup>, Ravindran Ramasamy<sup>Ω</sup>

**Abstract** - Construct and content validity is necessary to provide purified data for any exploratory research study. The commonly widely used in any exploratory research study is Cronbach Alpha to analyze data validity. However more robust analysis like Confirmatory Factor Analysis (CFA) in Structural Equation Modeling provides more rigorous analysis of model power in relation to construct and content validity. This paper provides insight of this construct and content analysis using the CFA approach by analyzing the Business Environmental Uncertainty research variable. To achieve the intended research objective, the BEU is explored in the context of Malaysian manufacturing sectors. Detailed illustration of the validity, analysis using the CFA approach together with the Cronbach Alpha was provided. The result analysis indicates to improve the model power in relation to the validity any manifest variables below the threshold require to be dropped. Moreover the Cronbach Alpha value is not much affected although some of the manifest variables do not significantly contribute to the research variable. In conclusion, a recommendation was give for future research to test the data validity.

**Keywords** : *Convergent Validity , Loading Factor and Variance Explained.*

## I. INTRODUCTION

It is common in exploratory study for the survey instrument to be subject to reliability and validity examination (Collis & Hussey, 1995). Reliability reflects the stability and consistency of an instrument in measuring the concept (Page & Meyer, 2000; U. Sekaran, 1992, , 2003). Numerous exploratory research studies focus on Cronbach alpha to test reliability. This method is commonly used to assess the reliability of each measure. The threshold for Cronbach alpha, is the higher the coefficient alpha values indicate the reliability of measurement instrument, the better. Nunnally and Bernstein (1994) suggested that 0.70 to be an acceptable reliability coefficient level. In a similar view, Sekaran (2000) asserted the Cronbach's alpha measure above 0.70, indicates that the instrument has the internal consistency reliability.

Lately, research studies examine the reliability and validity of survey instruments using more robust

approaches such as SEM technique. Under this technique, data reliability is verified using the Confirmatory Factor Analysis (CFA) approach. The CFA analysis provides standardized loading factor of each indicator where the research variable is quantified from a series of statement known as manifest variable. The standardized loading factor (regression weight) indicates the contribution of each indicator to the respective research latent variable. According to Hair et al., (2006) a good standardized loading factor of each measurement latent variable of which quantified from manifest variable should be above 0.5 and ideally 0.7 or higher. Data validity is also tested using the Variance Extracted (VE) approach. The average percentage of Variance Extracted (VE) is a specific Confirmatory Factor analysis testing the convergent validity. According to Hair et al., (2006) the VE of 0.5 or higher as a rule of thumb is good, suggesting adequate convergence.

The objective of this research study is to explore the construct and content analysis using the SEM approach. To illustrate this research objective, the study focuses on uncertainty of business environment research variable. For this purpose the study concentrates on firms operating in manufacturing sectors in Malaysia. This paper is organized into four main sections - the first section provides literature of business environmental uncertainty. The second section provides methodology to quantify the uncertainty as well as analytical expression to test the validity of uncertainty research variable using the SEM approach. The third section provides descriptive statistics of firms in the sample study. This is followed by result output of construct and content analysis using the SEM approach. This section also includes discussion of the result output. The final section provides the conclusion and future research recommendations.

## II. UNCERTAINTY OF BUSINESS ENVIRONMENT

A general definition of business environmental uncertainty is "an individual's perceived inability to predict (an organization's environment) accurately" because of a "lack of information" or "inability to discriminate between relevant and irrelevant data" (Milliken, 1987). According to prominent researchers in

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management accounting like Chenhall.R.H (2003) and Head (2005), uncertainty is generally described as an information deficit and they define situations in which probabilities cannot be assigned to particular outcomes. Under this circumstances, elements of the environment are very unpredictable, for instance actions of other economic players like competitors, customers, suppliers, and regulators. M.Fleming et al., (2009) asserts that uncertainty makes it difficult for manages to predict the future.

According to Johnson and Scholes (1999), the extent of business environmental uncertainty is viewed as a function of the level of increase in environmental dynamism and complexity. Jabnoun (2003) noted there is a difference between dynamic environment and environmental complexity as explained below:-

- Dynamic environment is typified by change in environmental variables constituting the uncertainty dimensions such as technology, customer needs and tastes, demand and supply conditions, and competition. These changes generate uncertainty for the firm.
- Environmental complexity is summed up by the number and diversity of variables influencing the uncertainty dimensions in the environment.

According to Milliken (1987), perceptions of environmental uncertainty occur when executives are unable to predict future changes in components of the environment or possess an incomplete understanding of the relationship among components of the environment. According to the author there are three categories of uncertainty of business environment:

- Effect uncertainty which is an inability to predict the nature of the effect of a future state of the environment on the organization;
- Response uncertainty which is the inability to predict the likely consequences of a response choice and
- State uncertainty which is the perceived environmental uncertainty. The perceived environmental uncertainty occurs when administrators perceive an organization's environment to be unpredictable.

Research studies have concentrated extensively on the relationship between perceived environmental uncertainty and organizational characteristics such as firm size, strategy, structure, and performance measures (Gordon & V.K.Narayanan, 1984; Gul. & Chia., 1994); for instance, empirical studies by Gordon and Narayanan (1984), Chenhall and Morris (1986) and subsequently Gul and Chia (1994) found that perceived environmental uncertainty is associated with the characteristics of management accounting information. Thus, business environmental uncertainty is an important research topic of management accounting and performance measurement system (Gordon & D.Miller, 1976).

To achieve the research objective of this study, the uncertainty of business environment is explored using Desarbo et al., (2005) model. This model consist of three categories of uncertainty namely, market environment, technological environment and competitive environment as illustrated in the following figure. Using this model, data was collected from Malaysian manufacturing firms and tested for construct and content validity.

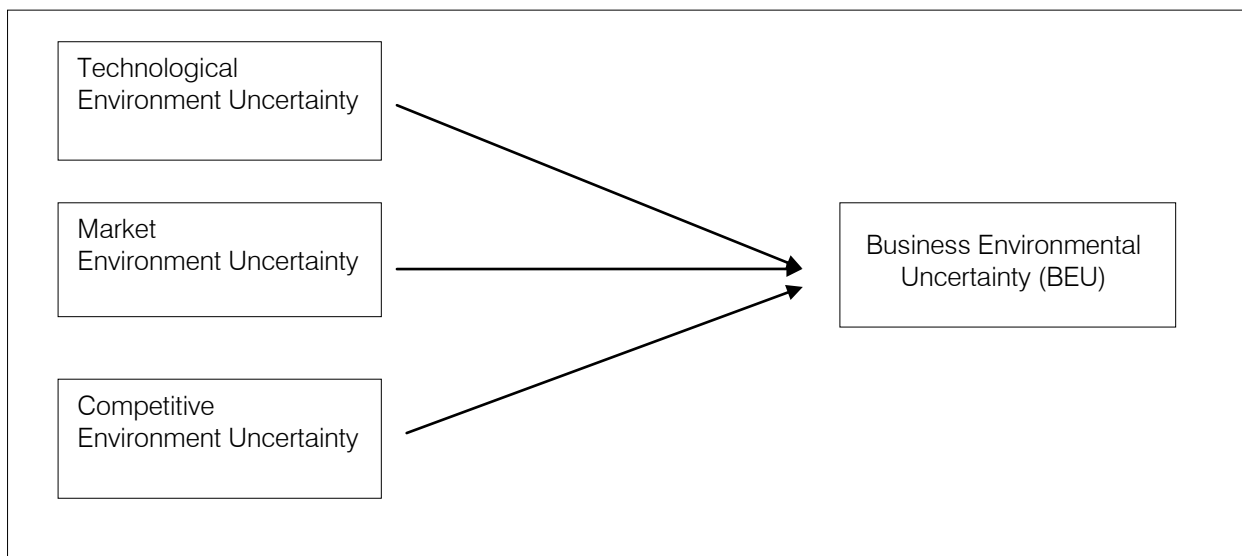


Figure 1.1 : Manifest variable of BEU latent endogenous variables.

### III. UNCERTAINTY QUANTIFICATION

As depicted in figure 1.1 above, the environmental uncertainty survey instrument consists of 19 questions. The statement quantifying the market environment and the competitive environment is retained with some minor modification to the statements to improve understanding and to suit the current business environment. As for the Technological environment, the original instrument consisting of six questions has been reduced to five questions as one of the questions carries a similar meaning. Redundant questions are omitted not to confuse the respondent and also to prevent missing data problems if the majority respondents failed to answer. In replacement to this redundant question, a new question was added addressing obsolete statements. This is necessary as this issue has a significant impact on technological development, particularly in the current business condition. The respondents were asked, on a five-point scale ranging from 1 "Strongly Disagree" to 5 "Strongly agree", to indicate their organization's level of uncertainty in accordance the three categories. The firm environmental uncertainty level is determined based on research methods suggested by Desarbo et al., (2005) and Nimtrakoon and Tayles (2010). As recommended by Desarbo et al., (2005), first the summated mean score of the three environmental uncertainty categories i.e., Market Environment, Technological Environment and Competitive Environment are calculated. Using this summated mean scores the firms' environmental level is determined based on mean score range established in empirical study by Nimtrakoon and Tayles (2010) as follows:

- companies with stable (and low) environmental uncertainty are defined as firms whose average score was less than or equal to 3.5;
- companies with moderate environmental uncertainty are identified as firms whose average score was greater than 3.5, but less than 4.5; and
- companies with high environmental uncertainty are defined as firms whose average score was greater than or equal to 4.5.

The following analytical expression illustrates the methodology determining the firm's uncertainty level of business environment as explained above.

$$\omega_i = \begin{cases} \gamma_1 & \text{if } 0 < \chi_{\eta j} \leq 3.5 \\ \gamma_2 & \text{if } 3.5 < \chi_{\eta j} \leq 4.5 \\ \gamma_3 & \text{if } \text{otherwise} \end{cases} \quad (1)$$

Where:  $\omega_i$  = Firm's uncertainty of business environment  
 $\gamma$  = Level of uncertainty (1 - Stable, 2- Moderate, 3- high)

$\chi$  = Summated Mean Score

$\eta$  = Three uncertainty of environment – Market Environment, Technological Environment and Competitive Environment

$j$  = Respondent 1, ..., K

As explained above, Uncertainty is quantified based on the three categories of environment. In SEM approach, the Business environment uncertainty is classified as endogenous while the other three categories of uncertainty are considered as exogenous. The Uncertainty endogenous quantified from the three exogenous manifest variables are statements in the questionnaire as discussed earlier. The following analytical expression depicts the manifest variables for Uncertainty endogenous latent variable.

Business Environmental Uncertainty manifest variable

$$x_{n...k} = \lambda_{n...k} \xi_{1BEU} + \delta_{n...k} \quad (2)$$

Where

$x_{n...k}$  = Manifest variables in the questionnaire

$\lambda_{n...k}$  = Manifest variables factor loadings

$\xi_{1BEU}$  = Business environmental uncertainty

$\delta_{n...k}$  = Manifest variables indicators error

As illustrated in the above formulae, the manifest variables factor loading or regression weight is calculated for all three categories of exogenous. The identified factor loading of each manifest variable indicates the significance of each manifest variable that quantified the endogenous variables. Any of the manifest variables factor loading below than the threshold level that is below 0.5 is purged to improve the model fit. As discussed earlier, the convergent validity is tested using the Variance Extracted (VE). The Variance Extracted (VE) value is indicated as Total Variance Explained presented together with the standardized manifest loading factors. The following segment provides the details of the firms analyzed followed by the result output of the construct and content analysis.

### IV. UNCERTAINTY VALIDITY ANALYSIS

The target population of this study is Malaysian firms operating in the manufacturing sector. Majority of the respondents were from industry related to manufacturing products representing 50% (126 respondents). Respondents from the Electronic and Electrical products companies represented 24% (60 respondents). This is followed by respondents involved in manufacturing Medical products which consist of 11% (28 respondents).



Table 1.1 : Organization's primary business activity

Business Activity	No of Firms	Percent (%)
Agriculture Products	7	3
Manufacturing Products*	126	50
Electronic and Electrical Products	60	24
Chemical and Petroleum Products	11	4
Infrastructure Products	19	7
Medical Products	28	11
Other Products	2	1
Total	253	100

\*Includes Food and Mineral, Furniture, Iron & Steel Products, Paper, Rubber, Souvenirs, Sport, Textile, Toys, Wood Products.

The respondents' firm ownership structure analysis revealed that out of the 244 firms, 159 firms are Malaysian owned firm which represents 63% and 79 firms consisting of 31% are Foreign owned firms. A very small percentage of firms which is 2% (n= 6 firm)

operates on the basis of joint venture business ownership structure. From the total of 253 firms, 9 (4%) firms failed to indicate their business ownership structure.

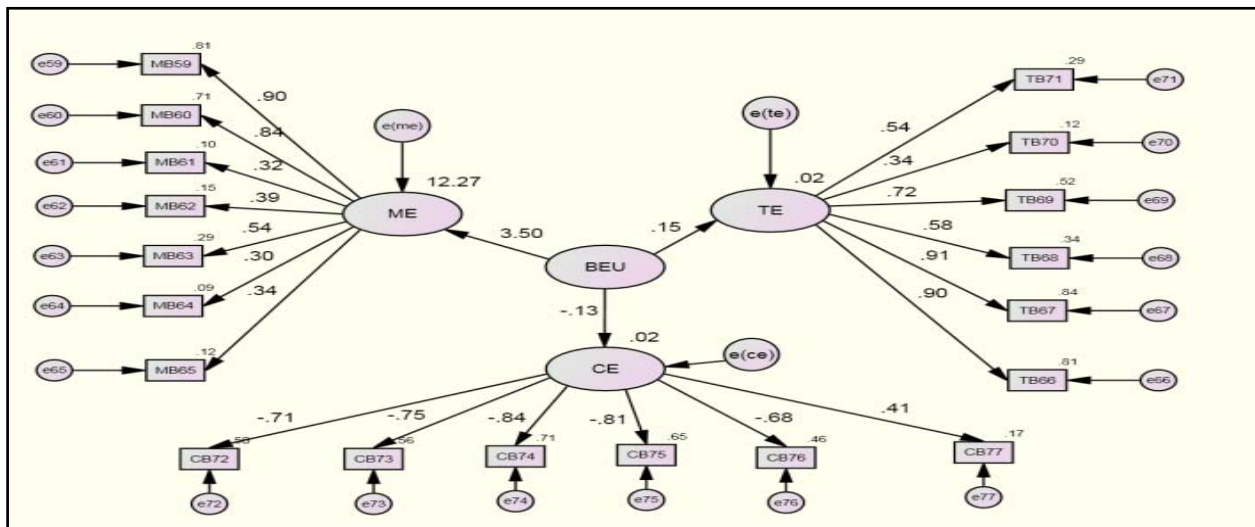


Figure 1.2 : SEM Diagram of Factor Loading for BEU

The standardized loading factor of the three exogenous- Market Environment, Technological Environment and Competitive Environment manifest variables values is provided in Table 1.2. In the table the Total Variance Explained is indicated together the Cronbach Alpha value. The analysis of factor loading presented in the SEM diagram is shown in Figure 1.2. The above SEM diagram depicts the standardized loading factor analysis of all manifest variable prior any modification.

Analysis of standardized loading factor for Business Environmental Uncertainty (BEU) endogenous variables revealed some of the manifest variables values are below the threshold of 0.5. As shown in the table, the Market Environment exogenous variable recorded few manifest variables value below 0.5 compared to other two exogenous categories. The Technological

Environment and Competitive Environment consist of manifest variable one each where the values are below 0.5. Due to the low manifest variable's loading factor, the convergent validity for business environmental uncertainty endogenous is severely affected. The Variance Extracted value 43% is below the recommended value of 50% although the Cronbach Alpha value is above the recommended level which is 0.7. As recommended by Hair et al., (2006) any manifest variable standardized loading factor below 0.5 is required to be eliminated in order to improve VE value of above 50%. Dropping manifest variables with loading factor below 0.5 is also necessary to remove errors in measurement. By removing this error, the researcher will only take the purified data to improve the overall SEM model fit.

*Table 1.2 :* BEU Standardized Regression Weight

Business Environment Uncertainty	Factor Loading
<b>Market Environment</b>	
Product preferences change quite often (MB1)	0.901
Customer look for new products (MB2)	0.844
Price-sensitive (MB3)	0.322
Price is relatively unimportant on some occasions (MB4)	0.391
Product-related needs (MB5)	0.494
Service existing loyal customers continuously (MB6)	0.299
Difficult to predict product changes/customer preference (MB7)	0.343
<b>Technological Environment</b>	
Technology rapidly changing (TB 8)	0.898
Technological changes provide opportunities (TB9)	0.914
Difficult to forecast future technology (TB10)	0.583
Technological breakthrough (TB11)	0.722
Technological development minor (TB12)	0.342
Technology becomes obsolete quickly (TB13)	0.539
<b>Competitive Environment</b>	
Price competition (CP14)	-0.705
Overall competition (CP15)	-0.746
Competitor offers (CP16)	-0.841
Promotion war (CP17)	-0.805
Competitive Move (CP18)	-0.678
Competitors are relatively weak (CP19)	0.408
<b>Total Variance Explained</b>	<b>43%</b>
<b>Cronbach' Alpha</b>	<b>0.83</b>

The following table provides details of manifest variables that need to be purged. As seen in the table, the Market environment exogenous variables, a total of 5 manifest variables were removed. Among the Market Environment manifest variable, retaining the Product-related needs although closer to the loading factor of

0.5 still produce the VE value below 0.5. Thus, this variable was also purged to achieve the acceptable VE value. Under the Technological environment and Competitive environment exogenous variables as mentioned earlier, one each manifest variables are removed.

*Table 1.3 :* BEU Manifest Variables Purged

Manifest Variable	Loading Factor
<b>Market Environment</b>	
Price-sensitive (MB3)	0.322
Price is relatively unimportant on some occasions (MB4)	0.391
Product-related needs (MB5)	0.494
Service existing loyal customers continuously (MB6)	0.299
Difficult to predict product changes/customer preference (MB7)	0.343
<b>Technological Environment</b>	
Technological development minor (TB12)	0.342
<b>Competitive Environment</b>	
Competitors are relatively weak (CP19)	0.408



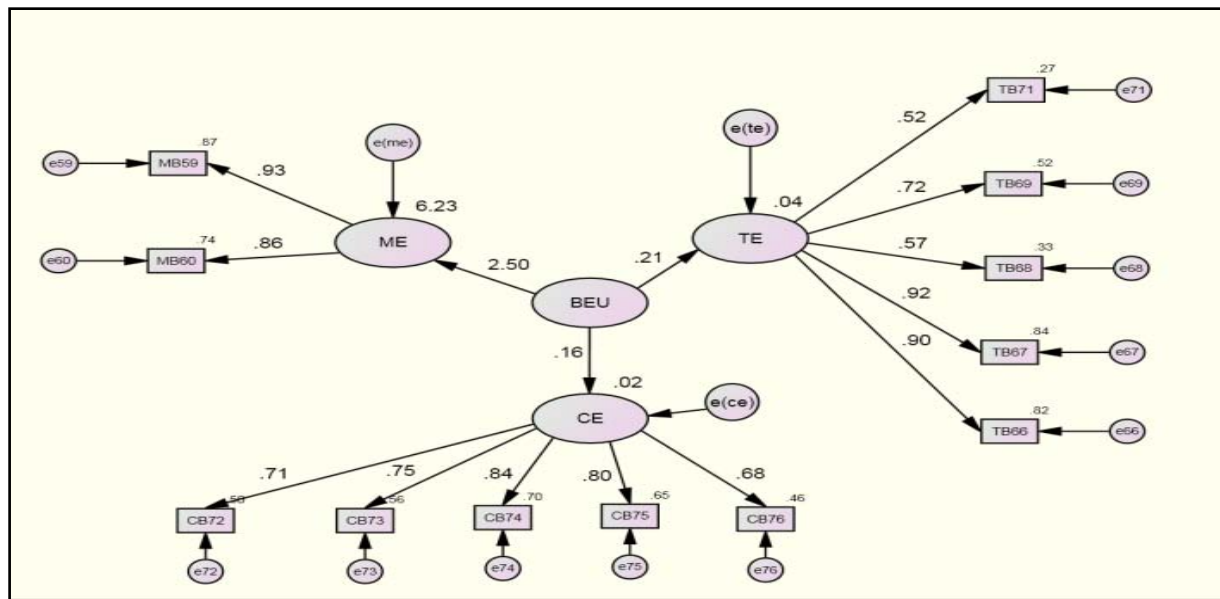


Figure 1.3 : SEM Diagram of Factor Loading for BEU after modification

As seen in the Table 1.4 below, the standardized factor loading of the three exogenous manifest variables are within the range of 0.5 to 0.9 with the highest recorded for Product preferences change quite often (0.932) from Market Environment exogenous variables and the lowest recorded for Technology becomes obsolete quickly (0.521) from Technological Environment exogenous. After removing the standardized loading factor, the overall percentage of Variance extracted (VE) improved from 43% to 58%. Thus the endogenous business environmental uncertainty after the modification provides greater convergent validity of data for further SEM analysis.

After removing the manifest variable with loading factor below 0.5, the Business Environmental Uncertainty endogenous comprised twelve manifest variables. According to Hair et al., (2006) as a rule of thumb, the number of manifest variable per latent variable must be at least three. The SEM diagram as shown in Figure 1.3 above indicates the BEU endogenous after the modification consists of 12 manifest variables above the recommended values. Thus the overall 12 items for Business environmental uncertainty measurement is now qualified for further SEM analysis.

Table 1.4 : BEU Standardized Regression Weight- After Modification

Business Environment Uncertainty	Factor Loading
<b>Market Environment</b>	
Product preferences change quite often(MB59)	0.932
Customer look for new products (MB60)	0.707
<b>Technological Environment</b>	
Technology rapidly changing (TB 66)	0.904
Technological changes provide opportunities (TB67)	0.917
Difficult to forecast future technology (TB68)	0.570
Technological breakthrough (TB69)	0.720
Technology becomes obsolete quickly (TB71)	0.521
<b>Competitive Environment</b>	
Price competition (CP72)	0.707
Overall competition (CP73)	0.750
Competitor offers (CP74)	0.836
Promotion war (CP75)	0.805

Competitive Move (CP76)	0.675
<b>Total Variance Explained</b>	<b>58%</b>
<b>Cronbach' Alpha</b>	<b>0.82</b>

## V. CONCLUSION

A point to note on both analyses before the modification and after the modification, the Cronbach's Alpha coefficient value is well above the recommended level of 0.7. As seen in the table, the value before modification is 0.83 while the value after modification is 0.84. The overall Cronbach's Alpha analysis or even item by item analysis provide indication of the data reliability. However, the test of convergent and construct validity is further improved with SEM approach. One of the major advantages of the CFA approach under the SEM analysis is that it provides the researcher the power of model validity by indicating the Total Variance Explained. In summary the higher standardized factor loading and higher percentage value of VE of the endogenous variables enable the examination of the significance of research variables more precisely and improvement of the data analysis. Thus it is strongly recommended that any future study use the Confirmatory factor analysis together with the Cronbach Alpha to achieve better results to support the research study.

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## International Reserve Holdings in ASEAN5 Economies

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**Keywords** : *International Reserves, ASEAN5 Economies, ARDL Model*

**GJMBR-A Classification** : *FOR Code: 150308, 140303 JEL Code: C31, N15*



INTERNATIONAL RESERVE HOLDINGS IN ASEAN5 ECONOMIES

*Strictly as per the compliance and regulations of:*



# International Reserve Holdings in ASEAN5 Economies

Eliza Nor<sup>a</sup>, M. Azali<sup>Q</sup>, Siong-Hook Law<sup>B</sup>

**Abstract** - This paper examines international reserve holdings in five ASEAN economies during the period of 1970-2005 using the autoregressive distributed lag (ARDL) bounds testing approach proposed by Pesaran, Shin, and Smith (2001). These countries had increased their international reserve holdings after the 1997 Asian financial crisis. The majority of these countries had also experienced consistent current account surplus during the same period. Thus, the present study attempts to investigate the existence of long run relationship between reserve holdings and the current account. The empirical results indicate that current account surplus leads to the rise in international reserve holdings in Indonesia, Malaysia, and Singapore.

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## 1. INTRODUCTION

After the Asian financial crisis in 1997-1998, the five ASEAN countries, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand, had increased their holdings of international reserves. International reserves holdings in ASEAN5 economies had been increasing since in the early 1990s but a sharp rise was observed after the crisis. Among the ASEAN5, Singapore showed the highest international reserve holdings both in terms of US dollars and when reserves are scaled to GDP. This is followed by Malaysia. In 2005, Singapore's international reserves stood at US\$116 billion (104% of GDP) while the international reserves of Malaysia were recorded at US\$70 billion (63% of GDP). In Indonesia, international reserve holdings increased by more than 100% after the crisis from US\$17 billion (9% of GDP) in 1997 to US\$35 billion (18% of GDP) in 2003 and 2004. The Philippines showed the lowest reserves in terms of US dollars (US\$16 billion). International reserves of Thailand rose from US\$29 billion in 1998 to US\$51 billion in 2005, an increase by 76% in seven years.

Besides the high international reserve holdings, these countries also experienced consistent current account surplus (with some exception in the cases of the Philippines and Thailand) at least until 2005. The rise in international reserve holdings during the period with

current account surplus is associated with the problem of savings-investment imbalance in the region since countries with current account surplus have higher savings than investment. The savings-investment gap had widened, especially in Malaysia and Singapore, reflecting the rise in their current account surplus in recent years.

Based on the above discussion, it can be inferred that high international reserve holdings in the ASEAN5 economies coincided with the period with current account surplus. An interesting question that this study attempts to answer is whether current account surplus leads to the rise in international reserve holdings in these countries. Therefore, the main objective of the present study is to empirically analyze the impact of current account imbalance on international reserve holdings in the ASEAN5 economies.

This study differs from the previous studies in two aspects. First, the study utilizes the autoregressive distributed lag (ARDL) bounds testing approach to cointegration to analyze the behavior of international reserve holdings. This methodology has not been widely applied in this area of research. Previous studies on international reserve holdings for individual countries usually employ the Ordinary Least Square (OLS) and the cointegration techniques developed by Engle and Granger (1987), Johansen (1988), and Johansen and Juselius (1990). One of the advantages of the ARDL approach to cointegration over previous cointegration techniques is that the former can be applied to studies with small sample sizes (Mah 2000).

Second, most studies on international reserve holdings for developed and developing countries are based on cross-country or panel data analysis. Only a few studies are conducted for individual countries. Even though there are studies that analyze the behavior of international reserve holdings for individual Asian countries, for instance, China (Huang, 1995; Wei and Zhu, 2000), India (Ramachandran, 2004, 2006; Ramachandran and Srinivasan, 2007; Prabheesh, Malathy, and Madhumati, 2008), Korea (Aizenman, Lee, and Rhee, 2007; Jo, 2007; Ra, 2007), Pakistan (Khan and Ahmed, 2005), and Taiwan (Huang and Shen, 1999), there is still a limited number of studies on international reserve holdings for individual ASEAN countries. Therefore, the present study attempts to fill up this gap in the literature.

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The remainder of this paper is organized as follows. Section II reviews recent empirical literature on international reserve holdings. Section III summarizes the data and methodology to be employed in this study. The major findings are presented in Section IV. The final section concludes the paper.

## II. REVIEW OF EMPIRICAL LITERATURE

This section provides a review of some empirical literature on international reserve holdings for individual countries. There has been an increasing number of studies using time series data since in the 1990s. Individual-country studies have addressed the following issues associated with international reserve holdings: (1) the transactions, precautionary, and mercantilist motives for holding reserves; (2) monetary disequilibrium and reserve holdings; (3) the opportunity cost of holding reserves; (4) the role of reserves as a buffer stock.

For instance, Elbadawi (1990) estimates the model of international reserve holdings for Sudan during 1971-1982 and he discovers that international reserve holdings in Sudan exhibits constant return to scale and the variability measure is positive and significant, reflecting the precautionary motive for holding reserves. A study by Prabheesh, Malathy and Madhumati (2008) for India during 1983-2005 also supports the precautionary motive for holding reserves against the current account and capital account vulnerabilities. Studies by Karfakis (1997) on Greece (during 1976-1992) and Wei and Zhu (2000) on China (during January 1994 to December 1998) suggest that the international reserve holdings in these countries serve the role in the balance of payments adjustment process. These findings also support the precautionary motive for holding reserves. Applying the seasonal error correction model, Huang and Shen (1999) analyze the behavior of international reserve holdings in Taiwan during 1961Q1-1995Q2. Their findings suggest that precautionary motive is not an important determinant of reserve holdings in Taiwan.

Using quarterly data for the period 1985Q1-1997Q4, Badinger (2004) finds strong economies of scale for holding reserves in Austria and he concludes that the transactions motive represents the foreign exchange demand by the private sector.

Aizenman, Rhee, and Lee (2007) analyze the precautionary motive for holding reserves for Korea during 1994-2003 by including variables such as short term external debt and foreign portfolio holdings. The empirical results suggest that the Korean holding of international reserves after the 1997 financial crisis supports the precautionary motive for holding reserves. In contrary, Jo (2007) finds that the Korean holding of international reserves during the period after the crisis is to maintain export competitiveness which supports the mercantilist motive for holding reserves.

Besides the precautionary and mercantilist motives, opportunity cost also affects international reserve holdings in Korea. For instance, Ra (2007) applies the dynamic ordinary least square (DOLS) and Johansen and Juselius (1990) cointegration approach to estimate reserve model for Korea during 1990-2005 and he concludes that the opportunity cost for holding reserves is inversely related to international reserve holdings during the pre-crisis and the whole sample period.

Some studies on international reserve holdings test the theory of monetarist approach to balance of payments by including monetary disequilibrium as an added regressor in reserve equation. For instance, Ford and Huang (1994) examine international reserve holdings in China during 1952-1991 and their empirical results suggest that domestic monetary disequilibrium significantly affects reserve holdings and the monetary authority takes appropriate action to restore reserves to their desired level. Monetary disequilibrium also significantly affects international reserve holdings in Pakistan during 1982Q1-2003Q2 (Khan and Ahmed, 2005).

Following Frenkel and Jovanovic (1981), Cifarelli and Paladino (2006) estimate the model of international reserve holdings based on the buffer stock model using the Johansen cointegration approach for ten Asian and Latin American emerging economies. Their empirical results suggest that high international reserve holdings in these countries is associated with the "fear of floating" and mercantilist motive. Similarly, Ramachandran and Srinivaran (2007) and Ramachandran (2004, 2006) utilize the buffer stock model to analyze the behavior of international reserve holdings for India and they discover that this model predicts well the reserve model for India.

## III. DATA, EMPIRICAL MODEL, AND METHODOLOGICAL ISSUES

### a) Data

This study utilizes annual data covering the period of 1970-2005. Reserves, current account balance, and total external debt are scaled by GDP. This is to allow comparison across different sizes of economy (Cheung and Xing, 2007). Following Edison (2003), export volatility is measured by standard deviation of real export receipts. Data on international reserves (excluding gold), real GDP per capita, imports, exports, and current account balance are obtained from the International Financial Statistics (IMF, 2007) and data on total external debt are collected from World Development Indicators (World Bank, 2007) and Key Indicators of Developing Asian and Pacific Countries (ADB, various issues).

### b) Empirical Model of International Reserve Holdings

Following Frenkel (1974a), international reserve holdings is a function of a scale variable, propensity to

import, and the variability measure. The scale variable is expected to have a direct relationship with international reserve holdings since it is expected that the international reserve holdings should increase with a rise in the volume of international transactions. Marginal propensity to import can have a positive or negative relationship with reserve holdings. A positive relationship indicates that propensity to import acts as a proxy for the openness of an economy (Frenkel, 1974b) while a negative relationship indicates that the variable becomes a proxy for the marginal cost of adjustment (Huang, 1995).

Besides these three explanatory variables, two additional variables are included in the model: current account balance and total external debt. The relationship between international reserves and current account balance is based on the theories presented by Dunn and Mutti (2000), McCauley (2003), and Taniuchi (2006). It has been argued that emerging economies accumulate reserves during the period with current account surplus through foreign exchange market intervention to avoid serious appreciation of their currencies. Specifically, the monetary authorities purchase foreign currencies and sell domestic currency to maintain stable exchange rates. This action would help these countries to retain their export competitiveness. On the other hand, when the current account is in deficit, central banks would sell foreign currencies (purchase domestic currency). This would result in the decline in international reserve holdings.

The inclusion of total external debt in the model is in line with the theories developed by Aizenman, Rhee, and Lee (2004) and Alfaro and Kanczuk (2007). Aizenman and Marion (2004) argue that countries with high cost of tax collections and sovereign risk tend to hold reserves and borrow externally. When output is not stable, external debt can be used to ease consumption. Under the event of default on external debt and thus, no access to external borrowing, international reserves can be used to ease consumption, provided that creditors have no access to country's international reserves.

Aizenman et al. (2004) extends the model on international reserve holdings suggested by Aizenman and Marion (2004) by taking into account the effect of abrupt short term capital reversals that reduces output and leads to financial crisis. International reserves may reduce the impact of crisis and thus improving welfare. The model accounts for the impact of the failure of a country to make external debt repayments on output. Reduction in output, in turn, could increase the probability of recession.

Alfaro and Kanczuk (2007) develop a stochastic equilibrium model of international reserve holdings based on the framework proposed by Eaton and Gersowitz (1980), Arellano (2006), and Aguiar and Gopinath (2006). They incorporate the decision to hold both reserves and debt in their model. They argue that both reserves and debt can be used to smooth

consumption, even though after the country has defaulted.

The relationship between international reserves and external debt can be positive or negative. If the relationship is positive, the latter is a complement for the former. Otherwise, the latter becomes a substitute for the former (Eaton and Gersowitz, 1980).

Based on the theories presented above, the proposed model of international reserve holdings for ASEAN5 economies is developed as follows:

$$\ln R_t = \beta_0 + \beta_1 \ln YCAP_t + \beta_2 \ln PIM_t + \beta_3 \ln XVOL_t + \beta_4 \ln CA_t + \beta_5 \ln DEBT_t + \varepsilon_t \quad (1)$$

Where  $\ln R$  is the ratio of international reserves to GDP;  $\ln YCAP$  is the real GDP per capita (scale variable);  $\ln PIM$  is the average propensity to import (imports/GDP);  $\ln XVOL$  is the variability in real export receipts;  $\ln CA$  is the ratio of current account balance to GDP; and  $\ln DEBT$  is the ratio of total external debt to GDP. All variables are expressed in logarithms.

### c) Methodology

In this study, the following procedures were used. Firstly, stationary tests were performed to identify the order of integration of the variables. These is done since the ARDL bounds test requires that the dependent variable to be  $I(1)$  and the independent variables to be either  $I(0)$  or  $I(1)$ . The following stationary tests were carried out: the Augmented Dickey-Fuller (ADF) test (Dickey and Fuller 1979) and KPSS test (Kwiatkowski, Phillips, Schmidt, and Shin, 1992).

Secondly, the ARDL bounds test developed by Pesaran, Shin, and Smith (2001) was applied to investigate the existence of cointegration relationship between international reserve holdings and its determinants. Following Pesaran et al. (2001), the vector auto-regression (VAR) of order  $p$  of international reserve holdings in the ASEAN5 economies is developed as follows:

$$w_t = \beta + \sum_{i=1}^p \alpha_i x_{t-i} + \varepsilon_t \quad (2)$$

Where  $w_t$  is the vector of dependent variable (the ratio of international reserves to GDP) and  $x_t$  is the vector consisting of both the dependent variable and independent variables (real GDP per capita, propensity to import, export volatility, the ratio of current account balance to GDP, and the ratio of total external debt to GDP).  $\beta$  is a constant term,  $\alpha$  is the vector of parameters of lag  $i$ ,  $t$  is time or trend term, and  $\varepsilon$  is the vector of error terms.

The error correction model of the ARDL model can be expressed as:



$$\Delta w_t = \beta_0 + \beta_1 \tau + \phi_1 w_{t-1} + \phi_2 z_{t-1} + \sum_{i=1}^p \eta_i \Delta w_{t-i} + \sum_{i=0}^p \lambda_i \Delta z_{t-i} + \varepsilon_t \quad (3)$$

The third and the fourth expressions containing  $\theta$  on the right-hand side correspond to the long run relationship. The remaining expressions with the summation sign represent the short-run dynamics of the model, where  $\Delta$  is the first difference operator. We develop the Unrestricted Error Correction model based on the assumptions made by Pesaran et al. (2001) in Case III, that is, unrestricted intercepts and no trends. In this case, it is assumed that  $\beta_0 \neq 0$  and  $\beta_1 = 0$ .

Thus, the unrestricted error correction model (UECM) based on equation (1) is developed as follows:

$$\begin{aligned} \ln \Delta R_t = & \beta_0 + \delta_1 \ln R_{t-1} + \delta_2 \ln YCAP_{t-1} \\ & + \delta_3 \ln PIM_{t-1} + \delta_4 \ln XVOL_{t-1} \\ & + \theta_5 \ln CA_{t-1} + \delta_6 \ln DEBT_{t-1} \\ & + \sum_{k=1}^a \lambda_{1,k} \Delta \ln R_{t-k} + \sum_{k=0}^b \lambda_{2,k} \Delta \ln YCAP_{t-k} \\ & + \sum_{k=0}^c \lambda_{3,k} \Delta \ln PIM_{t-k} + \sum_{k=0}^d \lambda_{4,k} \Delta \ln XVOL_{t-k} \\ & + \sum_{k=0}^e \lambda_{5,k} \Delta \ln CA_{t-k} + \sum_{k=0}^e \lambda_{6,k} \Delta \ln DEBT_{t-k} \\ & + \varepsilon_t \end{aligned} \quad (4)$$

The long run elasticities are calculated by dividing the coefficient of the first lag of the independent variable by the coefficient of the first lag of the dependent variable (Bardsen, 1989). There are three steps in the ARDL bounds test. First, equation (2) is estimated using Ordinary Least Square (OLS). Second, Wald tests are conducted to test for the existence of long run relationship between international reserve holdings and its determinants. This test is performed by imposing restrictions on the long run coefficients of  $\ln R$ ,  $\ln YCAP$ ,  $\ln PIM$ ,  $\ln XVOL$ ,  $\ln CA$ , and  $\ln DEBT$ . The null and alternative hypotheses for equation (2) are constructed as follows:

$$H_0: \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$$

(There is no long run level relationship)

$$H_1: \delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq 0$$

(There is long run level relationship)

The computed F-statistic from the Wald test is compared with the critical values from Pesaran et al. (2001) and Narayan (2005). The lower critical value assumes that the regressors are integrated of order zero or  $I(0)$  while the upper critical value assumes that the regressors are integrated of order one or  $I(1)$ . If the

calculated F-statistic from the Wald test is greater than the upper critical value, the null hypothesis of no long run relationship will be rejected. If the calculated statistic is less than the lower critical value, the null hypothesis will not be rejected. If the calculated value falls within the upper and lower critical values, the result of the test is inconclusive. The selection of model is based on the Hendry's (1991) general to specific approach.

#### IV. DISCUSSION OF FINDINGS

##### a) Stationary Test Results

The results of the ADF and KPSS tests both with and without trend are presented in Table 1. The lag lengths for the ADF and KPSS tests are selected using the Aikake Information Criteria (AIC) and the Newey-West bandwidth, respectively. The results of the tests indicate that the dependent variables ( $\ln R$ ) at level are non-stationary. When the tests are performed at first difference,  $\ln R$  of each country is found to be stationary. On the other hand, some of the independent variables are found to be stationary at level ( $I(0)$ ) while some of them are stationary at first difference ( $I(1)$ ). In short, the dependent variable ( $\ln R$ ) is  $I(1)$  while the dependent variables are either  $I(0)$  or  $I(1)$ .

Table 1 : Stationary Test Results

Countries	Variables	ADF Test		KPSS Test	
		Without Trend	With Trend	Without Trend	With Trend
Indonesia	lnR	-2.5894 (0)	-2.7151 (3)	0.7469 (4)***	0.1284 (12)*
	$\Delta$ lnR	-7.1632 (0)***	-7.1507 (0)***	0.1186 (3)	0.0692 (3)
	lnYCAP	-1.8357 (0)	-1.6083 (1)	0.7003 (5)**	0.1522 (4)**
	$\Delta$ lnYCAP	-4.2539 (0)***	-4.4740 (0)***	0.2592 (2)	0.0614 (1)
	lnPIM	-2.6035 (0)	-2.4747 (0)	0.5183 (4)**	0.0886 (2)
	$\Delta$ lnPIM	-6.2176 (0)***	-6.3073 (0)***	0.1909 (4)	0.0990 (5)
	lnXVOL	-2.9575 (3)*	-3.1817 (3)	0.3392 (4)	0.0900 (2)
	$\Delta$ lnXVOL	-4.7629 (4)***	-4.6808 (4)***	0.0559 (1)	0.0541 (1)
	lnCA	-3.4726 (0)**	-3.6843 (1)**	0.3494 (3)*	0.1265 (2)*
	$\Delta$ lnCA	-6.2626 (1)***	-6.1594 (1)***	0.0574 (3)	0.0568 (3)
	lnDEBT	-1.5970 (0)	-2.0373 (0)	0.4426 (5)*	0.0954 (4)
	$\Delta$ lnDEBT	-5.5772 (0)***	-5.4902 (0)***	0.1002 (0)	0.0994 (0)
Malaysia	lnR	-0.8448 (0)	-3.0273 (1)	0.7191 (4)**	0.1494 (3)**
	$\Delta$ lnR	-5.4116 (0)***	-4.6284 (3)***	0.3083 (17)	0.0479 (3)
	lnYCAP	-1.2830 (0)	-3.9935 (8)**	0.7088 (5)**	0.0760 (4)
	$\Delta$ lnYCAP	-4.8785 (0)***	-4.9762 (0)***	0.1450 (2)	0.0573 (1)
	lnPIM	-1.1162 (0)	-3.2815 (0)*	0.6672 (5)**	0.0919 (2)
	$\Delta$ lnPIM	-6.7491 (0)***	-6.6427 (0)***	0.0741 (3)	0.0742 (3)
	lnXVOL	-2.4267 (0)	-4.0789 (0)**	0.7611 (4)*	0.0679 (2)
	$\Delta$ lnXVOL	-8.7104 (0)***	-8.7890 (0)***	0.0983 (5)	0.0832 (6)
	lnCA	-2.8432 (1)*	-3.1344 (1)	0.2369 (3)	0.1121 (2)
	$\Delta$ lnCA	-5.3593 (0)***	-5.3020 (0)***	0.0772 (3)	0.0350 (2)
	lnDEBT	-2.8438 (4)*	-5.1456 (1)***	0.4369 (5)*	0.1629 (4)**
	$\Delta$ lnDEBT	-4.8104 (1)***	-2.8438 (4)*	0.2899 (9)	0.0646 (5)
The Philippines	lnR	-2.3289 (7)	-1.6614 (1)	0.3539 (4)*	0.1540 (4)**
	$\Delta$ lnR	-4.1801 (1)***	-4.5065 (3)***	0.0874 (2)	0.0888 (2)
	lnYCAP	-1.5139 (2)	-2.5819 (1)	0.4908 (4)**	0.1004 (4)
	$\Delta$ lnYCAP	-3.5720 (1)**	-3.4970 (1)*	0.1300 (2)	0.1299 (2)*
	lnPIM	-0.3981 (1)	-1.7441 (3)	0.6116 (5)**	0.1414 (4)*
	$\Delta$ lnPIM	-7.4357 (0)***	-7.3442 (0)**	0.0971 (1)	0.0808 (1)
	lnXVOL	-2.3405 (0)	-3.1354 (0)	0.3543 (4)*	0.0605 (3)
	$\Delta$ lnXVOL	-6.1865 (1)***	-6.1484 (1)***	0.1421 (2)	0.0714 (3)
	lnCA	-2.3576 (0)	-3.5552 (8)*	0.2803 (4)	0.1295 (3)*
	$\Delta$ lnCA	-5.6565 (1)***	-5.6648 (1)***	0.3190 (13)	0.0517 (3)
	lnDEBT	-1.9695 (1)	-1.7296 (1)	0.4473 (5)*	0.1588 (4)**
	$\Delta$ lnDEBT	-3.5720 (0)**	-3.6962 (0)**	0.1982 (1)	0.0722 (1)
Singapore	lnR	-1.0722 (0)	-3.0143 (3)	0.6739 (5)**	0.1443 (1)*
	$\Delta$ lnR	-6.4146 (0)***	-6.4339 (0)***	0.0568 (3)	0.0483 (3)
	lnYCAP	-2.5184 (0)	-2.0608 (0)	0.7117 (5)**	0.1829 (4)**
	$\Delta$ lnYCAP	-4.9678 (0)***	-5.4095 (1)***	0.4133 (1)*	0.0563 (3)
	lnPIM	-2.2061 (1)	-2.2511 (1)	0.1440 (4)	0.1257 (4)*
	$\Delta$ lnPIM	-6.4658 (0)***	-6.3652 (0)***	0.0894 (1)	0.0834 (1)
	lnXVOL	-2.0599 (0)	-3.5777 (1)**	0.7238 (4)**	0.0559 (2)
	$\Delta$ lnXVOL	-4.3766 (4)***	-4.2830 (4)**	0.1125 (7)	0.0996 (7)
	lnCA	-0.8656 (5)	-4.0348 (0)**	0.6985 (4)**	0.1675 (2)**
	$\Delta$ lnCA	-9.1313 (0)***	-9.9914 (0)***	0.1986 (2)	0.0900 (4)
	lnDEBT	-0.5104 (1)	-3.4085 (8)*	0.6217 (5)**	0.0971 (4)
	$\Delta$ lnDEBT	-4.5197 (0)***	-4.4880 (0)***	0.1015 (0)	0.0774 (1)
Thailand	lnR	-1.5991 (3)	-3.4756 (5)*	0.4502 (5)**	0.1349 (3)*
	$\Delta$ lnR	-3.9509 (0)***	-3.9824 (0)**	0.2009 (4)	0.1023 (4)
	lnYCAP	-0.8808 (1)	-3.2503 (7)*	0.6978 (5)**	0.1039 (4)
	$\Delta$ lnYCAP	-3.3534 (0)**	-3.3489 (0)*	0.1123 (3)	0.0953 (3)
	lnPIM	-0.3187 (1)	-3.3760 (0)*	0.7002 (5)**	0.0799 (3)
	$\Delta$ lnPIM	-8.0132 (0)***	-7.9276 (0)***	0.1078 (4)	0.0620 (4)
	lnXVOL	-2.5199 (0)	-2.9578 (0)	0.6360 (4)**	0.1003 (2)
	$\Delta$ lnXVOL	-5.0097 (2)***	-4.9118 (2)***	0.1225 (3)	0.0436 (2)
	lnCA	-2.5909 (0)	-2.6527 (0)	0.2106 (3)	0.1302 (10)*
	$\Delta$ lnCA	-4.7351 (2)***	-4.6790 (2)***	0.0648 (3)	0.0663 (3)
	lnDEBT	-1.6802 (1)	-1.1560 (1)	0.5342 (5)**	0.1312 (4)*
	$\Delta$ lnDEBT	-3.3324 (0)**	-3.5846 (0)**	0.2231 (4)	0.0942 (3)

1. ADF = augmented Dickey-Fuller; KPSS = Kwiatkowski, Phillips, Schmidt, and Shin
2. Critical values for ADF and KPSS tests are taken from MacKinnon (1991) and Kwiatkowski, Phillips, Schmidt, and Shin (1992), respectively.
3. The null hypothesis for ADF test is that the series is non-stationary while the null hypothesis for the KPSS test is that the series is stationary.
4.  $\ln R$  = ratio of international reserves to GDP, logged;  $\ln YC$  = real GDP per capita, logged;  $\ln PIM$  = average propensity to import (imports/GDP), logged;  $\ln XPV$  = volatility of real export receipts, logged;  $\ln CA$  = ratio of current account balance to GDP, logged;  $\ln EXT D$  = ratio of total external debt to GDP, logged.
5. Figures in parentheses are the lag lengths.  
\*\*\*, \*\*, and \* indicate significant at 1%, 5%, and 10% level respectively.

#### b) ARDL Bounds Test Results

Table 2 presents the results of the UECM for the long run coefficients based on equation (2). The goodness of fit of the models (adjusted R-squared) and the standard error of regression remain superior in all models. The short run coefficients of the UECM results are presented in Table 3. Diagnostic tests such as Breusch-Godfrey serial correlation test, ARCH test, Ramsey RESET specification test, Jacque-Bera normality test, and stability tests (CUSUM and CUSUM of Square tests) are performed to test for the adequacy of the models. All models have passed these tests. The results of diagnostic tests are summarized in the lower panel of Table 2 and in the Appendix.

Table 4 summarizes the results of the ARDL bounds tests based on equation (2). The calculated F-statistics for all five countries are greater than the upper critical values at least at 5% and 10% levels of significance based on Pesaran et al. (2001) and Narayan (2005), respectively. Therefore the null hypothesis of no cointegration can be rejected for all cases and we conclude that there is a long run level relationship between international reserve holdings and its determinants for Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

The long run elasticities calculated based on equation (2) are presented in Table 5. GDP per capita ( $\ln YCAP$ ) is significant and positive in the cases of Indonesia and Thailand. The positive relationship indicates that international reserve holdings rise with the rise in the volume of international transactions.

Propensity to import ( $\ln PIM$ ) is significant in affecting reserve holdings in all sample countries except in the case of Indonesia. The coefficient sign is positive for Malaysia and the Philippines but negative in the cases of Singapore and Thailand. Therefore,  $\ln PIM$  represents the openness of the economy for the first two countries and the variable acts as a marginal cost of adjustment for the last two countries.

The relationship between export volatility and international reserve holdings is positive and significant only in the case of Indonesia. This implies that international Diagnostic tests such as Breusch-Godfrey serial correlation test, ARCH test, Ramsey RESET specification test, Jacque-Bera normality test, and stability tests (CUSUM and CUSUM of Square tests) are

performed to test for the adequacy of the models. All models have passed these tests. The results of diagnostic tests are summarized in the lower panel of Table 2 and in the Appendix.

Cointegration can be rejected for all cases and we conclude that there is a long run level relationship between international reserve holdings and its determinants for Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Reserve holdings rise with an increase in the volatility of export receipts in this country.

Table 2 : Long Run Coefficients of the UECM results Based on Equation (4)

Variable	Indonesia	Malaysia	Philippines	Singapore	Thailand
$\ln R_{t-1}$	(-2.1898) -1.2229***	(-0.4408) -0.9573***	(-1.4424) -1.1027***	(0.3177) -0.6052**	(-2.0436) -0.1525*
$\ln YCAP_{t-1}$	(-4.0165) 0.9284**	(-4.1352) 0.1334	(-4.1347) 2.1489	(-2.5103) -0.0154	(-1.8436) 0.6830*
$\ln PIM_{t-1}$	(2.4470) 0.4991	(0.3111) 0.7429*	(1.3812) 1.8541***	(-0.1076) -0.2856**	(1.7939) -0.7276**
$\ln XVOL_{t-1}$	(1.1606) 0.2357***	(1.9218) 0.0060	(4.7293) 0.1322	(-2.2295) -0.0182	(-2.4968) 0.0049
$\ln CA_{t-1}$	(3.0022) 0.6853***	(0.0647) 0.2614***	(1.2375) 0.0830	(-0.5969) 0.3304***	(0.0996) -0.1170
$\ln DEBT_{t-1}$	(3.2721) 0.2010	(3.9370) -0.0775	(0.4646) -1.2785***	(3.3574) 0.0507	(-1.6733) -0.0664
	(0.7600)	(-0.6501)	(-4.3313)	(0.9053)	(-0.4091)
Adjusted R <sup>2</sup>	0.6255	0.5948	0.6568	0.5940	0.6032
AIC	0.1190	-1.0397	0.2640	-2.7159	-1.5221
Std. error of regression	0.2208	0.1234	0.2374	0.0534	0.0970
F-statistic	4.1436	3.9353	4.6023	4.1215	4.2430
Probability (F statistic)	- 0.0041	0.0046	0.0024	0.0032	0.0027
Diagnostic Tests					
Serial correlation test	1.1752 [0.3395]	2.5919 [0.1102]	0.8293 [0.4543]	0.4653 [0.6367]	2.1512 [0.1509]
ARCH test	0.3353 [0.7179]	0.3188 [0.7296]	1.2901 [0.2911]	0.7360 [0.4881]	0.3770 [0.6894]
Normality test	2.8036 [0.2462]	0.1290 [0.9376]	0.4377 [0.8034]	1.9393 [0.3792]	2.8626 [0.2390]
Ramsey RESET test	1.0885 [0.3145]	2.8330 [0.1130]	1.9510 [0.1745]	0.0513 [0.9502]	0.5078 [0.6118]

1.  $\ln R$  = ratio of international reserves to GDP, logged;  $\ln YCAP$  = real GDP per capita, logged;  $\ln PIM$  = average propensity to import (imports/GDP), logged;  $\ln XVOL$  = volatility of real export receipts, logged;  $\ln CA$  = ratio of current account balance to GDP, logged; and  $\ln DEBT$  = ratio of total external debt to GDP, logged.
  2. Figures in parentheses ( ) and square brackets [ ] are the *t*-statistics and *p*-values, respectively.
  3. Serial correlation test, ARCH test, and Ramsey RESET test are performed at lag two.
- \*\*\*, \*\*, and \* indicate significant at 1%, 5%, and 10% levels, respectively.

Current account balance shows a significant positive impact on international reserve holdings in Indonesia, Malaysia, and Singapore. The positive relationship implies that a rise in the current account surplus leads to a rise in international reserve holdings in these countries. The impact of current account balance on international reserve holdings is highest in Indonesia followed by Singapore and Malaysia. A 1% increase in the current account surplus would result in the rise in international reserve holdings by 0.56%, 0.54% and 0.27% in Indonesia, Singapore, and Malaysia, respectively. These results are consistent with the fact that these countries were experiencing huge current account surplus in recent years.

Table 3 : Short Run Coefficients of the UECM Results Based on Equation (4)

Variable	Indonesia	Malaysia	The Philippines	Singapore	Thailand
$\Delta \ln R_{t-1}$	0.2749 (1.1370)	0.4647** (2.4577)	0.2868 (1.0874)		
$\Delta \ln R_{t-2}$	0.2692 (1.4359)		0.1915 (0.9590)	0.4111* (1.8851)	0.2582 (1.4885)
$\Delta \ln YCAP_t$			8.4343** (2.6870)		
$\Delta \ln YCAP_{t-1}$			-6.8786*** (-3.0537)	0.3222 (0.6022)	-0.5912 (-0.6875)
$\Delta \ln YCAP_{t-2}$	1.6767 (0.5617)	0.8387 (0.9892)		0.6555 (1.3310)	-1.0757 (-1.1739)
$\Delta \ln PIM_t$		0.3914 (1.6840)	2.8458*** (4.4545)	0.5840** (2.1778)	0.2865 (1.4784)
$\Delta \ln PIM_{t-1}$	-0.6127 (-1.4620)	-0.5043* (-1.7538)		-0.1498 (-0.7252)	0.6609** (2.5833)
$\Delta \ln PIM_{t-2}$	-1.2790*** (-3.0423)		-0.8981 (-1.7067)		
$\Delta \ln XVOL_t$	0.0784 (1.0973)	0.1253* (1.9253)	0.0648 (0.6224)		0.0403 (1.0290)
$\Delta \ln XVOL_{t-1}$		0.0517 (0.8245)	-0.2476** (-2.4697)	-0.0646* (-2.0402)	
$\Delta \ln XVOL_{t-2}$		0.0778 (1.2901)			
$\Delta \ln CA_t$	0.2956*** (3.1830)	0.1092** (2.1795)	0.3420** (2.6390)	0.4863*** (3.7741)	
$\Delta \ln CA_{t-1}$	-0.4551** (-2.8044)	-0.1020* (-1.7916)		-0.0886* (-2.0426)	0.0955 (1.6974)
$\Delta \ln CA_{t-2}$	-0.2775** (-2.2608)				
$\Delta \ln DEBT_t$			-1.0426 (-1.5846)	-0.1097 (-1.2318)	
$\Delta \ln DEBT_{t-1}$	0.3230 (0.9458)	0.3005 (1.3821)	1.3289* (1.9200)		-0.3516 (-1.6553)
$\Delta \ln DEBT_{t-2}$	0.8284 (1.5786)				-0.6572** (-2.8988)

- Notes: 1.  $\ln R$  = ratio of international reserves to GDP, logged;  $\ln YCAP$  = real GDP per capita, logged;  $\ln PIM$  = a verage prop ensity to import (imports/GDP), logged;  $\ln XVOL$  = volatility of real export receipts, logged;  $\ln CA$  = ratio of current account balance to GDP, logged; and  $\ln DEBT$  = ratio of total external debt to GDP, logged.  
 2. Figures in parentheses ( ) are t-statistics.  
 \*\*\*, \*\*, and \* indicate significant at 1%, 5%, 10% levels, respectively.

Table 4 : Results of the ARDL Bounds Test Based on Equation (4)

Country	Computed F-Statistic			
Indonesia	4.1940**(*)			
Malaysia	3.9031**(*)			
The Philippines	4.5439**(**)			
Singapore	4.1094**(*)			
Thailand	5.0941***(**)			
Unrestricted Intercept and No Trend	Critical Values			
	Pesaran et al. (2001)		Narayan (2005)	
Significance level	Lower Bound	Upper Bound	Lower Bound	Upper Bound
	(k=5)		(k=5; n=35)	
1%	3.41	4.68	4.26	6.04
5%	2.62	3.79	3.04	4.44
10%	2.26	3.35	2.51	3.76

1. Critical values are taken from Pesaran et al (2001), Table CI(iii) Case III, p. 300, and Narayan (2005), Table in the Appendix, Case III, p. 1988.  
 2. \* outside and inside parenthesis indicate significance levels based on Pesaran et al. (2001) and Narayan (2005), respectively.  
 3. k and n denote the number of regressors and observations, respectively.  
 \*\*\*, \*\*, and \* indicate significant at 1%, 5%, and 10% levels, respectively.

*Table 5* : Long Run Elasticities Based on Equation (4)  
(Dependent Variable: Reserves/GDP (lnR))

	Indonesia	Malaysia	The Philippines	Singapore	Thailand
lnYCAP	0.7591**	0.1393	1.9488	-0.0254	4.4796*
lnPIM	0.4081	0.7761*	1.6814***	-0.4718**	-4.7719**
lnXVOL	0.1928***	0.0062	0.1199	-0.0301	0.0322
lnCA	0.5604***	0.2730***	0.0752	0.5459***	-0.7672
lnDEBT	0.1644	-0.0810	-1.1594***	0.0838	-0.4357

lnYCAP = real GDP per capita, logged; lnPIM is average propensity to import (imports/GDP), logged; lnXVOL = volatility of real export receipts, logged; lnCA = ratio of current account balance to GDP, logged; and lnDEBT = ratio of total external debt to GDP, logged.

\*\*\*, \*\*, and \* indicate significant at 1%, 5%, and 10% levels, respectively.

In the case of the Philippines, the current account recorded deficits since 1987 until 2001, except in 1998. The current account of the Philippines shifted to surplus after 2002 and remained in surplus until, at least, to 2005. However, the surplus totaling to only US\$3 billion during 2003-2005. This surplus was relatively small as compared to the surplus in the rest of sample countries. This fact may explain the insignificant impact of current account balance on reserve holdings in the Philippines.

The insignificance of current account balance in Thailand may be associated with the inverse movement between international reserves and the current account. The ratio of reserves to GDP in Thailand was moving upward (from 26% in 1998 to 30% in 2002-2005) while the ratio of current account balance to GDP was moving downward (from 13% in 1998 to 4% in 2004). Furthermore, the Thailand's current account had shifted to a deficit amounting to US\$7.8 billion in 2005.

International reserve holdings would decline with the rise in the total external debt holdings in the Philippines. In other words, total external debt is a substitute for international reserves in this country. A 1% increase in total external debt would lead to the decline in international reserve holdings by 1.2% in the Philippines. Total external debt is not significant in the rest of the countries.

Total external debt does not have any significant effect on international reserve holdings in the cases of Indonesia, Malaysia, Singapore, and Thailand. Some possible explanation for such findings can be offered. Indonesia was able to reduce its total external debt burden from US\$151 billion (97% of GDP) in 1998-1999 to an average of US\$136 billion (74% of GDP) during 2001-2004. The reduction is mainly due to the reduction in the long term debt of the private sector from US\$55 billion in 1998 to an average of US\$32 billion in 2001-2004 (Asian Development Bank, various issues). The government has taken steps in rescheduling its external debt and also the external debt of the private sector. Under the Paris Club and London Club Agreements, the government was allowed to reschedule its external debt repayments. Besides, the Frankfurt Agreement was signed on the 4th June of 1998 to assist the private sector in resolving its external debt burden

(Kusumaningtuti, 2004).

In the case of Malaysia, there had been a decline in the private sector's long term external debt from US\$18 billion in 2000 to an average of US\$14 billion during 2001-2004 (ADB 2006). There are at least two reasons that could explain the insignificance of total external debt in Singapore. First, the Singaporean government has not taken any external financing since 1996. This may be due to the policy of the government to maintain budget surplus. The government budget has been in consistent surplus since 1988 (ADB various issues). Second, even though the levels of external debt have grown in recent years, Singapore is a net creditor in all trade credit transactions, debt securities, FDI-related loans, and loans to other non-residents (Kapur, 2005).

The short run causality based on equation (2) is presented in Table 6. In the short run, lnYCAP is significant only in the case of the Philippines while lnPIM is significant in all sample countries. lnXVOL is significant in affecting international reserve holdings in the cases of the Philippines and Singapore. lnCA is significant in all of the ASEAN countries except Thailand while lnDEBT debt does not show significant impact on international reserve holdings in the short run except in the case of Thailand.



Table 6: Short Run Causality Based on Equation (4)

	<i>Indonesia</i>	<i>Malaysia</i>	<i>Philippines</i>	<i>Singapore</i>	<i>Thailand</i>
$\Delta \ln YCAP$	0.3155 [0.5826]	0.9786 [0.3373]	5.5498** [0.0157]	0.9798 [0.3956]	1.2033 [0.3245]
$\Delta \ln PIM$	4.6425** [0.0270]	3.6751** [0.0486]	10.013*** [0.0017]	2.9755* [0.0780]	3.7690** [0.0442]
$\Delta \ln XVOL$	1.2041 [0.8981]	1.4650 [0.2616]	3.0543* [0.0771]	4.1624* [0.0572]	1.0588 [0.3179]
$\Delta \ln CA$	6.5017*** [0.0049]	3.7047** [0.0476]	6.9643** [0.0186]	7.1919*** [0.0054]	2.8811 [0.1078]
$\Delta \ln DEBT$	1.9684 [0.1741]	1.9103 [0.1859]	1.9886 [0.1714]	1.5174 [0.2348]	6.3103*** [0.0089]

1.  $\ln YCAP$  is real GDP per capita, logged;  $\ln PIM$  is average propensity to import (imports/GDP), logged;  $\ln XVOL$  is volatility of real export receipts, logged;  $\ln CA$  is the ratio of current account balance to GDP, logged;  $\ln DEBT$  is the ratio of total external debt to GDP, logged.
  2.  $\Delta$  is the first difference operator.
  3. Figures in square brackets [ ] are the p-values.
- \*\*\*, \*\*, and \* indicate significant at 1%, 5%, and 10% levels, respectively.

## V. CONCLUSION

This paper examines the behavior of international reserve holdings in the ASEAN5 economies, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand, during the period of 1970-2005. The ARDL bounds testing approach developed by Pesaran et al. (2001) is utilized to test for the existence of cointegration relationship between international reserve holdings and its determinants (GDP per capita, average propensity to import, export volatility, current account balance/GDP, and total external debt/GDP). The empirical results indicate that there is a long run relationship between international reserve holdings and its determinants in the five ASEAN economies.

An important conclusion can be drawn from the empirical findings is that current account balance is significant and positively related to international reserve holdings in Indonesia, Malaysia, and Singapore. In other words, current account surplus leads to the rise in international reserve holdings in these countries.

Current account surplus is the excess savings by the private sector. Therefore, it is expected that the private sector will use these savings to finance their investment. However, due to the less developed financial markets in the region, the private sector may have limited ability to transform their savings into investment. As a result, the public sector acts as an intermediary for the private sector to recycle the savings into investment. In particular, the public sector has transformed these savings into investment in foreign currency assets in the form of the build up of international reserves (Genberg, McCauley, Park, and Persaud, 2005, p. 13).

The build up of reserves represents the investment in foreign currency assets, especially the US dollar denominated assets, by central banks. This is because nearly 70% of international reserves are denominated in the US dollars (World Bank, 2005;

Genberg et al., 2005, p. 30). These reserves are usually invested in high liquidity and low return assets such as the US treasury bills and bonds (Oh, Park, Park, and Yang, 2003; World Bank 2005). Such investment of reserves represents capital outflows from East Asia to the US. These outflows of savings could be a loss of opportunities to these countries since the returns on reserves may be lower than the returns on alternative investments at home. Therefore part of reserves may be used to finance investment at home such as on health, education, and infrastructure. Such investment may minimize the savings-investment imbalance and promote long term economic growth in these countries.

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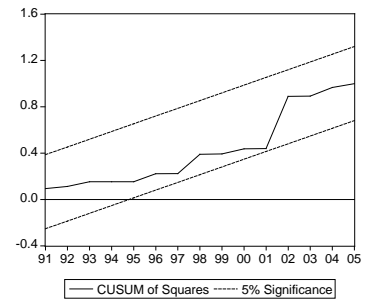
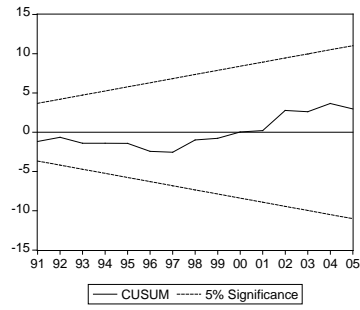
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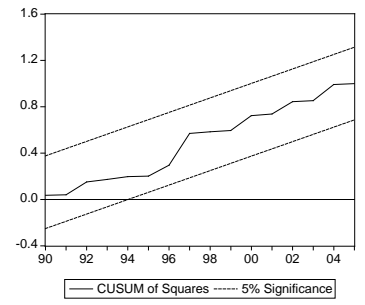
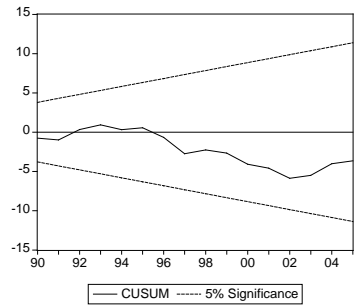
## APPENDIX

## Stability tests

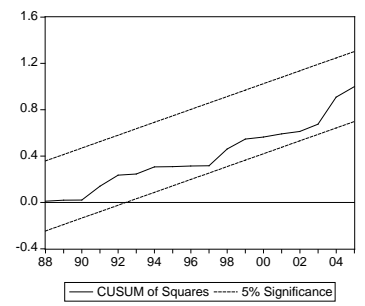
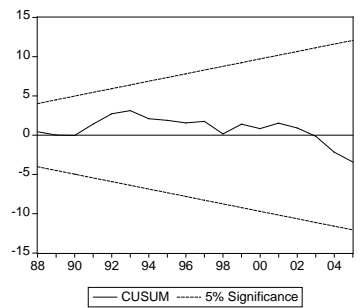
Indonesia



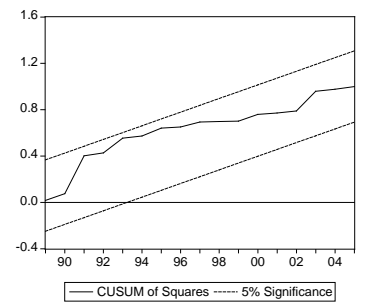
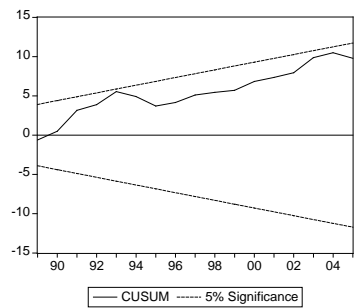
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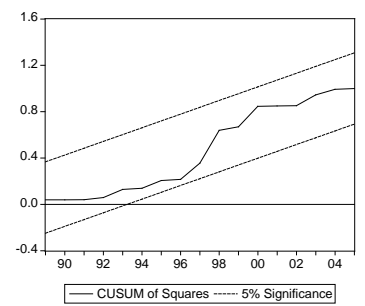
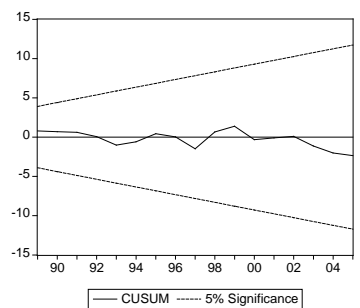
The Philippines



Singapore



Thailand



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# Teachers' Perception of Principals' Leadership Effectiveness in Public and Private secondary Schools in Ondo State

By DR. ALIMI, Olatunji. S, ALABI, Festus. O, DR. G.B. Ehinola

*Adekunle Ajasin University Akungba -Akoko.*

**Abstract** - The study investigated Teachers' Perception of Principals' Leadership effectiveness in the important salient aspects of school management: Pedagogical skill, Administrative skill and community relation skills effectiveness. Three hundred and sixty (360) teachers were selected from 10 public and 10 private secondary schools in Ondo State on the basis of proportionate stratification to reflect the varying degrees of their proprietorship, academic qualifications and local government areas. The instrument for data collection was a 30-item questionnaire tagged, Teachers' Perception of Principals' Leadership Effectiveness Questionnaire (TPPLEQ). Three hypotheses were formulated and tested for using t-test statistical tool. The results showed that there is a significant difference in the teachers' perception of principals' leadership effectiveness in public and private secondary schools, with the principals of public secondary schools having low level of leadership effectiveness in pedagogical and community relation skills effectiveness, but high administrative skill effectiveness while the reverse is the case in private secondary schools. The paper finally recommended that since the principals of public secondary schools are perceived to be less effective than principals of private secondary schools in school leadership, appointment as principal should not be based on seniority alone but also on capability as a change agent to influence others through collaborative problem solving strategies with students, staff, community and stakeholders.

**Keywords** : Leadership effectiveness, Accounting officer, Pedagogical skill, Administrative skill, Community relation skill.

**GJMBR-B Classification** : FOR Code: 150311, 150305 JEL Code: M12



*Strictly as per the compliance and regulations of:*



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**Keywords** : Leadership effectiveness, Accounting officer, Pedagogical skill, Administrative skill, Community relation skill.

## I. INTRODUCTION

The notion of principals' leadership effectiveness has come to prominence in educational literature within the last three decades. It is increasingly recognized that the quality of leadership in any organization, school or non-school to a large extent affects the success of the organization (Ukeje, Akabogu and Ndu, 1992).

According to Ibukun (2004), leadership is the art of influencing others to work enthusiastically towards the achievement of organizational goals. Building on this

definition, the function of organizational leadership can be said to be a relationship of influence on relevant others in and out of an organization towards the achievement of the organizational goals. This is because the attainment of organizational goal is a function of the cumulative inter play of the forces (internal and external) influencing an organization. An effective leader therefore is one who diligently influences these forces to achieve the specified goals of the organization.

The concept of principals' leadership effectiveness in Nigerian secondary schools is often used to express the overall school effectiveness in relation to the attainment of both normative and summative values in students as spelt out in the National Policy on Education (FGN, 2004). The school principal is the accounting officer of the school who is either blamed or praised depending on the degree of his effectiveness in influencing the relevant others in and outside school to enhance teaching and learning. However, while much of the existing literature on principals' leadership effectiveness in Nigerian secondary schools is often evaluated in relation to quantifiable measure of outcomes such as the Junior Secondary School Examination (JSSCE) or Senior Secondary School Examination (SSCE), perhaps because such normative outcomes as character development and patriotism cannot be easily measured, there is a less effort by educationist on investigating the principals' leadership effectiveness in both public and private secondary schools from the angle of teachers who themselves are, according to Silva, Gimbert and Nolan in Pounder (2006) leaders who can "navigate the structures of schools, nurture relationships, model professional growth, encourage change and challenge the status quo". pg 22. In this era of technological advancement, diffused and multiple cultural goals, it is believed that principals are important change agents who must lead their schools to success through collaborative efforts with students, staff and the school community.

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## II. STATEMENT OF THE PROBLEM

The poor performance of candidates in English Language and Mathematics in SSCE in recent times despite the importance attached to the two subjects as core subjects in the Nigerian Secondary School. Curriculum has posed serious concern to Students, Parents, Governments and even Private Investors. Government is particularly worried that many public secondary schools find it difficult to have candidates to register for WAEC and NECO in Ondo State despite her huge investment on education. The situation is more disturbing as the complaints roar that majority of parents, even some principals of public Secondary Schools prefer to send their children \ wards to private schools.

This study therefore seeks to examine teachers' perception of principals' leadership effectiveness in selected public and private secondary schools in Ondo State with regard to the pedagogical skills practiced, Administrative skills exercised, and community relations skill employed. This is because, as Ibukun (2004) opines, the principal is the leader and chief executive of his school who is expected to perform certain professional and administrative roles in order to ensure proper teaching and learning. Be it big or small, public or private, it is the leader who usually provides direction towards goals attainment (Robbins and Judges, 2007).

Unfortunately, Principals competences and authorities as the administrative, technical and pedagogical head of the school has become a matter of concern in recent years as there are increasing public outcry on accountability.

## III. RESEARCH HYPOTHESES

1. There is no significant difference in teachers' perception of the pedagogical skill effectiveness of

the principals of public and private secondary schools in Ondo State.

2. There is no significant difference in teachers' perception of the administrative skill effectiveness of the principals of public and private secondary schools in Ondo State
3. There is no significant difference in the community relation skill effectiveness of the principals of public and private secondary schools in Ondo State.

## IV. METHODOLOGY

### a) Design

This study specifically adopted the survey method of descriptive research design. The population consisted all teachers of the 298 re-articulated public secondary schools and 500 Government approved private secondary schools in Ondo State.

### b) Sample and Sampling Technique

However, samples for the study were 18 public and 18 private secondary schools selected on the basis of proportional stratification with each Local Government Area represented by one public and one private secondary schools. 10 teachers were randomly selected from each of the 36 sampled schools.

### c) Instrumentation

The instrument for data collection was a self-constructed instrument titled: "Teachers perception of the Principals' Leadership Effectiveness Questionnaire" (TPPLEQ). The instrument was validated and used with a reliability index of  $r = 0.78$ . Descriptive statistics of frequencies and percentages were used to analyze the demographic data while t-test was used to determine the significance of the results.

## V. RESULT

### a) Demographic Information

*Table 1* : Frequency and Percentage Analyses of Respondents' Academic Qualification

Qualification	Public Secondary Schools		Private Secondary Schools	
	Freq.	%Freq.	Freq.	%Freq.
SSCE/OND	0	0	28	16
NCE	72	40	98	54
HND/PGDE/BA/B.ED/B.Sc.	90	50	48	27
MA/M.SC/M.ED.	18	10	6	3
Total	180	100%	180	100%

Source: Fieldwork, 2011.

Of the total 180 respondents from public secondary schools, 72 respondents representing 40% were NCE graduates, 90 respondents representing 50% were HND/ PGDE / BA / BED/ B.Sc. graduates 18 respondents representing 10% were MA /MSC or M.ED. Post graduates while none was either OND, GCE, WASC or NECO certificate holders. However, in the Private Secondary Schools, of the total 180

respondents, 28 respondents representing 16% were either OND, WASC, GCE or NECO certificate holders, 98 respondents representing 54% were holders of NCE, 48 respondents representing 27% were holders of HND PGDE /BA /B.ED or B.Sc. degree certificate while the remaining 6 respondents representing 3% were Masters degree graduates in either science, Arts or Education. This is also illustrated by figure 1.



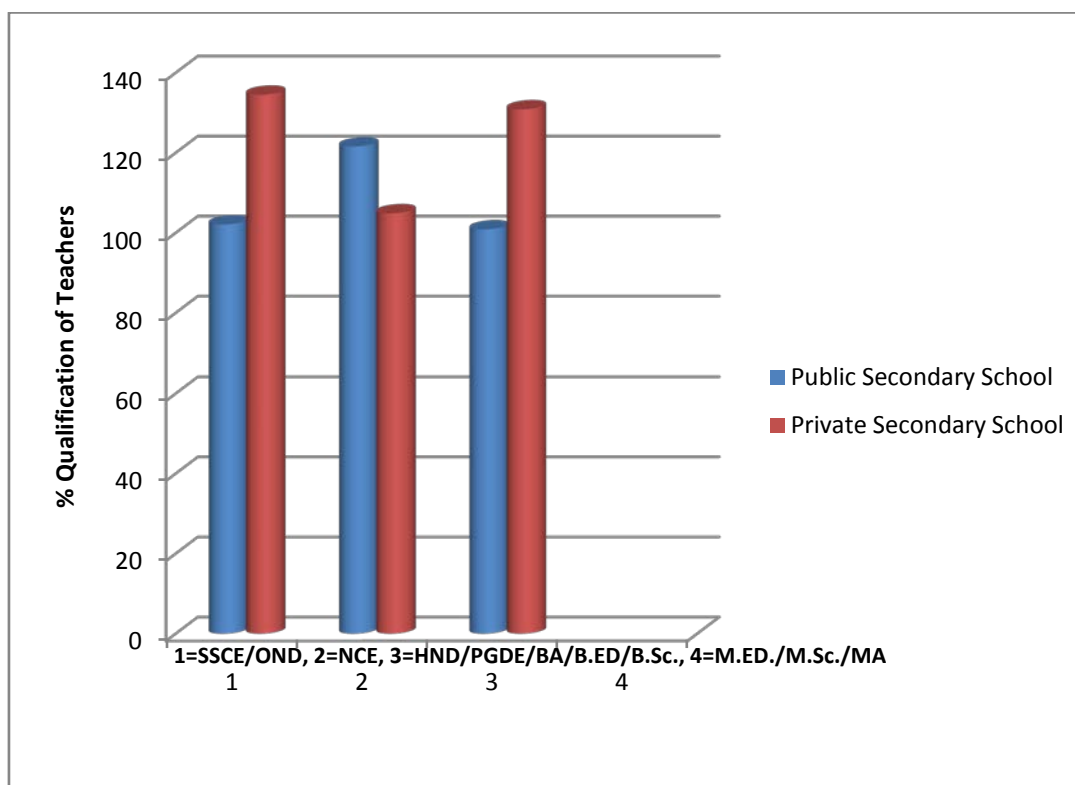


Figure 1 : Histogram Showing Respondents Distribution by Academic Qualifications

Source : Derived from Table 1

b) Testing of Hypotheses

*Hypothesis One* : There is no significant difference in teachers' perception of the pedagogical

skill effectiveness of the principals of public and private secondary schools in Ondo State.

Table 2 : Summary of Teachers' Perception of Principals' Pedagogical Skill Effectiveness of the Principals of Public and Private Secondary Schools in Ondo State

Source	N	Mean	SD	df	t-cal	t-val	Sig.
Public Sec. Sch.	180	102.09	40.81	358	0.12	.128	P>.05
Private Sec. Sch.	180	134.53	111.57				

\*Significant

Table 1 shows that t- cal is greater than critical value, implying that hypothesis 1 which states that there is no significant difference in the teachers' perception of the principals pedagogical skill effectiveness of the public and private secondary school principals is

rejected.(t (358) = 0.12 ; p> .05).

*Hypothesis 2* : There is no significant difference in teachers' perception of the principals administrative skill effectiveness of the public and private secondary school principals

Table 3 : Summary of Teachers' Perception of the Principals Administrative Skill Effectiveness of the Principals of Public and Private Secondary Schools in Ondo State

Source	N	Mean	SD	df	t-cal	t-val	Sig.
Public Sec. Sch.	180	121.57	81.15	358	.879	.383	P>.05
Private Sec. Sch.	180	104.82	59.77				

\*Significant

From table 3,  $t$ -cal is greater than critical value, hence hypothesis two which states that there is no significant difference in the teachers' perception of the Administrative skill effectiveness of the Principals of Public and Private Secondary Schools is rejected. ( $t(358) = .879$ ;  $p > .05$ ).

*Hypothesis 3*: There is no significant difference in teachers Perception of Principals community relation skill effectiveness of the Principals of Public and Private Secondary Schools.

**Table 4:** Summary of Teachers' Perception of the Principals Community Relation Skill Effectiveness of the Principals of Public and Private Secondary Schools in Ondo State

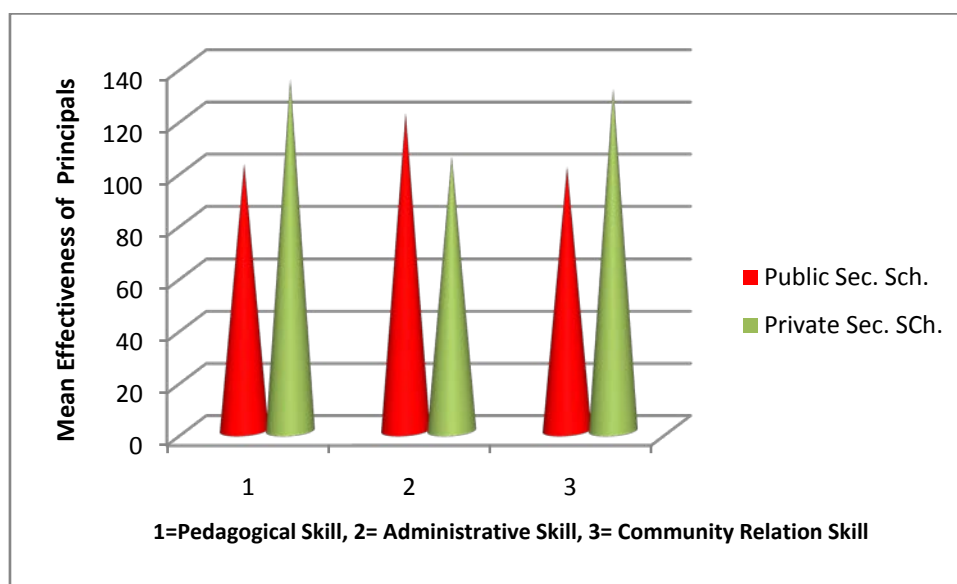
Source	N	Mean	SD	df	t-cal	t-val	Sig.
Public Sec. Sch.	180	100.85	53.19	358	-.176	.247	P<.05
Private Sec. Sch.	180	130.85	100.93				

Not Significant

Table 3 shows that  $t$ -cal. is greater than critical value, implying a rejection of the hypothesis which says that there is no significant difference in the teachers' perception of the community relation skill effectiveness of the Public and Private Secondary School Principals.

( $t(358) = -.176$ ;  $p < .05$ ).

Figure 2 represents the mean outcome of the tested hypotheses in the three areas of Principals' effectiveness in both public and private secondary schools in Ondo State.



**Figure 2:** Mean of Principals' Skill Effectiveness in the Tested Hypotheses  
Source: Derived from Tables 2, 3, and 4

## VI. DISCUSSION

The study showed that there is a significant difference between teachers perception of the pedagogical Skill effectiveness of the principals of Public and private Secondary Schools in Ondo State. This finding is consistent with previous research (Hall and Lord, 1995). However, the finding showed that teachers of Private Secondary Schools have high Perception of their principals' Pedagogical Skill effectiveness than teachers of public schools. This situation is surprising because the teachers in public secondary schools as revealed in table 2, and by

extension their principals are better trained and more qualified for pedagogy than those in private secondary schools. Adegoke (2003) opines that an effective principal is a definer of reality in his secondary schools. The principal must have the good opportunity to use his professional ingenuity, resource-fullness, creativity and association in facing challenges and forging ahead through exemplary performance and systematic dialogue with authorities and subordinates to create and sustain the required enabling environment that will engender efficacious secondary school administration.

One major reason could be adduced to the higher rating of the private secondary school principals' pedagogical skill effectiveness despite the latter's evidence of superior professional knowledge. One reason could be due to the differing organizational culture in Public and Private Secondary Schools. While public secondary schools are established and funded by the government and are not meant to maximize profit, Private Secondary Schools are established and funded by the private individual or groups and are quite often than not, aimed at maximizing profits through quality improvement of the classroom, teaching and learning.

A second reason could be the general laxity and lack of commitment to any governmental project by Nigerians, which has led the government to deregulate the education industry up to the university level. The study also revealed that there is no significant difference in the teachers' perception of the Administrative skill effectiveness of the principals of public and private secondary schools. While teachers of public secondary schools perceived their principals as being more position conscious giving more attention to official mails, delegating responsibilities to teachers and attending meetings. The principals of private secondary schools are perceived by their teachers as being more dictatorial, emphasizing compliances to established rules and high productivity. This is supported by the claim of Atkinson (2005) that the success of the school for the principal to carry out his duties depends so much on his competence as a good administrator.

The result of the third hypothesis showed that there is a significant difference in the teachers' perception of the community relation skills of the principals of public and private secondary schools in Ondo State. The principals of public secondary schools were perceived to be less adequate in their community relation skill effectiveness.

Generally, it therefore, appears that the public secondary school principal is driven by the ancient Yoruba adage which says that "Oga ta, Oga o ta,owoalaaru a pe", meaning that the servant must be paid his complete wage regardless of the masters' sales, whereas in private secondary schools, productivity determines the pay.

## VII. RECOMMENDATIONS

The following recommendations were made based on the findings of this study to improve the leadership effectiveness of the principals of public and private secondary schools in Ondo State

1. Appointment of principals in schools should not be based on seniority or experience on the job alone but also on capability as a change agent to influence others through collaborative problem solving with students, staff, community and stake holders.

2. The performance of students in external examinations should be a major factor for consideration in the recognition and promotion of principals.
3. Principals should always state and discuss the mission of their schools, with the stakeholders at the beginning of each academic year and collaborate with staff and even students to prioritize the set plans for implementation.
4. Principals should be more concern about classroom monitoring in order to enhance teaching and learning.

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# University Management: Resource Managerial Approach to Nutritional Intake of Undergraduates of Adekunle Ajasin University, Akunga - Akoko, Nigeria.

By Dr. C.A. Akinfolarin, Dr. G.O. Ayenigbara

*Department Of Educational Management Adekunle Ajasin University, Akungba - Akoko.*

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**Keywords** : Nutrition, Marasmus, Obesity, Nutrient deficiency disorder, Vitamins.

**GJMBR-A Classification** : FOR Code: 150305, 150311, 150312, JEL Code: M12, D23, Q12



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DR. C.A. AKINFOLARIN<sup>α</sup>, DR. G.O. AYENIGBARA<sup>Ω</sup>

December 2011

29

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## I. INTRODUCTION

The University management could be defined as representatives of entire body of the institution of learning. This body includes the visitor (Governor or President of the Nation), the Chancellor, Vice-Chancellor, Deputy Vice Chancellor, Registrar, Bursar, University Librarian, the Director of works and the Director of health services.

Individual constituting this body called "Management" has its offices and definite roles played in the development of the institution. Looking at the organizational structure, there are important posts which deals directly with the students welfare. These are the Deans of faculties, Dean of the students' affair, director of health services and other relevant organizations such as the Heads of Departments, staff advisers and

lecturers at large.

The Deans of faculties are primarily concerned with the administration of the faculty and probably see to the welfare and academic progress of the students within their faculty and department. The Dean Students affair is primarily in-charge of students formal and informal activities and probably sees to the welfare of these students. It was observed that students' welfare is limited to some important needs such as provision of partial accommodation, extra curricular activities such as sports excursion and other social devices. Farant (1964) was of the opinion that a total child ought to be taken care of mentally, socially, physically, emotionally and spiritually. Maslow (1970) emphasized the needs of the individuals as physiological needs among others.

The university management seems to neglect what a total child is, concentration is only based on the mental aspect of the student forgetting that a well fed student will be able to carry out all the physical, mental, emotional and spiritual activities effectively. In the past early 60's to late 80's, the university management was observed to have treated the students then under a conducive and cultured environment, with good accommodation spaces, good dinning halls with balanced diets. Laundry services were also rendered at a meager amount. These services seem not to be rendered to the present day students. Students now struggle to get accommodation within and around the university town. These students were observed to leave a reckless life, they engage in anti-social activities such as stealing, cultism, adulterous acts and other criminal activities. The students were observed to be spending money on junks for survival this seems to be the order of the day, just to keep the body and the soul.

The basic university culture of looking good, decent and forming good eating habits seem not to be inculcated into these students. The health centre is another organ of the school environment where students can be helped especially when it comes to feeding. The nutrition unit of the health centre is probably not functioning. Some students may be sick probably because they lack a particular food nutrient, but on

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getting to the clinic, students were observed to be diagnosed by the medical doctor and drugs were administered without finding out the feeding position of these students. Lucas and Gilles (2003) Identified errors of diagnosis as a result of lack or limited facilities, standard diagnostic criteria, poor laboratory services and health personnel. This as it may be, students feeding habits were observed not to be adequate and what they eat were injurious to their body system.

The management on the other hand could be of assistance to the students through the following management principle of planning, organizing, directing, controlling, coordinating, evaluating and staffing. The management through the visitor can plan for students by making bursary available so as to boost their financial stand, seminars or workshops could be organized and directed through the students affairs, faculties and departments. Students eating habit can be controlled if management provide an appropriate place where selling and buying of raw and prepared food could take place. The student's health can be evaluated through their academic performance. Appropriate staffing is very important, it was observed that staff members that ought to take care of students were not appointed in the hostels and the health care centre where a nutritionist ought to be on ground to assist the students, and also to give advice to the food vendors on the appropriate food items to prepare for sale.

## II. ADMINISTRATIVE RESPONSIBILITIES OF THE STUDENTS AFFAIRS OFFICE

The student's affairs office deals directly with the student's welfare. This office ought to work and be linked up directly with the office of the Vice-Chancellor for effectiveness and coordination. The Students Union representatives suppose to be linked to the student's affairs for consultation and necessary advice. Students are probably not given talk on their nutritional needs, even during orientation. Instead, they are usually warned against some ill practices such as exam-malpractices, fighting, stealing and other vices.

## III. QUALITIES OF DEAN STUDENT'S AFFAIRS

- He/she must be a lecturer within the university system.
- He/she must understand psychology of human behavior especially student.
- He/she must be firm and tolerant
- He/she must be accessible to the students
- He/she must always be ready to assist the students if need arises.

He/she must recognize any informal group that are likely to influence the system negatively or otherwise.

## IV. THE NEED FOR NUTRITION

Nutrition could be defined as the study and the uses of foods by the body system for growth, repair, and regulation of body temperature. Majority of the University undergraduates are still growing therefore need to replace the worn out tissues because they were very agile and because of the academic activities and rigors of trekking far distance due to non residential practices by the university authority. Where accommodation are provided within the campus, there was the problem of over crowded which was likely to cause fatigue hence the health of these students were observed to be hamper with because all the necessary and correct food nutrients were not eaten by these students. Aina (2009) observed the increase in chronic diseases such as diabetes heart diseases and obesity as a result and reflects of the complex interactions of biological, personal behavior and environment University students who were mostly adolescence, during this period grow very fast, physical changes usually affect the body's nutritional needs, while changes in ones lifestyle may affect eating habits and food choice.

Duyff (2002) stated that nutritional health during adolescence is important for supporting the growing body and for preventing future health problems. Contento (1995) and Birch (1999) were of the opinion that people's food choice could be influenced by biologically determined behavioral predispositions of liking and disliking experience with food through associative conditioning; both physically and socially, personal factors such as beliefs, attitude knowledge and social norms and environmental factors. All of these were believed to interact with one another.

The nutrients that are very essential for these students could be grouped into three namely

- a. Body building food
- b. Energy giving food
- c. Protective food.

The body building foods are protein which could be first class or second class protein. The first class proteins are usually animal source for example meat and eggs, milk and other animal products. Second class proteins are of vegetable origin such as beans, pulses and nuts. The energy giving food are mainly carbohydrates and fats, these include tubers, cereals and fruits like bread fruit and plantain. In fact these are in form of margarine, palm oil, groundnut oil and others.

The protective food consists of vitamins, minerals and water. These nutrients are usually found in different food items but in a small portion, for example iron is found in liver, kidney, meat, eggs. Calcium is found in bones and bone marrow. Water is most present in all fresh food. Vitamins are also present in all food stuffs examples are vitamin A in palm oil vitamin C in citrus fruits and others. Monica and Bennett (1978)

stated that food provides the body with materials which are needed for the following:

1. For the production of heat.
2. For the regulation of body processes.
3. For growth and repair and reproduction.
4. In the protection of the body against disease.
5. To provide the minerals required by the body for cells, body fluids and bones.
6. To keep a proper water balance.

If the above nutrients are not taken in the right proportion and utilized by exercising the body and going about different activities there is likely hood of developing nutrient deficiency disorders, sight disorder, nerves disorder and other minor ailment associated with malnutrition that are commonly found among students.

The aim of this paper is to identify the role of management staff and other resources that could be of help in nutritional intake of students in A.A.U.A. The specific questions for this study are as follows:

1. What are the key roles of management members in appropriate nutritional intake of A.A.U.A student?

*Table1* : Key roles of management staff in nutritional intake of A.A.U.A students.

a. Is bursary made available to students?	f	%	F	%
	Yes		No	
	136	68	64	32
b. Is catering services made available to students in A.A.U.A?	142	71	58	29
c. Are seminars/workshops organized to create awareness on appropriate nutritional intake of A.A.U.A students?	84	42	116	58
Is portable water made available for students in A.A.U.A?	175	88	25	12

*Table 2* : Likely Problems hampering nutritional intake of A.A.U.A Students.

a. Do A.A.U.A Students have money to buy required food nutrients for optimum health?	Yes		No	
	F	%	F	%
	96	48	104	52
b. Are good food items appropriate for optimum health available for students in A.A.U.A?	82	41	118	59
c. Do you prepare your own food at home?	66	33	134	67
d. Do you buy meals outside?	128	64	72	36

2. What are the problems hampering appropriate nutritional intake of A.A.U.A students?
3. What are the roles of the director of health centre in handling health problems due to the inappropriate nutritional intake of A.A.U.A students?

## V. METHODOLOGY

The study is designed to find out the roles of management members on the nutritional intake of A.A.U.A students. Survey design was used for this study and the population of this study consists of all A.A.U.A students. In all, two hundred (200) students were sampled and randomly selected, comprising of 25 males and 25 females from each faculty (Arts, Education, Law and Social Sciences).

Questionnaire was developed by the researcher in relation to the objectives of the study. The data collected were presented in tables. Frequency counts and simple percentage was used to analyze the findings.

*Table3* : The roles of director Health centre A.A.U.A

a. Do medical doctors ask questions about your eating habits?	YES			NO
	F	%	F	%
	60	30	140	70
b. Do you go for medical check up?	25	12	175	88
c. Are only drugs prescribed for your ailment?	192	96	8	4
d. Have you been referred to a nutritionist in the health centre?	3	2	197	97

## VI. RESULT AND DISCUSSION

Table 1 presented the data on key roles of management staff in nutritional intake of Adekunle Ajasin University students. It was evident from the findings that bursary was made available to the students catering services was available along with portable water. Provision of bursary to students, provision of catering services and availability of portable water for the students supported Lucas and Gilles (2003), Ajala (2006) and Alade (2001) who opined that portable water hygienic food and money to buy them are essential for good health. However, the funding further showed that seminars for creating awareness on appropriate nutritional intake was grossly inadequate. This is contrary to Ayenigbara Omoniyi and Akinfolarin (2011) Ajala (2006), Lucas and Gilles (2003) and Alade (2001) who recommended that nutritional education should be made available to individuals to enable them chose appropriate diet for their optimum health.

Table 2 showed the data on likely problems hampering nutritional intake of Adekunle Ajasin University students. The data revealed that 104 (52%) had no money to buy required food items and 118 (59%) claimed that required food items were not available. The implication of this might be the consumption of poor nutrient which according to Ayenigbara Omoniyi and Akinfolarin (2011) and Ajala (2003) may lead to malnutrition. Furthermore, the data revealed that 134 (67%) and 128 (64%) of the respondents prepared their own meals at home and bought their meals outside respectively. These findings agreed with the observations of the researchers that students prepare and consume junks, and that they bought meals from local eating places where hygienic preparation of food, preservation and consumption were in doubt.

Table 3 indicated that 175 (88%) of the respondents do not go for medical check up and that medical doctors do not ask questions about the eating habit of 140 (70%) of the respondents. The finding also showed that while only drugs were prescribed for 192 (96%) of the respondents, 197 (97%) of them had never been referred to a nutritionist. These findings revealed

that malnutrition might be difficult to detect and prevent among the respondents and this according to Alade (2001), Ajala (2006) Lucas and Gilles (2003) Mayer (1969) and Deutseh (1976) may lead to nutritional health problems such as Marasmus and obesity.

## VII. CONCLUSIONS AND RECOMMENDATIONS

As a result of data analysis, the following findings were made:

1. Seminars and Workshops which would create awareness on appropriate nutritional intake for Adekunle Ajasin University students were not organized for them.
2. Food items appropriate for optimum health of the respondents were not available, they had no money to buy them.
3. The findings also revealed that majority of the students bought their meals outside the campus.
4. Adequate medical attention was not paid to the nutritional health problems of the students.

## VIII. RECOMMENDATIONS

Consequent upon these findings, the following recommendations were made:

1. Relevant Units of Adekunle Ajasin University Akungba – Akoko should organize seminars and workshops to health educate the students on issues relating to appropriate nutrition.
2. All students should be mandated to go for regular medical check – up.
3. Efforts should be made by the University authorities to provide conducive and hygienic eating places for all the students on campus and prices of meals made affordable for the students.

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# Entrepreneurs Health and Productivity in Nigeria: Analysis of Microfinance Bank Contribution

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**Abstract** - This paper investigates the effects of microfinance bank health related services on micro and small enterprise owners' productivity. Productivity is measured as output value over resource input value. The paper employed panel data and multiple regression analysis to analyze a survey of 502 randomly selected entrepreneurs whose enterprise are finance by microfinance banks in Nigeria. We find strong evidence that microfinance bank health related programmes have positive correlation with productivity of micro and small entrepreneurs in Nigeria. Participation in health related services such as health education and health finance are found to have positive impact on entrepreneurs' productivity, while microfinance bank linkages with health services provider and entrepreneurs access to health product through microfinance bank are microfinance banks health related services that are yet to be developed well developed by the microfinance banks . The paper recommends that a well structured health seminar and training programmes should be embedded in all Microfinance programme to further enhance productivity of entrepreneurs in Nigeria and partner with Insurance Companies in the country to provide quality health insurance services affordable to MFBs' client. This will guarantee the clients' access the health services when the need arise.

**Keywords** : Productivity, Health, Microfinance, MSE, Mutiple regression.

**GJMBR-A Classification** : FOR Code: 150304, 150203. JEL Code: L26, G21



ENTREPRENEURS HEALTH AND PRODUCTIVITY IN NIGERIA ANALYSIS OF MICROFINANCE BANK CONTRIBUTION

*Strictly as per the compliance and regulations of:*





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## I. INTRODUCTION

The provision of health services for all in Nigeria has been a growing concern to both the government and the private sector. The huge investment by the government in the sector over the years has not yielded any meaningful result. It has been realized in the recent years that there are limits to which government can singularly provide health care services for all especially in Nigeria where provision of health care services are becoming increasingly difficult to accomplish. Nigeria as a nation has many developmental challenges which have affected all sectors in the economy, the health sector inclusive. In recent times many microfinance institutions are integrating health protection services in their microfinance support services. Studies have shown that microfinance institutions (MFIs) are capable of contributing to health improvements by increasing knowledge that leads to behavioural changes, and

enhances access to health services through addressing financial, geographic and other barriers (Oxford journal health policy, 2011). In the past few years, microfinance has been widely acknowledged as a successful contributor to the alleviation of poverty and a valuable tool for achieving the Millennium Development Goals. While access to financial services is undeniably powerful, credit and savings products address only an aspect of poverty which is not sufficient to tackle serious difficulties the poor go through when struck with illness and disease. Poverty and ill health are intertwined and, as such, must be addressed together. The poor are unable to afford health care when they are injured or ill, as a result, the poorer the clientele, the more difficult it is to obtain basic preventive and curative health services, and the higher the morbidity and mortality rates. A vicious cycle of poverty and ill health affects the ability of MFI clients to engage in productive activity, repay loans taken from the bank, build assets and grow their businesses, which are the conditions necessary for pulling out of poverty. As clients are unable to repay their loans and continue borrowing, MFI sustainability can also be affected.

The ability of the microfinance bank clients to access timely and effective health services, can improve their likelihood of preventing disease, recovery from ill health and enhance continuous productivity. MFIs can help realize this change and bring an end to the trap of poverty and ill health by integrating innovative health protection services that leverage the institution's financial services and further its social mission. That is, integration of financial and health related services become valuable to clients and MFIs along social and financial dimensions (Ostradicky, 2010). Microfinance Institutions has enormous potential as a financially viable mechanism for reaching poor, rural people with simple but life-saving health protection services. Microfinance banks clients' productivity is enhanced when they are healthier and have more knowledge and options to protect their health. Well-established microfinance banks have integrated valuable health-related programs such as health savings, health loans, health insurance, health education, group discounts with health providers, mobile healthcare in rural villages, distribution of insecticide-treated mosquito nets, and much more to their clients at low or no cost to the bank

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itself. It is therefore necessary at this junction to undertake an assessment of the extent to which health related services provided by microfinance banks enhance the productivity of entrepreneurs. A number of studies have been carried out on the impact of microfinance on poverty alleviation, some scholars focused on the mechanism by which poverty is reduced. Copestake, Halotra and Johnson (2001) analysed the impact of microfinance on firm and individual well being. Copestake et al. (2001) focused on business performance and household income to establish a link between the availability of microfinance and overall wellbeing of the poor. Ryne and Holt (1994) provide a meta – analysis of microfinance and focuses on women empowerment, intending to show why various studies conflict in their conclusions as to the impact of microfinance on women empowerment. Bütünheim (2008) examines the relationship between microfinance programs, women empowerment and use of contraceptive, he concludes that microfinance program participation and availability do not uniformly increase contraceptive use, but rather increase a woman's ability to achieve her fertility preferences as measured by desire for more children. Despite popular claims that microfinance has many nonfinancial impacts, it is not expected that microfinance alone impact non-financial knowledge, behaviours and outcomes such as relate to health. The effects on health most likely would be indirect, through improvement of financial ability to access education and health care. Karlan and Morduch (2010) state in a recently published and broad review of microfinance that the evidence so far indicates that finance interventions alone may not be as powerful as 'finance coupled with other interventions such as training and healthcare. A small but growing number of studies that integrate microfinance with other non-financial services seems to support the argument that MFI financial services have positive impacts beyond the direct financial benefit, such as women's empowerment and decision making agency (Manderson and Mark 1997; Kim et al. 2007), nutritional status of children (Dunford and McKelly, 2002) and health outcomes, including use of contraceptives, higher child-survival rates, reduced family violence and increased use of health services (Mohindra 2008). Nonetheless, most MFIs have naturally chosen to focus where their competencies are strongest, on microenterprise credit.

There is no doubt that microfinance has increased both in research and practice, in spite of this emphasis, current research did not provide sufficient justification for the link between microfinance health services and entrepreneurs' productivity in developing countries. Besides, the empirical evidence emerging from various studies on the overall effect of microfinance have so far yielded mixed results that are inconclusive and contradictory. The question of whether microfinance health services improves or worsen entrepreneurs productivity is worthy of researching into like we have in

this study. In addition, the impact of microfinance health related services on entrepreneurs' productivity has not received research attention in Nigeria. Research also shows that most of the studies on impact assessment of microfinance that were reported were carried out in industrialized countries. This means that there is a major gap in the relevant literature on developing countries, particularly Nigeria that is yet to be covered. This study attempts to fill this gap by studying the situation in Nigeria and providing evidence on the effects of microfinance health related services on Entrepreneurs productivity in Nigeria. It is therefore necessary at this junction to undertake an assessment of the extent to which health related services provided by Microfinance Banks enhance Entrepreneurs productivity in Nigeria. That is the overall objective of this paper. The specific objectives are: (i) ascertain the relationship between health education and entrepreneurs' productivity (ii) examine the effects of health related services provided by microfinance banks on the productivity of micro and small entrepreneur in Nigeria (iii) create awareness of the involvement of microfinance institution in provision of basic health services in Nigeria. In order to achieve the above stated objectives, the following research questions are advanced: (i) Is there a relationship between health education received by entrepreneurs and Entrepreneurs productivity? (ii) To what extent does microfinance health related services enhance productivity of micro and small entrepreneurs in Nigeria? (iii) What are the prospects of microfinance banks in provision of health related services in Nigeria? The following null hypotheses are proposed and tested in the course of this study. (i). There is no significant relationship between health education and entrepreneurs' productivity in Nigeria. (ii). Health related services provided by Microfinance banks has no significant effect on the level of productivity of Entrepreneurs in Nigeria. (iii). Microfinance banks' contributions to the provision of health service is not significant.

## II. LITERATURE REVIEW

The term 'microfinance' refers to the full range of financial services that low-income people use, including not only credit but also savings, insurance and money transfers. Microfinance institutions (MFIs), as well as development non-government organizations (NGOs) with a strong microfinance component, are increasingly recognized for their capacity to provide effective and sustainable programmes to reduce poverty and associated vulnerabilities such as food insecurity among the world's poorest people (Leatherman, Metcalfe, Geissler and Dunford, 2010). Microfinance has existed, although mostly in the shadows and unseen by casual observers, since the rise of formal financial systems, and indeed probably predates them. It has only been within the last four decades, however, that serious global efforts have been made to formalize

financial service provision to the poor. This process began in earnest around the early to mid-1980s and has since gathered an impressive momentum (Brau and Woller, 2004). Copestake et al. (2001) finds that borrowers who were able to obtain two loans experienced high growth in profits and household income compared to a control sample, but borrowers who never qualified for the second loan were actually worse off due to MFI collection mechanisms. Wydick (1999) finds that upward class structure mobility increases significantly with access to credit. Using the same Guatemala data set in a subsequent study (2002), Wydick also finds that rapid gains in job creation after initial credit access were followed by prolonged periods of stagnant job creation. Dunn (2001) finds that program clients' enterprises performed better than non-client enterprises in terms of profits, fixed assets, and employment.

On health related services impact studies, several studies show that when families have fallen into poverty or remain trapped there, ill health often emerges as a key reason (Narayan 2000; Dodd and Munck 2002). MFI managers clearly see the effects of these health problems on the performance of their clients and more generally on the lives of their households and communities. Moved by their dedication to a social mission as well as the business imperative to have healthy clients, some MFIs have adopted a strategy of offering health-related programmes, including one or more of the following: health-related education (including nutrition and sanitation), health care financing (such as health loans or savings accounts), training community health workers, direct delivery of clinical services, and health microinsurance (Leatherman et al., 2010).

Recognizing the vicious cycle of poverty and ill health, and the impact on clients' abilities to repay loans, build assets and pull themselves out of poverty, some microfinance institutions have added nonfinancial services, such as dialogue-based education and a range of health related services and products. In order to make sense of a diffuse and ill-defined field, we propose a simple conceptualization of three principle barriers to microfinance clients utilizing health-related services in resource-poor countries: Knowledge that is, awareness and information for behavior change, (ii), affordability that is financial ability to pay for health care, (iii), availability, that is, convenience of access to effective and safe health services and products.

Freedom from hunger (2006) identified four areas of microfinance health related services. The four broad categories are; health education, health finance, linkages to health provider and access to health products. Health education variables include seminars and workshop on health care, health promotion and screening, training of community health volunteers and circulation of health related pamphlet and leaflets. Factors related to health finance are general health savings, health loan, health insurance, and special

saving account for surgical procedure. Distance, quality and affordability can be major barriers to timely health care for MFI clients, particularly those in rural areas, where providers are sparse, transportation is difficult, and public develop expertise in health care is scarce. The factors related to linkages with health providers are group discounts with health providers, mobile healthcare in rural villages, negotiation of special rates, advocacy for better quality health care and accessibility to health care by providing transport arrangement for health workers in villages. Lastly, access to health care products involve distribution of insecticide-treated mosquito nets, providing affordable financing to enable purchase of higher-costing health products; directly furnishing basic preventive and curative health products, enabling access to products through linkages with health providers and health product manufacturer. These four categories of variables account for most of the health related services provided by Microfinance Institutions.

Health education common health topics are malaria fever, diarrhea, HIV/AIDS, breastfeeding, healthy habits, women's sexual and reproductive health, planning for better health, and using health care services. The objectives of health education are prevent and appropriately treat common illnesses, commit to breastfeeding and breastfeeding exclusively for six months, adopt healthy habits to ward off chronic disease, engage in healthy practices for the well-being of mother and baby, prepare their families to cope with the financial impact of illness, and make the most out of available health services.

### III. PRODUCTIVITY

Productivity is the measure of how specified resources are managed to accomplish timely objectives as stated in terms of quantity and quality. Productivity may also be defined as an index that measures output (goods and services) relative to the input (labor, materials, energy, etc., used to produce the output). Hence, there are two major ways to increase productivity: increase the numerator (output) or decrease the denominator (input). (Planert, 2000).

Productivity is useful as a relative measure of actual output of production compared to the actual input of resources, measured across time or against common entities. As output increases for a level of input, or as the amount of input decreases for a constant level of output, an increase in productivity occurs. Therefore, a "productivity measure" describes how well the resources of an organization are being used to produce input (Inman, 2001). Productivity is usually expressed in one of three forms: partial factor productivity, multifactor productivity, and total productivity.

The standard definition of productivity is actually what is known as a partial factor measure of productivity, in the sense that it only considers a single input in the ratio. The formula then for partial factor

productivity would be the ratio of total output to a single input. Other partial factor measure options could appear as output/labor, output/machine, output/capital, or output/energy. Terms applied to some other partial factor measures include capital productivity (using machine hours or dollars invested), energy productivity (using kilowatt hours), and materials productivity (using inventory dollars). While a multifactor productivity measure utilizes more than a single factor, for example, both labor and capital. Hence, multifactor productivity is the ratio of total output to a subset of inputs: a subset of inputs might consist of only labor and materials or it could include capital. Obviously, the different factors must be measured in the same units, for example dollars or standard hours (Stevenson, 1999).

#### IV. RESEARCH METHODOLOGY

The study adopts a combination of survey-based data collection using a well structured questionnaire administered to MFBs customers and an in-depth interview session with the bank officials who are directly responsible for providing health related services in the respective MFBs, as well as Focus Group Discussion (FGD) with the MFBs clients. The purpose of such combination is to obtain cross-referencing data and independent confirmation of data, as well as a range of opinions. The theoretical population of the study consists of the entire MSEs in the country. However, the study was restricted to South-West geopolitical zone comprising of six states, the states are Lagos, Ogun, Osun, Oyo, Ondo and Ekiti states. The choice of South-west stems from the fact that the concentration and the predominance of MSEs in this zone are easily identifiable particularly with the inclusion of Lagos state which is the commercial nerve centre of the nation. For effective coverage and lower cost, purposive sampling technique was used to select the banks offering health related services, while simple random sampling technique was used to selected bank clients that participate regularly in microfinance programme for a period of at least two years. A total of 623 entrepreneurs were selected for the study. The sample size was determined using Bartlett, Kotrlik and Haggins (2001) model for determining the minimum returned sample size for any given population. The primary data consists of a number of items in well structured questionnaire that was administered to and completed by the respondents. The decision to structure the questionnaire is predicated on the need to reduce variability in the meaning possessed by the questions as a way of ensuring comparability of responses. To ensure the validity and reliability of the questionnaire used for the study, experts in the field of microfinance were consulted to look at the questionnaire items in relation to its ability to achieve the stated objectives of the research, level of coverage, comprehensibility, logicity and suitability for prospective respondents. A pilot test which took the

form of test –retest method was conducted prior to the actual study. Data collected from the questionnaire were analysed using Pearson Correlation Coefficient and Multiple Regression Analysis.

A total of 274 copies of the questionnaire, representing 44% of the total sample size were administered in Lagos State. In Ogun State, a total of 106 copies of the questionnaire were distributed, representing 17% of the sample size. In Oyo 96 (representing 15%) were distributed, in Osun State, 88 copies of the questionnaire were distributed representing 14% of the total sample. In Ekiti and Ondo States 26 and 33 copies of questionnaire were distributed respectively, representing 4% and 5% respectively of the total sample size. The questionnaires were distributed using the geographical spread of microfinance bank in South-west geopolitical zone. In all, a total of 502 copies of the questionnaire were returned from the six States out of 623 copies administered. This represents a total response rate of 80.5%. The high return rate achieved from the field survey can be attributed to the support received from the loan/field officers in the banks visited. A total of 53 Microfinance Banks were used for the study and the copies of questionnaire were distributed at an average of twelve (12) copies of questionnaire per Bank.

#### V. MODEL SPECIFICATION

The model specification used in this study was based on the hypotheses of the study. This statistical model is presented below to examine the extent to which micro finance banks health related services have enhanced the productivity of Entrepreneurs in Nigeria. The model adopted for this study was developed from the work of Fasoranti, Akinrinola, and Ajibefun (2006) they examined the impact of microcredit and training on efficiency and productivity of small scale entrepreneurs. The model was adapted and modified for this study.

$$Y = f(OC, FC, MFC) \dots\dots\dots (1)$$

Model 1 transform into model 2 below

$$Y = \alpha_o + \beta_1 OC_1 + \beta_2 FC + \beta_3 MF + u_1 \dots\dots\dots (2)$$

Model 2 transform into model 3 below

$$Y = \alpha_o + \beta_1 EAge_1 + \beta_2 EE_2 + \beta_3 Bizloc_3 + \beta_4 Biz reg_4 + \beta_5 HE_5 + \beta_6 HF_6 + \beta_7 LinH_7 + \beta_8 AH_8 + u_1 \dots\dots\dots (3)$$

Where,

Y = dependent variable (SMEs productivity). Productivity is measured as output value (sales value) over resource input value. Resource input is measured as cost of capital at time  $t$ , wages and salary paid at time  $t$ , rent paid at time  $t$ , electricity paid at time  $t$ , and cost of machine maintenance at time  $t$  Otokit (2002).

$\alpha_o$  = constant

$f$  = a function to be specified

The independent variables which are key predictor of MSE productivity is given as;



OC = Owners characteristics variables, included in this study are: EAge1 = Entrepreneur Age, EE2 = Entrepreneur Education,

FC = Firm Characteristics variables, included for this study are: Bizloc3 = Business location, and Biz reg4 = Business registration.

And finally is the MF = Microfinance variables, included for this study are: HE5 = Health Education, HF6 = Health Finance, LinH7 = Linkage to Health service providers, AH8 = Access to Health products.

## VI. DISCUSSION OF RESULT

### a) *Business Charactersitics Of Respondents*

Table 1 (see appendix) shows that 239 (47.6%) of the businesses had been in existence for five years, 195(38.8%) had been in existence for about 6 – 10 years, 56 (11.2%) had been in existence for between 11 – 15 years, 10 (2.0%) had been in existence for between 16-20 years, while only 2 (0.4%) had been in existence for a period more than twenty years. The majority in the five years time frame implies that the businesses started just around the same time the MFB was officially introduced into the Nigeria financial system. Meaning that the existence of these banks are a catalyst to business start-up five years ago and are also contributive to the growth of the new businesses as well as the expansion of the old ones.

On the type of business, the field survey revealed that 238 (47.4%) are involved in trading, particularly retail trading. This confirmed the 2001 country survey carried out by the CBN, where wholesale and retail trading accounted for 49% of non-agriculture microenterprise in Nigeria. This situation is largely due to the fact that retail trading does not require any special skill to start. Also, the dominance of Lagos State in the field survey may be another reason, Lagos State being the commercial nerve centre for the country. It was observed that 86 (17.1%) are artisans, including people involved in hair-dressing, furniture making, tailoring, mechanics, vulcanizers, fashion designing, brick laying, etc. 33 (6.6%) are involved in service industry' the majority of people in this category are people involved in the sale of recharge cards, operators of business centres, providers of educational services, food vendors, etc. Only 54 (10.8%) and 89 (17.7%) are involved in manufacturing and agricultural businesses respectively. This calls for concern, If out of five hundred and two respondents only 54 are involved in production of goods, it is a pointer to the fact that the nation has a long way to go in terms of real economic growth, because no nation develop on mercantile trading and commerce alone. Most of the businesses are sole ownership. 420 (83.7%), a typical micro enterprise is operated by a sole proprietor/manager aided mainly by unpaid family members and occasional paid employee and/or apprentice. Fifty six (representing 11.2%) are family businesses, 24 (4.8%) are partnership businesses, while 2 (0.4%) are other types of business

formation. This is to buttress the fact that most of the businesses supported by MFB are one-man businesses which are expected to grow to other forms, such as partnership business or limited liability Company after some years. In relation to the registration status of the businesses, the analysis revealed that 331 (65.9%) are not registered businesses, while only 171 (34.1%) are registered businesses. This may be as a result of bureaucratic bottleneck involved in registration of businesses and the dominance of microenterprise in the survey. The survey revealed that 367 (73.1%) are micro enterprises, using the 2007 National policy on MSMEs classification. 135 (26.9%) are small scale enterprise. The 2001 country survey revealed that most micro enterprises in Nigeria operate in the informal sector, meaning that they are most not registered business. It is in recent time that the MFBs are persuading business owners to at least register their business name.

The table also shows the sources of initial capital of the respondents, 388 (77.4%) started their business with their personal savings, 61(12.2%) started with borrowed funds from friends and family, 13 (2.6%) started with a loan from the bank, while 39 (7.8%) started with gifts and grants obtained from friends and institutions. This confirms the fact that funding for most microenterprises is mainly from individual resources, with a little help from family and traditional mutual fund societies such as Rotational Savings and credit Association (ROSCA). Bank loans are rarely sought and more rarely obtained. The research tried to find out the composition of the initial capital to know the likely capital structure of small business in South West Nigeria. The study revealed that 266 (53%) is purely owners equity, that is the entrepreneur rely mainly on their personally generated funds to finance their businesses. The implication of this is that their growth and expansion is limited in size. Table 4.14 also reveals that 135 (26.9%) combined owners equity and loan which makes for business growth if they are combined in appropriate proportion. Also, 101 (20.1%) make use of loan alone. This implies that such entrepreneurs do not have any stake in the business and as a result, he/she may not be enthusiastic towards ensuring business growth.

The research also strived to know what motivate the respondents to start their businesses. The result obtained reveals that to gain financial independence is the main reasons why many Entrepreneurs start their own businesses. 283(56.4%) indicated financial independence, 126(25.1) indicated loss of job, 79 (15.7%) to bequeath to their children and 14 (2.8%) gave other reasons such as for self actualization and for economic reasons. The research also discovered that most of the businesses are located in the urban areas 396 (78.9%), the dominance of Lagos in the survey explains this. 106 (21.1%) located in the rural area.

### b) *Relationship between Entrepreneurs Productivity and Heath Services*

*Hypothesis 1* : Is there a relationship between health services and Entrepreneurs' productivity.

*Table 2* : Correlation test between the Health Service and Entrepreneurs Productivity

		Health Services	Entrepreneurs Productivity
Microloan	Pearson Correlation	1	.331(**)
	Sig. (2-tailed)		.001
	N	502	502
Business expansion	Pearson Correlation	.331(**)	1
	Sig. (2-tailed)	.001	
	N	502	502

Source: Field Survey (2010)

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

The first hypothesis is to find out if there is a relationship between health services provided by microfinance banks and Entrepreneurs productivity. Health services here are the combination of health education, health finance, linkage to health service provider and access to health product. Therefore, we tried to find out the direction and the significant level of the relationship that exist between the two variables using the Pearson correlation test. With SPSS, we computed a Pearson correlation test between the two variables, health service provided and Entrepreneurs' productivity. The result obtained as shown in Table 2 (see appendix) shows that there are 502 cases which implies that there are no missing cases. The Table also shows a correlation coefficient of .331 and it is positive, this implies that the Pearson correlation coefficient of (.331) is positive indicating a low correlation between health services provided by micro finance banks and Entrepreneurs' productivity, that is, health related services provided by MFBs contribute significantly to Entrepreneurs productivity in Nigeria but its level of contribution is still at the low level. The coefficient of determination which is the square of the  $r$  indicate 10.9%, that is health services provided by MFBs contributes only 10.9% to Entrepreneurs productivity in South west Nigeria which is very low, but has a positive contribution. This is significant at 1% significant level. Therefore, our null hypothesis which is there is no significant relationship between health service provided by MFBs and Entrepreneurs' productivity is rejected, while we accept our alternative hypothesis, that is, there is a significant relationship between health services provided by MFBs and Entrepreneurs' productivity in Nigeria. We therefore conclude that health related services provided by MFBs help to enhance the productivity of Entrepreneurs in Nigeria.

The relationship between health services provided by MFBs and Entrepreneurs' productivity in Nigeria was investigated using Pearson product moment correlation coefficient. Preliminary analysis was performed to ensure no violation of the assumption of

normality, linearity homoscedasticity. There is a low positive correlation between the two variables,  $r = .33$ ,  $n = 502$ ,  $p < .0005$ , with low level of Entrepreneurs productivity associated with positive but low level of MFB health related service.

*c) Multiple Regression Analysis of Effect of Microfinance Health Service on Small Business Operators Productivity by Category.*

Table 3 below presents results from the regression of microfinance health related service variables on entrepreneur's productivity. The result in column I of the Table represents the total sample. In columns II and III we split the sample into small and micro firms. Column II presents observations for small firms (i.e. firms with more than 10 employees) and column III presents observations for micro firms (i.e. firms with less than 10 employees). The constant, which is also the intercept, reveals that when all the variables are zero, the entrepreneur's productivity will be 37.7% for the total sample and 17.9% and 8.6% for small and micro firms respectively. The result obtained is significant at 1%. The coefficient for entrepreneur's age is negative and significant at 1% for the total sample and 5% for small firms and micro firms. This is expected: as the entrepreneur advances in age, he becomes less productive. The result shows that when an entrepreneur's education increases by one unit, his productivity will increase by 7.7 units for the total sample and by 6.2 and 8.6 units for small and micro firms respectively. The result obtained is significant at 1% for the total sample and small firms and is significant at 5% for micro firms. This implies that education has a positive correlation with productivity; the significance of education hinges on the fact that it enhances the stock of human knowledge and management skills which consequently enhance productivity. This confirms the findings of Fasoroti et al., (2006) that the entrepreneur's level of education enhances productivity.

On firm characteristics variables, the coefficient for business location (urban) is positive and significant



at 5% for total sample and small firm sample respectively, but not significant for micro firms, while the coefficient for business location (rural) is positive but not significant for the three samples. On effects of business registration on entrepreneurs' productivity, registration of business tends to be size-based. The coefficient for business registration is positive and significant for the total sample and small firms at 1% and 5% significance level, but positive and insignificant for the micro firm sample. In small firms, registration enhances credibility, opens up access to rationed resources and reduces transaction cost, thus enhancing the growth and productivity of the firm. In micro firms on the other hand, registration may not enhance productivity appreciably. For instance, operating outside the purview of government affords firms more flexibility in input use as local conditions change (Sleuwagen and Goedhuys, 2002).

On micro finance health related variables, the coefficient for health education shows that a unit increase in health education service provided by MFB increases the Entrepreneurs' productivity by 5.0, 3.1 and 2.0 units for total, small and micro samples and they are all significant at 1% for total sample and 5% for small and micro samples. This implies that health education service provided by MFBs such as seminars/workshops, health screening and circulation of education related pamphlets goes a long way to affect Entrepreneurs productivity positively. Any training programme properly, well structured and diligently provided enhances entrepreneurs productivity (Fasoranti, 2006).

The coefficient for health finance is positive and significant for total sample and micro firms at 10% significant level. The result shows that health finance significantly affects the Entrepreneur's productivity in the total sample and micro firm's sample, but it is not insignificant for the small firm sample. This implies that health finance service provided by MFBs is not commensurate to the business activities of small firm operators. The result obtained on linkages with health services provider (such as group discounts with health providers, mobile healthcare in rural villages, negotiation of special rates, advocacy for better quality health care and accessibility to health care by providing transport arrangement for health workers in villages) is positive but not significant for the three samples, this is understandable for many reason, the MFBs are currently facing a lot of problems. The result on access to health service product also is positive but not significant for the three samples. Most of the MFBs are not keen in providing such services now crisis in the Microfinance subsector is clouding most of the activities of the banks.

The coefficient of determination, that is, the adjusted  $R^2$  for the three samples are 0.48, 0.22 and 0.52 for the total sample, small firm and micro firms respectively. This is acceptable for a cross-sectional data, like we have for this study. The overall statistic is significant at 1% for the total sample and the micro

samples but not for the small firm sample. The decision rule is that when calculated F-value is significant we reject the null hypothesis and accept the alternative hypothesis. We therefore conclude that, health related services provided by MFBs enhance the productivity of micro entrepreneurs especially and the factors that positively affect entrepreneur's productivity are Entrepreneurs' education, business location (urban), business registration, health education and to an extent health finance while other factors such as linkage with health service provider, and access to health products are not significant in South West Nigeria. This is in line with the conclusion reached by Fasoranti (2006) that the significant determinants of technical efficiencies of bakers, furniture makers and burnt brick makers were age of operators, business experience, and level of education, training experience, credit access, working capital and initial capital outlay. And that well structured entrepreneurship training programmes complemented with easy credit access can facilitate the desired improvement in the efficiencies of small scale business people.

## VII. FINDINGS

### a) *Microfinance and Entrepreneurs' Productivity*

The result obtained on this aspect of the study shows the magnitude of beta coefficient for owners' characteristics variables Entrepreneurs' Education, some firm characteristics variables such as business location (urban) and business registration, and MFB health related service such as health education and health finance are found to have significant effects on entrepreneurial productivity for the total sample in South-West Nigeria. When the sample was split into small firms and micro firms, the same variables were seen to have significant impact on entrepreneur's productivity, but the order of impact varies significantly. The overall statistics of 4.119, 1.218 and 3.103 for total sample, small firm and micro firm respectively led to our decision to reject our null hypothesis for total sample and micro loan and accept our null hypothesis for small firm samples. Our null hypothesis states that MFBs health related services does not have significant effects on Entrepreneurs level of productivity in South-West Nigeria.

## VIII. CONCLUSION AND RECOMMENDATIONS

The international development community has shown keen interest and enthusiastic support for microfinance programs in recent decades. With its emphasis on poverty alleviation, family welfare, women's empowerment and entrepreneurial development, the practice of microfinance certainly offers considerable promise for improving the health and livelihood of many of the world's poor. In recent times many MFIs are offering health related services to compliment the

financial services as health issues are found to have effect on individual poverty level. This paper has attempted to add to the microfinance program evaluation literature in the following areas.

First, the study explore in details the probable relationship between health related services provided by microfinance banks and the Entrepreneurs productivity and goes further to examine the specific factors that that affects entrepreneurs productivity in Nigeria. In doing so the study finds compelling evidence that there is a significant positive relationship between health services provided by MFBs and entrepreneurs productivity in Nigeria. This is a departure from much of the microfinance literature that links participation in microfinance programme to poverty alleviation without finding out the specific factors that makes for poverty alleviation. While the study finds that there is a positive relationship between microfinance health services and entrepreneurs productivity, the study reveals specifically that microfinance health related services do not have significant impact of productivity level of small scale entrepreneurs'. It would be fruitful in future studies to explore the other hypothetical pathways between microfinance programs and probably reproductive health outcomes.

Secondly, the study extends the literature on microfinance programs and entrepreneurs productivity in Nigeria, a country with high poverty index and poor health service delivery. Due to different gender dynamics, cultural influences, economic environments and program approaches to health care service in Nigeria, the study has succeeded to find the linkages between microfinance health services and entrepreneurs productivity.

The international development community has shown keen interest in and enthusiastic support for microfinance programs in recent decades. With its emphasis on poverty alleviation, family welfare, women's empowerment and entrepreneurial development, the practice of microfinance certainly offers considerable promise for improving the health and livelihood of many of the world's poor. In recent times many MFIs are offering health related services to compliment the financial services as health issues are found to have effect on individual poverty level. This paper has attempted to add to the microfinance program evaluation literature in the following areas.

First, the study explore in details if there is any relationship between health related services provided by microfinance banks and the Entrepreneurs productivity and goes further to examine the specific factors that that affects entrepreneurs productivity in Nigeria. In doing so the study finds compelling evidence that there is a significant positive relationship between health services provided by MFBs and entrepreneurs productivity in Nigeria. This is a departure from much of the microfinance literature that links participation in microfinance programme to poverty alleviation without

finding out the specific factors that makes for poverty alleviation. While the study finds that there is a positive relationship between microfinance health services and entrepreneurs productivity, the study reveals specifically that microfinance health related services do not have significant impact of productivity level of small scale entrepreneurs'. It would be fruitful in future studies to explore the other hypothesized pathways between microfinance programs and probably reproductive health outcomes.

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In this study, we have estimated the effects of MFBs health related services on entrepreneurs' productivity and the significant policy variables influencing the productivity of small and micro entrepreneurs in Nigeria. Our findings show that there exist some level of inter and intra group variations of productivity among various sectors and categories examined. This signals that there is room for improvement in productivity of micro and small business entrepreneurs in Nigeria. Among small scale entrepreneurs' the significant variables are Entrepreneurs education, business location and business registration, same variables applies for micro entrepreneurs. We conclude that a well structured health education and innovative health finance services enhance productivity of micro and small scale entrepreneurs in Nigeria. We therefore recommend that;

1. Health related services offered by MFBs especially health education and health finance should be well entrenched into MFBs services. The significance of health education is that it helps to bring about behavioural changes in Entrepreneurs which goes a long way to enhance their productivity. Also the Microfinance Banks should be recapitalize to enable them provide more health finance entrepreneurs on easy terms.
2. MFBs should assist their clients by providing health education and provide information on government health programmes in the country. Such MFBs health related service should be strengthened and properly funded and delivered too. MFBs can partner with health organizations such as health care centres to provide client-focused health education to their clients.
3. Banks should engage in target site selection and means testing before they are sited in a particular location. This will enable the banks to develop appropriate health financial product that will suit the need of the entrepreneurs in a particular location

rather than offering blanket services that will not have positive impact on Entrepreneurs productivity and performance.

4. Entrepreneur's level of education is found to have positive effects on entrepreneurs' productivity; Entrepreneurs should therefore be encouraged by the MFBs to improve on their current level of education by engaging in adult education or life-long learning; as this will have the potency to increase their level of productivity.
5. MFBs can partner with Insurance Companies in the country to provide quality health insurance services affordable to MFBs' client. This will guarantee the clients' access to health services when the need arise.

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## APPENDIX

*Table 1 : Business Charactersitics Of Respondents*

Variable	Measuring group	Frequency	%
Year Business Established	5 years	239	47.6
	6 – 10 years	195	38.8
	11 – 15 years	56	11.2
	16 – 20 years	10	2.0
	Above 20 years	2	0.4
	Total	502	100
When did you open account with MFB/community Bank?	Above 10 years	76	15.1
	7 – 9 year	138	27.5
	5 - 6 years	262	52.2
	3 – 4 years	26	0.5
	Total	502	100
Kind of Business	Trading	238	47.4
	Artisan	86	17.1
	Manufacturing	54	10.7
	Agriculture	89	17.7
	Service	33	6.6
	Others	2	.4
	Total	502	100
Form of Business	Sole ownership	420	83.7
	Family Business	56	11.2
	Partnership	24	4.8
	Other type	2	0.4
	Total	502	100
Source of Initial Capital	Personal Savings	388	77.4
	Borrowed from friends	61	12.2
	Loan from bank	13	2.6
	Gift & Grant	39	7.8
	Total	502	100
Registration of Business	Yes	171	34.1
	No	331	65.9
	Total	502	100
Category of Business	Micro	367	73.2
	Small	135	26.8
	Total	502	100
Business Location	Urban Area	396	78.9
	Rural area	106	21.1
	Total	502	100
Motivation for starting a business	Financial independence	283	56.4
	Loss of Job	126	25.1
	To bequeath to children	79	15.7
	Others	14	2.8
	Total	502	100

Source : Field survey, 2010

**Table 3 :** Multiple Regression Analysis of Effects of Microfinance health Services on Entrepreneurs' Productivity by Category.

	Column I		Column II		Column III	
	Total Sample		Small Firms		Micro Firms	
	Coefficient	t- stati	Coefficient	t- stati	Coefficient	t- stati
Constant	37.709*	3.962	17.907*	7.184	8.692*	5.008
<b><u>Owners Characteristics</u></b>						
Entrepreneur's Age	-0.152*	-1.813	-2.217**	-1.958	-0.195**	-1.737
Owners Education	7.752*	3.613	6.266**	1.618	8.695**	1.577
<b><u>Firm Characteristics</u></b>						
Business location (Urban)	0.003**	2.169	0.058**	1.725	1.019	1.164
Business location (Rural)	0.023	1.169	0.018	1.025	0.021	0.964
Business registration	4.026*	3.152	0.092**	2.041	1.065	1.003
<b><u>Microfinance Characteristics</u></b>						
Health Education	5.030*	3.393	3.165**	2.011	2.014**	1.598
Health Finance	1.003***	1.887	1.802	1.448	1.108***	1.972
Linkage to health providers	0.079	1.128	1.111	1.021	0.016	1.014
Access to health products	0.448	1.112	0.046	1.031	0.031	0.916
R – squared	0.597		0.321		0.611	
Adjusted R-Squared	0.481		0.226		0.527	
No. of Observation	502		135		367	
F-test statistics	4.119(0.000)		1.218(0.081)		3.013(0.000)	

Source : Field survey, 2010. Note\* = 1% level of significance, \*\* = 5% level of significance, \*\*\* = 10% level of significance

The effect analysis of microfinance health service on Entrepreneurs' productivity. Productivity is measured as output over resource input at time  $t$ . The result of the total sample is presented in column I, the data is later split into two, result of firms with equal or more than 10 employees is presented in column II i.e (small firms), while result of firms with less than 10 employees (i.e micro firms) is presented in column III.



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# Linking Corporate Governance with Organizational Performance: New Insights and Evidence from Nigeria

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**Abstract** - Past studies on corporate governance among Nigerian firms have been limited to quoted companies, thereby excluding insights into the behavior of privately-owned firms that form the bulk of the existing formal business organizations. Using a balanced sample of quoted and unquoted firms, this study attempted to establish a nexus between corporate governance and organizational performance. Strong relationships were found between a number of corporate governance variables and firm performance measures. The study also found that there were no material differences between the reliability of financial reporting between quoted and unquoted firms. It recommended a combination of principles and rules-based approaches to dealing with governance infractions, mandatory self-reporting of the degree of compliance with governance codes in company annual reports and setting of high standards for selection of non-executive and independent board members.

**Keywords** : Corporate governance, Organizational performance, Ethics, Nigeria.

**GJMBR-A Classification** : FOR Code : 150303, 150312 JEL Code: G32 , G34,



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*Strictly as per the compliance and regulations of:*



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Joe Duke II<sup>a</sup>, Kechi Kankpang<sup>o</sup>

**Abstract** - Past studies on corporate governance among Nigerian firms have been limited to quoted companies, thereby excluding insights into the behavior of privately-owned firms that form the bulk of the existing formal business organizations. Using a balanced sample of quoted and unquoted firms, this study attempted to establish a nexus between corporate governance and organizational performance. Strong relationships were found between a number of corporate governance variables and firm performance measures. The study also found that there were no material differences between the reliability of financial reporting between quoted and unquoted firms. It recommended a combination of principles and rules-based approaches to dealing with governance infractions, mandatory self-reporting of the degree of compliance with governance codes in company annual reports and setting of high standards for selection of non-executive and independent board members.

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## I. INTRODUCTION

The bulk of evidence suggests a positive association between corporate governance and organizational performance (Love, 2011). In this regard, sub-optimal or outright failure of governance systems can therefore be argued to be a major contributor to the collapse of many of the well-celebrated organizations that have littered the world's corporate landscape. This failure, which translates into an inability of organizations to meet the expectations of their various stakeholders, has often been traced to weaknesses in the internal controls infrastructures and operating environments, and a lack of commitment to high ethical standards. These weaknesses are sometimes deliberately or intentionally induced by organizational designers and controllers, and at other times they may be a result of the naive assumption that managers will always act in a way that suggests or promotes enlightened self-interest, which should ultimately have positive implications for all stakeholders (Donaldson & Preston, 1995). However, evidence emerging from some of the recently collapsed firms, hitherto assumed to be run professionally or on sound principles, succinctly demonstrates the point that there

will always be discrepancies or misalignments between the various organizational stakeholders' interests. Therefore, managing these conflicting interests in a way that produces mutually satisfying outcomes for all stakeholders is at the core of the good corporate governance discussion. Expectedly, this problem has generated renewed interest in understanding the dimensions and ramifications of corporate governance, and its centrality to the wellbeing and survival of firms across sectors and geographic borders. Emphasis is not just on how well the organization succeeds in its profitability goal, but how well it is managed, run and internally regulated, both formally and informally (Parker, 2006). As has been demonstrated in the recent closure of News of The World in UK, corporate governance concerns clearly transcend just the financial wellbeing of firms.

Corporate governance is all about running an organization in a way that guarantees that its owners or stockholders receive a fair return on their investment, while the expectations of other stakeholders are also met (Magdi & Nedareh, 2002). It addresses the need for organizational stewards or managers to act in the best interest of the firm's core stakeholders, particularly, minority shareholders or investors, by ensuring that only actions that facilitate delivery of optimum returns and other favorable outcomes are taken at all times. This is typically facilitated by creating an operating milieu which promotes the observance of codes of conduct that espouse accountability, transparency, fairness, ethical behavior, responsibility and other values designed to act as safeguards against institutional corruption and the mismanagement of scarce organizational resources.

The policies, rules, processes, practices, programs and institutions used in administering, directing and controlling the operations and affairs of an organization generally constitute the elements and instruments of its corporate governance. Therefore, the elaborateness, clarity, formality and the degree of compliance with these elements and plans reflect the extent to which an organization is likely to experience good corporate governance. The main responsibility for corporate governance rests with the Board of Directors of a firm. The board is usually made up of executive (full time) and non-executive (part-time and independent) members. The board's responsibilities include setting

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the company's strategic goals, providing leadership towards putting the set goals into effect, supervising the management of the firm and reporting to shareholders on their stewardship. The board also sets financial policy and oversees its implementation, using financial controls systems. The board's actions are subject to laws, regulations and the shareholders' review at general meetings (Rathmell, Daman, O'Brien & Anhal, 2004). While the key facilitators and midwives of corporate governance are clearly members of the board, it is however apparent that other stakeholders, particularly management and employees, equally have significant roles to play in corporate governance, albeit in varying degrees. As the board needs to secure the active cooperation of managers in order to be effective in instituting and ensuring appropriate behavior, so do employees on their part need to offer support by insisting on, and complying with, only board-approved actions taken by managers. In this way, a cooperative relationship between these core of organizational stakeholders helps drive the corporate governance process in the right direction. Nevertheless, the paramount responsibility in corporate governance lies with the board. This argument is supported by an important finding in a McKinsey and Company (2000) study indicating that informed investors are always ready to pay a premium of as much as 20% on stock price on the back of their perception that the firm has a strong and effective board.

Studies carried out so far on the subject of corporate governance in Nigeria have concentrated exclusively on firms quoted on the Nigerian Stock Exchange (Adenikinju & Ayorinde, 2001; Babatunde & Olaniran, 2009; Kajola, 2008; Sanda, Mikailu & Garba, 2005). Although the basis for this choice is understandable, it however creates a problem of exclusion, and forecloses a comprehension of the corporate governance behaviors and outcomes of private medium and large firms which make up the bulk of organizations across the various business sectors of Nigeria. This present research addresses the problem by studying a mix of publicly quoted firms and private companies in a cross-sectional survey. Also, the study uses profit margin and return on assets as proxies for corporate performance, rather than the popular market or share valuation, which may be relatively restrictive for immediate and accurate assessment of the performance of privately-owned firms. Instructively, this study captures two important corporate governance variables that have largely been ignored or left out in the narrative of the studies carried out in Nigeria on the subject: existence of code of corporate governance and reliability of financial reporting. As reported in a Nigerian Securities & Exchange Commission (2003) study, only about 40% of all quoted companies, including banks, had codes of corporate governance in place. The Code of Best Practices for Corporate Governance in Nigeria

was adopted only in 2002, and revised in 2009 (as cited in Olajide, 2010). While this may partly explain the relative infancy of corporate governance entrenchment in Nigerian firms, it however sharpens the need to examine the extent to which the adoption of governance codes contributes to recent firm performance. Reliability of financial reports of firms, on the other hand, has equally created concern for stakeholders in view of the revelations of misleading profits reported by Nigerian banks which were in fact tottering on the brink of collapse just before they were bailed-out in 2009 by the Central Bank of Nigeria (CBN). The key tactic used by corporate managers in masking the true health of the firms involved was falsification of financial reports. Therefore, reliability or accuracy of financial reporting is arguably an important corporate governance variable that demands sufficient research attention.

Overall, the study examines the relationship between corporate governance and the performance of Nigerian firms, using reliability of financial reporting, existence of a code of corporate governance, effective audit committee, board size, and separation of office of board chair from CEO as the variables of corporate governance, while return on assets and profit margin serve as proxies for firm performance. A comparison of corporate governance regime of public and private firms is also carried out here. This study will therefore contribute new dimensions to the growing stock of literature on the subject, as it attempts to deliver on a more robust, yet simple understanding of the impact of corporate governance on the performance of Nigerian organizations using appropriate yardsticks that recognize the problem of paucity of reliable data in the study of the phenomenon in the Nigerian setting.

## II. THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

An understanding of corporate governance proceeds from an examination of a number of theories that attempt to explain the basis and rationale behind this management imperative. These theories principally include the Agency, Stakeholders, Stewardship, Resource-dependency, Transaction cost and Complexity theories. Each of the theories has received comprehensive treatment in previous studies including Abdullah and Valentine (2009), Mintz, (2004), Khanna and Ken (2008), Heath and Norman (2004), Hua and Zin (2007), Sanda, Mikailu and Garba (2005).

Over the last decade, the Asian financial crises, Enron, WorldCom, Tyco, Adelphia, Arthur Anderson, Lehman Brothers, Freddy Mac and Fanny Mae in the USA have come to represent the classic faces of failure attributable to corporate governance shortcomings. On account of the same problem, other important institutions, including Goldman Sachs (in USA); Marconi and Northern Rock (in UK); Parmalat (in Italy); Yukos (in Russia); and, Intercontinental Bank, Oceanic Bank,

Union Bank, Bank PHB, Spring Bank (in Nigeria), were found to be virtually on the threshold of failure just before their various national governments intervened to bail them out of imminent collapse. In the wake of these developments, corporate governance frameworks have been formulated by a variety of regulatory agencies and national governments over the last decades across different countries, including the USA - the Sarbanes-Oxley Act (2002); in the UK - the UK Companies' Act (2006) and similar policy guidelines issued by the Financial Reporting Council and the Financial Services Authorities; the UN's Bank of International Settlement's Basel Committee guidelines on Corporate Governance; the OECD Principles of Corporate Governance (1999 & 2004); in Nigeria the Securities and Exchange Commission (SEC) Code of Best Practices for Public Companies (2003), Code of Corporate Governance for Banks and Code of Corporate Governance for Licensed Pension Operators (Nwadioke, 2009). These well-documented guidelines have provided the main instruments used in regulating the operations of firms. In spite of the soundness and widespread subscription to these corporate governance codes, financial scandals and prospects of organizational failure still continue to be of deep concern to stakeholders. The OECD provisions for instance is considered to be adequate in addressing issues of executive remuneration, risk management, board practices and exercise of shareholder rights. However, weakness in corporate governance appears to be a function of ineffective implementation of the codes (OECD, 2009). Pursuance of good corporate governance would therefore mainly stem from the political will of organizational managers to adhere to specified best-practices.

The rewards of good corporate governance include reduction of waste on non-productive activities such as shirking, excessive executive remuneration, perquisites, asset-stripping, tunneling, related-party transactions and other means of diverting the firm's assets and cash flows. It also results in lower agency costs arising from better shareholder protection, which in turn engenders a greater willingness to accept lower returns on their investment. The firm ultimately ends up enjoying higher profits as it incurs lower cost of capital. Importantly, firms become more attractive to external financiers in direct proportion to a rise in their corporate governance profile. Finally, managers become less susceptible to making risky investment decisions, and focus more on value-maximizing projects that generally facilitate organizational efficiency. The ultimate outcomes of these corporate governance benefits are generally higher cash flows and superior performance for the firm (Love, 2011).

Most of the studies on the link between corporate governance and firm performance confirm causality (Abor & Adjasi, 2007). However, the evidence indicates between a strong and very weak relationship. Black (2001), for instance found a strong correlation

between corporate governance and firm performance, as represented by stock valuation. Love (2011, pp 50-58) documented several other studies that have demonstrated these varying positive relationships to include Bebchuk, Cohen and Ferrell (2006), Black and Khana (2007), Brown and Caylor (2009), Bruno and Claessens (2007), Chhaochharia and Laeven (2007), El Mehdi (2007), Gompers, Ishii and Metrick (2003), Klapper and Love (2004), Kyereboah-Coleman (2007), Larcker, Richardson and Tuna (2007), Nevona (2005) and Wahab, How and Verhoeven (2007). Some other studies have however argued against a positive relationship between corporate governance and firm performance (Ferreira & Laux, 2007; Gillan, Hartzell & Starks, 2006; Pham, Suchard & Zein, 2007). This lack of unanimity continues to render the discussion inconclusive.

Findings from past studies on the selected corporate governance variables in the literature are as follows;

*a) Reliability of financial reporting*

The accuracy and reliability of the financial reports issued by management affects the perception of the firm by all other stakeholders and prospective investors. In spite of the experience at Enron and WorldCom, the financial reporting of publicly quoted firms are generally perceived to be more transparent and credible, because they are usually subjected to stiffer or more rigorous scrutiny, than what obtains in private firms. And, this therefore makes the financial reporting component of corporate governance even more difficult to assure in privately held firms. Audit committees and external auditors are the main instruments available for ensuring this corporate governance variable. There is however scant evidence of empirical research findings around this particular variable.

*b) Existence of code of corporate governance*

The growing concern about the need to institutionalize corporate governance mechanisms in firms has elicited the issuance of codes of governance by different regulatory agencies and voluntary industry associations. However, clear evidence of the exact extent to which Nigerian firms have adopted these codes or developed their own company-specific governance procedures is still unknown largely because of dearth of readily available data.

*c) Audit committee*

Although results of Klein (2002) and Anderson, Mansi and Reeb (2004) showed a strong association between audit committee and firm performance, Kajola (2008) found no significant relationship between both variables. This lack of consensus presents scope for deeper research on the impact of this corporate governance variable.



#### d) Board size

There is a convergence of agreement on the argument that board size is associated with firm performance. However, conflicting results emerge on whether it is a large, rather than a small board, that is more effective. For instance, while Yermack (1996) had found that Tobin's Q declines with board size, and this finding was corroborated by those of Mak and Kusnadi (2005) and Sanda, Mikailu and Garba (2005) which showed that small boards were more positively associated with high firm performance. However, results of the study of Kyereboah-Coleman (2007) rather indicated that large boards enhanced shareholders' wealth more positively than smaller ones.

#### e) Separation of office of board chair and CEO

Separation of office of board chair from that of CEO generally seeks to reduce agency costs for a firm. Kajola (2008) found a positive and statistically significant relationship between performance and separation of the office of board chair and CEO. Yermack (1996) equally found that firms are more valuable when different persons occupy the offices of board chair and CEO. Kyereboah-Coleman (2007) proved that large and independent boards enhance firm value, and the fusion of the two offices negatively affects a firm's performance, as the firm has less access to debt finance. The results of the study of Klein (2002) suggest that boards that are structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process and therefore more valuable. Fosberg (2004) found that firms that separated the functions of board chair and CEO had smaller debt ratios (financial debt/equity capital). The amount of debt in a firms' capital structure had an inverse relationship with the percentage of the firm's common stock held by the CEO and other officers and directors. This finding was corroborated by Abor and Biekpe (2005), who demonstrated that duality of the both functions constitute a factor that influences the financing decisions of the firm. They found that firms with a structure separating these two functions are more able to maintain the optimal amount of debt in their capital structure than firms with duality. Accordingly, they argued that a positive relationship exists between the duality of these two functions and financial leverage. Separation of these two offices is however sharply challenged by Donaldson and Davis (1991), who found that shareholders' returns are maximized when there is duality.

### III. MATERIALS AND METHODS

This study basically seeks to link corporate governance with firm performance and the model used in establishing this relationship is expressed as follows:

$$ROA = X_0 + x_1BSIZE + x_2CEO + x_3RFR + x_4AUDCOM + x_5CODCORG0V + e_t \dots\dots\dots (1)$$

$$PM = X_0 + x_1BSIZE + x_2CEO + x_3RFR + x_4AUDCOM + x_5CODCORG0V + e_t \dots\dots\dots (2)$$

Where:  $x_1 > 0, x_2 > 0, x_3 < 0$

Organizational performance is measured by Return on Asset (ROA) and Profit Margin (PM). These are the dependent variables in the model. Corporate governance is represented by five measurement variables: Board Size (BSIZE), Board Chair/Chief Executive Status (CEOSTATUS), Reliability of Financial Reporting (RFR), Audit Committee (AUDCOM), and, Code of Corporate Governance (CODCORG0V) which are the independent variables in the model. These measures are observable characteristics that may have some influence on organizational performance. The error term,  $e_t$ , represents some residual contributions to organizational performance arising from errors in the measurement of the corporate governance variables.

Although, Love (2011) has concluded, based on meta-analysis, that there appears to be a relatively stronger link between firm performance and market valuation than firm performance and operating performance, the recent dramatic crash of the value of stocks of quoted companies on the Nigerian Stock Exchange and other difficulties attending private firms' equity and debt valuation make it compelling for us to rely more on operating indicators in measuring firm performance than on stock valuation. Besides, OECD (2009) cautions against the use of company stock price as a single measure of performance as this does not allow for the benchmarking of a specific firm's performance against the industry or market average. Unlike in other studies that concentrate on stock returns as the key performance variable (Gompers, Ishil & Metrick, 2003; Suchard, Pham & Zein, 2007), we have adopted ROA and PM as the more pragmatic variables for use as proxies for firm performance in Nigeria than stock values. This is especially as the sample of firms used for the study is a mix of both publicly quoted companies and private firms (whose changes in stocks' valuation is relatively more difficult to monitor). The Tobin's Q is equally problematic for application here because of the weakness of data on the market valuation for the equity and debt issued by privately-held Nigerian firms. Therefore, ROA and PM remain preferred measures which should provide reliable results for analysis.

This study made use of cross-cutting sectoral data derived from a total of forty firms. Twenty of these firms were publicly quoted companies selected randomly from the Nigerian Stock Exchange (NSE) population frame. The bulk of information and data about them were obtained from their published annual reports and company sources spanning five years and informed company sources. Other details were sourced from NSE-licensed stock brokers. The remaining twenty firms were judgmentally selected from privately owned

companies spread across ten industry sectors including banking, insurance, construction, manufacturing, hospitality, pharmaceutical, publishing, agro-processing, food and rubber. A composite population frame for privately owned firms was built from information sourced from the Nigerian Federal Bureau of Statistics, Corporate Affairs Commission and various chambers of commerce and industry. The selected firms comprised those that had a minimum workforce of 100 and an asset base of N1billion (approximately US\$6.5million). Information on these companies was derived from their annual financial reports and company sources.

#### IV. RESULTS AND DISCUSSION

##### a) Method of analysis

The ordinary least square (OLS) regression method, Pearson's product moment coefficient of correlation and descriptive statistical tools were used in

testing the degree of relationship between the various variables in the study. In the analyses, the estimated Pearson correlation coefficient, standard errors, t-value and coefficient of determination were present for each of the corporate governance category variables using the selected corporate performance measures of ROA and Profit Margin separately. The t-value was tested using two-tail test. The statistical significance was determined at 5% level. This translates to a 95 percent confidence level that the results are not attributable to chance.

Other necessary statistics are equally presented, namely the coefficient of determination ( $r^2$ ), the adjusted  $r^2$  and the F-statistic.

##### b) Presentation of data

Results for the research variables are presented in Tables 1, 2, 3, 4 and 5.

**Table 1 : Descriptive Statistics for Quoted Firms**

	RFR	CODCORGOV	AUDCOM	BSIZE	CEOSTATUS
N Valid	20	20	20	20	20
Missing	0	0	0	0	0
Mean	4.6500	3.8500	4.0000	14.5500	2.0000
Median	5.0000	4.5000	4.0000	14.5000	2.0000
Mode	5.00	5.00	5.00	12.00 <sup>a</sup>	2.00
Std. Deviation	.58714	1.38697	1.07606	3.61976	.00000
Variance	.345	1.924	1.158	13.103	.000

**Table 2 : Descriptive Statistics for Unquoted Firms**

	UNRFR	UNCODCOR	UNAUDCOM	UNBSIZE	UNCEOSTAU
N Valid	20	20	20	20	20
Missing	0	0	0	0	0
Mean	4.6500	4.3500	3.8500	7.4000	2.0000
Median	5.0000	5.0000	5.0000	7.5000	2.0000
Mode	5.00	5.00	5.00	4.00 <sup>a</sup>	2.00
Std. Deviation	1.08942	.98809	1.53125	2.85436	.00000
Variance	1.187	.976	2.345	8.147	.000



**Table 3 :** Least Squares Regression Results – Corporate Governance Variables and Profit Margin as Firm Performance Proxy

Variables	Estimated coefficient	Standards error	t- value	Sig.
Constant Term	1.751	.831	2.106	.036
BSIZE	.314	.080	3.916	.000
CEOSTATUS	.210	.062	3.378	.001
RFR	-.016	.068	-.238	.812
AUDCOM	.072	.073	.989	.324
CODCORGGOV	.147	.142	2.119	.035
R	.817			
R <sup>2</sup>	.667			
Adjusted r <sup>2</sup>	.623			
F-Statistic	28.151			

a. predictors (Constant), CODCORGGOV, RFR, BSIZE, AUDCOM, CEOSTATUS

b. Dependent Variable: PROFITMARGIN

Source: Researcher's Estimates 2011 (See SPSS Results)

**Table 4 :** Least Squares Regression Results – Corporate Governance Variables and Return on Assets

Variables	Estimated coefficient	Standard error	t- value	Sig.
Constant Term	4.155	.913	4.549	.000
BSIZE	.354	.089	3.972	.000
CEOSTATUS	-.133	.069	-1.920	.056
RFR	-.174	.075	-2.317	.022
AUDCOM	.291	.081	3.604	.000
CODCORGGOV	.033	.077	.430	.668
R	.827			
R <sup>2</sup>	.684			
Adjusted r <sup>2</sup>	.645			
F-Statistic	26.658			

a. Predictors (Constant), CODCORGGOV, RFR, BSIZE, AUDCOM, CEOSTATUS

b. Dependent Variable: ROA

Source: Researcher's Estimates 2011 (See SPSS Results)

## V. RESULTS AND DISCUSSION

### a) Analysis of results

The above tables present the descriptive statistics of the corporate governance variables for both the quoted and unquoted sample firms. The mean reliability of financial reporting (RFR) of the quoted firms is 4.6500 while the mean reliability of financial reporting (RFR) for unquoted firms is 4.6500. The above results indicate that the status of a firm, in terms of the form of

ownership, has no significant effect on the reliability of firms' financial reporting. Put differently, privately-held firms observe roughly the same standards as public or quoted firms when it comes to financial reporting. The presence of corporate governance codes was found to have a mean of 3.8500 for quoted firms and 4.3500 for unquoted firms. This indicates a relatively greater corporate governance codes existence and adherence in unquoted firms than in quoted firms. The mean audit

committee effectiveness for quoted firms was 4.000 and 3.8500 for unquoted firms, signifying that audit committees were more effective in quoted companies than unquoted firms. The results also show that unquoted firms have audit committees just as the quoted firms. The average board size for quoted firms was found to be fifteen, while the board size of unquoted firms was seven. The entire quoted and unquoted firms in the study had separate persons occupying the positions of CEO and board chair. Overall, these results indicate very similar corporate governance behaviors between publicly quoted firms and privately-held firms.

The regression results showed a positive sign for the constant term in the first model, which is consistent with economic theory. The implication of these results is that the dependent variable, return on assets (ROA), is positively affected by the corporate governance variables of board size (BSIZE), chief executive officers status (CEOSTATUS), audit committee (AUDCOM) and code of corporate governance (CCG), while it is negatively affected by the reliability of financial reporting (RFR). This means that an increase in the performance of these independent variables with positive sign will lead to an increase in the dependent variable, ROA, while an increase in the reliability of financial reporting will also lead to some degree of increase in the dependent variable.

The regression results for the second model showed a positive constant term which is also consistent with economic theory. The coefficients of the corporate governance variables of board size (BSIZE), audit committee (AUDCOM), and code of corporate governance (CODCORGOV) are also positive, meaning that an increase in their performance will lead to an increase in the dependent variable, profit margin (PM). The estimated coefficient of chief executive officers' status (CEOSTATUS) and reliability of financial reporting (RFR) are negative. This indicates that there is relationship between these corporate governance variables (being the independent variables) and profit margin (the dependent variable). The implication of this result is that, a change in the performance of these explanatory variables will lead to a reduction in the performance of the independent variable, profit margin.

The adjusted  $r^2$  is 0.623 and 0.645. This means that 62.3 percent and 64.5 percent of the variation on the dependent variables, ROA and PM respectively, can be explained by the explanatory variables of BSIZE, CEOSTATUS, AUDCOM, and CODCORGOV for ROA and BSIZE, AUDCOM, and CODCORGOV for PM, while the remaining 37.7 percent and 35.5 percent can be explained by variables other than the corporate governance variables used in the model. The high values of the adjusted  $r^2$  are an indication of a good relationship between the dependent and independent variables.

These values of adjusted  $r^2$  indicates that the regression line captures more than 64.5 percent and 62.3 percent of the total variation in ROA and PM respectively caused by variation in the explanatory variables specified in the model, with less than 35.5 percent and 37.7 percent accounting for the error terms.

The F-Statistic is 26.658 and 28.151. This is very high and statistically significant at 0.05 levels. This is higher than its theoretical values. The F-Statistic confirms that ROA is statistically related to the independent variables (BSIZE, CEOSTATUS and CODCORGOV) in the model, while PM is statistically related to the independent variables (BSIZE, CEOSTATUS, RFR and AUDCOM).

#### b) Test of hypotheses

*HA1 : There is a significant relationship between reliability of financial reporting of company's transactions and organizational performance.*

The first hypothesis sought to establish if a statistically significant relationship exists between reliability of financial reporting of company's transactions and organizational performance, as measured by ROA or PM. The results show a t-statistic of -0.238 and -2.317 respectively. This confirms that there is a negative relationship between the reliability of financial reporting and organizational performance measured by return on assets (ROA) and profit margin (PM). Therefore, the hypothesis is accepted at 5 percent against ROA and it is insignificant against PM at 10 percent.

*HA2 : There is a significant relationship between the existence of corporate governance codes and organizational performance.*

In this hypothesis, we attempted to establish the existence of a statistically significant relationship between the existence of corporate governance codes and organizational performance. The result shows that the estimated t-values for independent variable in the equation are 2.119 and 0.430 respectively. This indicates a significant relationship between CODCORGOV and ROA, and an insignificant relationship between CODCORGOV and PM. The hypothesis is accepted when measured against ROA at both 5 and 10% and rejected when measured against PM at 5%.

*HA3 : There is a significant relationship between the existence of an effective audit committee and organizational performance.*

For the third hypothesis, we sought to determine if a statistically significant relationship exists between an effective audit committee and organizational performance. The estimated t-values of the equation are 0.989 and 3.604 respectively. The result shows that there is no significant relationship between the existence of an effective audit committee and organizational performance measured by profit margin. However, there is a significant relationship between the existence of an

effective audit committee and organizational performance as measured by return on assets.

*HA4 : There is a significant relationship between board size and organizational performance.*

The fourth hypothesis sought to establish the existence of a statistically significant relationship between board size (BSIZE) and organizational performance as measured by ROA and PROFITMARG. The results show that the estimated t-values for the equation are 3.916 and 3.972 respectively. The above result shows that there is a significant relationship between board size and organizational performance as measured by PM and ROA.

*HA5 : Separation of the office of board chair and CEO significantly affects organizational performance.*

The fifth hypothesis sought to establish the extent to which separation of office of Board chair from that of the CEO affects the performance of an organization. The result indicates that the t-values are 3.378 and -1.920 respectively. The implication of this result is that, there is a significant relationship between the dependent and independent variable at 1% and 10% respectively for PM and ROA. In the light of the foregoing, the hypothesis is accepted.

#### *c) Discussion of findings*

Analysis of results show that the corporate governance variables of BSIZE, CEOSTATUS, AUDCOMM and CODCORGOV have a positive correlation with firm's PROFITMARG, thus confirming the fact that these performance variables are positively influenced by the independent variables in the model, while BSIZE, AUDCOM and CODCORGOV are positively related to return on assets (ROA). Furthermore, the positive sign in the variables' coefficient for the constant term, BSIZE, CEOSTATUS, AUDCOM and CODCORGOV indicates a positive relationship between these corporate governance variables and firm performance measured by ROA and PROFITMARG. The coefficient for RFR was negative indicating that, at a combined level, there is a negative relationship between reliability of financial reporting of firm's transactions as a measure of corporate governance and ROA and PROFITMARG as measures of organizational efficiency.

There is a positive relationship between Board size (BSIZE), CEO status (CEOSTATUS) and corporate governance (CODCORGOV) and it is significant at 1% and 5% respectively for profit margin, just as a positive relationship exists between Board Size (BSIZE) and Audit Committee (AUDCOM), which is also significant at 1% for ROA.

It is clear from the above that there is a positive and significant relationship between board size and the two performance proxies, PM and ROA. This result is in agreement with previous empirical studies (Kyereboah-Coleman, 2007; Liang and Li, 1999; Yermack, 1996).

The relationship between CEO status and profit margin was positive and significant at 5% level, while the relationship between CEO status and ROA was negative, but significant at 1% level. The result of CEO status and PM is in conformity with Kajola (2008), who found a positive and statistically significant relationship between separation of the office of chair of board and CEO. Yermack (1996) equally found that firms are more valuable when different persons occupy the offices of board chair and CEO. The negative relationship between CEO status and ROA is supported by Kyereboah-Coleman (2007), who proved that large and independent boards enhance firm value, and the fusion of the two offices negatively affects a firm's performance, as the firm has less access to debt finance.

The result of the relationship between reliability of financial reporting (RFR) is clear with the two performance proxies – negative and insignificant relationship with PM while the relationship with ROA is significant at 5%. The implication of this result is that, there is an insignificant negative relationship between RFR and PM, while there is a significant negative relationship between RFR and ROA at 5% level of significance. It means that, all things being equal, a unit change in the reliability of financial reporting will lead to a significant change in ROA of the firm.

The implication of the positive relationship between the existence of effective audit committee and the performance proxies, PM and ROA, is that AUDCOM is significantly and positively related to ROA, while AUDCOM is positively, but insignificantly related to PM. This means that, a unit change in the effectiveness of audit committee will lead to an increase in ROA at 5% level of significance, while there is no significant relationship between PM and AUDCOM. The above result is in conformity with the earlier findings of Klein (2002) and Anderson, Mansi and Reeb (2004), which all showed a strong association between audit committee and firm performance. Kajola (2008) however, found no significant relationship between both variables.

The existence of a code of corporate governance (CODCORGOV) was found to be positively related with the performance proxies, PM and ROA. It was significantly positive for PM and insignificant for ROA. The implication of this is that, a unit change in the existence of code of corporate governance will lead to an increase in the profit margin (PM) for the firm.

## **VI. CONCLUSION AND RECOMMENDATIONS**

### *a) Conclusion*

This study examined the relationship between a number of corporate governance variables and organizational performance. It was found that all five corporate governance variables used for the study had positive association with performance. Specifically, it

was established that accurate and reliable financial reporting enhances organizational performance, as good operating results, more than any other factor, strongly motivates managers, just as poor performance alerts all stakeholders on the need to pay closer attention to the operations of the firm. This all-stakeholder attention ultimately translates into positive outcomes for all. However, the burden of ensuring transparency in financial reporting rests with organizational managers, who have better information and knowledge about the firm's operations.

The existence of a company-specific code of conduct built around the contemporary corporate governance principles, which management and employees identify and relate with, helps in strengthening and facilitating the institutionalization of corporate governance. This in turn translates into self-regulating internal controls that induce lowered operating and agency-related costs. The study found that approximately 60% of the firms surveyed had their own home-grown corporate governance codes which were widely used in the firms. It was also found that the firms that had such codes enjoyed relatively higher ROA and PM than those that were yet to institute this in their system.

Strong audit committees were found to have very significant impact on attainment of corporate governance objectives of firms. In particular, boards of firms that had functional and effective audit committees appeared to be better informed about the major financial transactions of the firm, and managers generally were found to comply with board directives more closely. The evidence confirms that audit committees, when constituted mostly of independent or non-executive directors, have a restraining effect on unauthorized actions of executive managers. However, it could not be ascertained whether this conditioning effect impacted negatively on the entrepreneurial role of managers as firms' opportunity seekers.

The number of directors on the board is important in the performance of the oversight function on executive management. The complexity of the firm's business determines to a large extent the size that is appropriate for its operations. Firms in the banking sector statutorily have a specified mix of independent and executive directors. However, except for family controlled ones, most private firms' boards in Nigeria were composed largely of non-executive members. And, since most of the board members simultaneously sit on boards of other firms or are also full-time executive managers of other organizations, the level of commitment or attention payable by each director is somewhat limited. Therefore, the larger the board size, the greater the number of directors available to make up membership of sub-committees, particularly audit and compensation. This facilitates good corporate governance and impacts positively on overall firm performance. Evidence does not therefore support the

argument of Kajola (2008) that an appropriate board size should be less than thirteen. It also does not agree with the suggestion of Sanda, Mikailu and Garba (2005) of ten members as being the right size. These numbers are arbitrary, and may even be counter-productive in the light of the foregoing revelation, and particularly in the cultural context of size in Nigeria.

Separation of the offices of board chair and CEO has a number of positive attributes, particularly in large financial services firms. Monitoring is particularly difficult when there is duality, as the CEO, who has the greatest knowledge of the firm can effectively withhold information of the financial transactions from non-executive board members. The office holders can also effectively divide the board and factionalize it, thereby opening up opportunities for their own unilateral action. Separation promotes checks and balances, and opens the space for objective assessment of all major investment and policy choices of the firm. Critically, it was found that firms with separate offices generally had a higher-than-study average ROA and PM.

#### *b) Recommendations*

Arising from the foregoing conclusions, we recommend that financial reporting breaches should attract a combination of both loss of job and criminal prosecution. This will provide a stronger incentive for compliance by corporate managers, and it is likely to be more effective than the principles-based UK approach which merely emphasizes loss of job or the US approach that is rules-based and focuses mainly on prosecution.

The regulatory agency for companies should develop a checklist with which firms can score themselves on the aspect of compliance with corporate governance codes. This score should become an inherent component of every firm's (public and private) annual financial report. To ensure adherence to the rules of scoring, there should be routine and sentinel auditing of the scoring by the regulatory agency concerned.

It is important to ensure deeper investor engagement and involvement in the affairs of the companies. To facilitate this, firms should set fairly high or competitive standards in the selection of non-executive and independent directors for board committee duties. This is critical if such committees are to have strong impact on governance of the firm.

Board size should be relative to the firm's business needs, scope and complexity. Since no two firms are exactly alike in all ramifications, it is important that an appropriate size be understood to be a function of each firm's circumstances. Setting arbitrary board size benchmarks may therefore be counterproductive.

Separation of office should be the rule for firms, irrespective of the sector, given the consistent positive result this particular corporate governance variable has enjoyed in the literature and has been confirmed in this study. In addition to separation, a distinct office should



be created for a company Risk Auditor. The office holder should report directly to the board chair.

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## APPENDIX : LIST OF SAMPLE COMPANIES

Public/Quoted firms	Private/Unquoted firms
First Bank Plc	Ganapla Nigeria Ltd
Adswitch Plc	Fagma (Bata) Co. Nig. Ltd
University press plc	Posh Industries Nig Ltd
Conoil	Addstar Industries Ltd
Union Bank Plc	Hallcreate Industries Ltd
Intercontinental Bank Plc	Polo Industries Ltd
Guinness Plc	Geeta Plastic
Nigerian Breweries Plc	KLM Manufacturing Co. Ltd
Oando Plc	Berger Paints Ltd
Stanbic IBTC	Monalpex Nig Ltd
Diamond Bank Plc	Pamol Nig. Ltd
Unilever Plc	Niger Mills Ltd
PZ Cussons Plc	United Cement Company Ltd
Julius Berger Plc	Addax Petroleum Ltd
UAC Plc	Golden Guinea Breweries Ltd
Finbank Plc	Champion Breweries Ltd
Dangote Sugar Plc	International Equitable Association Ltd
Oceanic Bank Plc	Nigerian – German Chemical Ltd
Fidelity Bank Plc	Dufil Prima Foods Ltd
Union Dicon Salt Plc	Eleganza Industries Ltd





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# Quality Management System Is a Change Management Process

By Dr. Omer El Tigani  
*Quality Manager, Tanween Co.*

*Introduction* - Having a successful Quality Management System is a very hard job and requires all parties within the organization to work as one hand and all to push in one direction. This is why only few organizations around the globe who managed to go in a successful Quality Journey and get benefited from its enormous advantages. From experience, the Author believes that one of the most effective methodologies for the organization to follow (for a successful Quality Journey) is to approach it as a complete Change Management Process. In the following part, the Author tries to provide the organization with some suggestions for activities or actions to do in light of Kurt Lewin's Change Model.

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# Quality Management System Is a Change Management Process

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## I. INTRODUCTION

Having a successful Quality Management System is a very hard job and requires all parties within the organization to work as one hand and all to push in one direction. This is why only few organizations around the globe who managed to go in a successful Quality Journey and get benefited from its enormous advantages. From experience, the Author believes that one of the most effective methodologies for the organization to follow (for a successful Quality Journey) is to approach it as a complete Change Management Process. In the following part, the Author tries to provide the organization with some suggestions for activities or actions to do in light of Kurt Lewin's Change Model.

## II. WHAT IS QUALITY MANAGEMENT SYSTEM?

Quality Management System (QMS) is a set of interrelated processes that designed to operate to produce products or present services required to meet stakeholders' desires. One or more processes are documented in one Procedures, Work Instructions or Guidelines. Also, an important part of every successful QMS, which is ignored by so many people, is the documentation related to the maintenance and improvement of the QMS itself, such as: Internal Audits, Corrective Actions, Preventive Actions, Document Controls, Quality Objectives, and so on.

## III. QUALITY JOURNEY

Establishing, implementing, maintaining and continually improving the QMS is an endless Journey that the organization should go for; striving to hit the Total Quality Management (TQM) as a destination. But, to convince the organization's top management and all workers to adopt the QMS as a journey and not to deal with it as a project with a definite end; is a huge challenge for the Quality Management Team. Moreover, applying a proper change management process is another big challenge.

## IV. CHANGE MANAGEMENT

Change is inevitable for every successful organization to experience at different points during its

development. Upon the announcement of the top management that the organization embarked on its journey towards Total Quality Management and Business Excellence, a very challenging change process will instigate. Managing the change process is crucial for the success of the QMS. The change agent or the leader of the change is responsible to properly manage the change. When we say "manage", that means the change leader/agent has to tackle all management elements, like: planning, organizing, monitoring, assessing, communicating, motivating, and so on. It's very important to understand that organizational change not only relating to structure, apply new technology, implement new management system; but also it should involve cultural and behavioral changes to all organizational level, including the individual ones.

Kurt Lewin similarly described the Change Process as a Journey with no definite end. He split the change process into three phases: i) Un-freezing, ii) Moving and iii) Re-freezing (Hitt, Porter & Black, 2004, p. 47). Although this theory was originally presented in 1947, but the Kurt Lewin's change model is still relevant. In the following part we will discuss the ideal actions and/or activities that any new QMS should do to ensure a good implementation of Lewin's Change Phases. We will also discuss in detail what the organization should do in each phase to have successful and fruitful Quality Journey at the end. Of course, the time and resources needed for the successful implementation of the ISO Quality Management System (QMS) differs from organization to another; it mainly depends upon so many factors, such as: a) the size of the organization; b) the complexity of the existing management system and the associated processes; c) the distance of the current organizations' system and culture from those desired.

## V. PHASE (I) : UN-FREEZING

This phase is the most important phase, as it represents the trigger of the Change Management Process. In this phase the organization recognizes the need for change and that the current system, structure, technology is not feasible anymore and Change is necessary. The importance of this phase comes from that the recognition and definition of the problem is or more than the half-way of achieving the desired results and/or getting the problem solved. Therefore, the more

that the organization feels the change is necessary, the more that the change desired is priority and the more that the organization is enthusiastic and motivated to successfully achieve the desired change results.

#### a) *Identify Change Drivers*

First of all and the foremost, the top management of the organization (i.e. top management covers all of the senior management team members) must be fully convinced by that the new Quality Management System will definitely improve the overall performance of the organization, enhance its image and position in the marketplace and assist in satisfying its stakeholders. Upon the success of this, top management of the organization must reveal a commitment to the establishment, implementation preservation and continual improvement of the Quality Management System in the organization.

As a result of their commitment, top management shall appoint one person from the top management members of the organization to be the Change Agent, who irrespective of his/her other responsibilities, shall have responsibilities and authorities related to the quality management system, which includes: (a) ensuring that processes needed for the quality management system are established, implemented and maintained, (b) reporting to top management on the performance of the quality management system and any need for improvement, and (c) ensuring the promotion of awareness of customer requirements throughout the organization. (ISO, 2008)

Because of his/her crucial role in the success of the new QMS, the Management Representative (i.e. the Change Agent) should be carefully selected among the top management members. He/She must have, but not limited to, the following characteristics:

- High interpersonal skills;
- High leadership skills;
- Strong personality;
- Ability to build positive relationships with top management and other employees, i.e. the lesser number of enemies he/she has, the greater people involvement the organization's QMS will gain;
- Knowledgeable about Quality Principles and concepts (e.g. ISO 9001:2008 requirements, Excellence Model criteria, etc.);

In addition to the top management member (i.e. the Change Agent), the top management should also prove their commitment by identifying the Quality Governance Committee (i.e. the Change Team), in accordance to the following:

- Consists of one or two staff members from each department.
- Selected members should be self-motivated and enthusiastic to the adoption of the QMS.
- Selected members should be knowledgeable about all or most of operations running in their departments.

- Selected members preferred to be senior staff in their department, so that the organization can get benefit from their positions' influences.
- Selected members are preferred to possess leadership skills and strong personalities.
- Selected members must be well trained or at least have a reasonable background on Quality Management.

#### b) *Arrange for Minimum Resistance*

People always afraid and resist new and unclear things. To clear the ambiguity and uncertainty, a thorough and intensive awareness programs must be held, such as: lectures, seminars, workshops, exhibitions, formal and informal meetings and the like. The awareness programs can be conducted by the Change Agent, Quality Governance Committee member(s), and/or an outsourced expert(s). The main purpose of the awareness programs is to communicate to all employees at the different organizational levels (a) the aim of the Quality Management System; (b) why is it necessary? (c) the advantage it offers to the organization and all stakeholders (including the employees); (d) how it will work; and (e) their roles and responsibilities within the QMS. Employees' awareness will also pave the way for the achievement of the "People Involvement", which is an important principle of the eight Quality Management Principles, i.e. the eight pillars that any successful QMS should construct.

Some sort of reward/punishment systems linked to the performance of the QMS tasks should be established and applied to all employees according to: (a) their cooperation with the Management Representative and the Quality Governance Committee; (b) quality of the performed jobs/tasks; (c) their commitment and meeting deadlines; (d) their initiation and innovative contributions; and (e) so many other criteria related to the QMS for rewarding/punishing employees.

## VI. PHASE (II) : MOVING

This second phase occurs when the needed changes are made. In this phase, people are 'unfrozen' and moving towards the desired changes. Definitely, it's not an easy time for people to exactly understand the changes, therefore, people must be supported by huge efforts to be made in communicating the clear picture of the desired changes, awareness, training and design a proper system to correct mistakes that may take place at this stage. Some actions are recommended to be taken by the organization during this phase to ensure a successful and smooth moving process in its Quality Journey. For a smooth moving phase, the organization should initially identify the gap or the empty spaces between the existing quality management system of the organization and the quality management system required by the targeted international standard (e.g. ISO 9001:2008 Standard requirements). So, the next

step is to compare the organization's existing quality management system, if any, with the requirements of the targeted international standard. The outcome of this step is a report exactly determining the gaps between the existing quality management system of the organization and that required by the targeted international standard as well as proposing the most suitable actions, activities and/or processes to fulfill those gaps.

#### a) *How to Move Towards the Desired QMS*

It's important to mention that the action of gap analysis is not only related to identifying gaps for meeting requirements of a certain international standard or quality certification/accreditation, but also, it can be conducted to diagnose or identify what actions and documentation (e.g. processes, procedures, documents, etc.) need to be performed to meet some stakeholders' requirements internally (e.g. internal processes, internal customers, internal suppliers, etc.) or externally (e.g. external customers, society, governments, etc.).

By considering the findings of the Gap Analysis Report, the organization obtains a clear picture of how its current quality management system compares with the desired QMS. Then, the organization sets an action plan showing the necessary activities that should be done to establish, implement, maintain and continually improve the Quality Management System. The plan should define the responsibilities of the different departments and personnel and set target dates for the completion of activities. But there is a question now; does the 100% completion of the action plan means that the organization's QMS is complete??

The answer is of course 'NO'. The proper implementation of the developed QMS documents is the most important part in the Quality Journey. Actually, implementation of the established QMS is not an action with definite end. It's a long-term process that requires the organization to gather all its strengths and involve everybody in the organization to work hard to adapt himself/herself to the new quality management system.

The implementation of the quality management system may be by parts or may be all at once; depending upon the organization size, culture and the complexity of the processes. The most important thing to say here is that the organization must closely monitor the implementation process and update the implementation plan when necessary so as to ensure that the quality management system is effective and conforms to the desired QMS.

## VII. PHASE (III) : RE-FREEZING

From the Author's point of view, this phase is the hardest phase in the change process as it endeavors to establish stability for the changes made. Generally, this may take time according to the level of change, organization responsiveness and people enthusiasm and how they can beat their previous mental

maps to achieve and maintain the change. The organization should do the best to reinforce the change and ensure that the desired change will survive. Otherwise, organization's people will go back to do what they used to do in the past. This is probably what Kurt Lewin meant by Re-freezing and supporting the desired change to make sure it continues and is not lost.

#### a) *Maintain a Healthy and Continually Improved QMS*

As mentioned before, the implementation is an ongoing process with no definite ends. So, the Author believes that the implementation process should continue and expand as an important portion of the "Re-freezing" Phase. Why? I will tell you, unfortunately, most of organizations concentrate on properly establishing and implementing their operational procedures; neglecting the crucial role that the Processes and Procedures related to the QMS may play in maintaining and continually improving the established QMS. Those Processes/Procedures include, but not limited to, the following:

- Document Management and Controlling;
- Records Management and Controlling;
- Internal Quality Audits Management;
- Corrective Actions Management;
- Preventive Actions Management;
- Top Management Review;
- Managing and Controlling the Non-conforming Products/Services;
- Development and Deployment of Quality Policy;
- Development and Deployment of Quality Objectives; and/or
- Monitoring and Measurement of the Processes.

The importance of having those Processes/Procedures developed and implemented is that they ensure the effectiveness of the QMS as well as its continual improvements. For instance, the internal quality audit is one of the most effective tools that the organization uses to maintain and improve the established QMS. It's an instrument by which the organization checks out the validity, soundness and effectiveness of the implemented quality management system. During the implementation journey and specially if a certain certification or accreditation (e.g. ISO 9001:2008) is targeted, the organization conducts a number of internal quality audits in order to ensure the readiness of the organization for the Certification/Accreditation Audit, which always performed by external auditors who represents the certain certification/accreditation entity. The result of those Quality Audits always highlights the weakness areas as well as the opportunities for improvements.

## VIII. CONCLUSIONS

Eventually, we can conclude that to have a successful Quality Journey, the organization must treat it as a Change Management Process; considering the Change Process Model of Mr. Kurt Lewin Model. Both

Quality Journey and Change Journey are ongoing processes with no end. Yes, there may be lots of rest stops and many opportunities for settling down for a while; but there is no end. Therefore, the essential concept that everybody in the organization must know by heart is that Quality is a Change Process.

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# Credit Rating in India: A Study of Rating Methodology of Rating Agencies

By Kuljeet Kaur, Dr. Rajinder Kaur

*Quality Manager, Tanween Co.*

**Abstract** - Credit rating is the symbolic indicator of the current opinion of rating agencies regarding the relative capability of issuer of debt instrument, to service the debt obligations as per contract. The corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation is known as Credit Rating Agencies. The main objective of the paper is to assess the consistency in rating methodology of each individual rating agency by taking companies belonging to same rating class (within group) including AAA, AA, A and BBB as sample. It has been assessed that all the rating agencies use consistent methodology while assigning a particular rating grade as there is no significant difference in the values of all the ratios which belong to different sets of similarly rated companies in maximum cases.

**Keywords** : Credit Rating, Credit rating agencies, Methodology, Consistency, Solvency ratios, Profitability ratios.

**GJMBR-B Classification** : FOR Code : 150403 , 150499 JEL Code: G24,



CREDIT RATING IN INDIA A STUDY OF RATING METHODOLOGY OF RATING AGENCIES

*Strictly as per the compliance and regulations of:*



# Credit Rating in India: A Study of Rating Methodology of Rating Agencies

Kuljeet Kaur<sup>α</sup>, Dr. Rajinder Kaur<sup>Ω</sup>

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**Keywords** : Credit Rating, Credit rating agencies, Methodology, Consistency, Solvency ratios, Profitability ratios.

## 1. INTRODUCTION

Credit rating is the symbolic indicator of the current opinion of rating agencies regarding the relative capability of issuer of debt instrument, to service the debt obligations as per contract. Credit Rating essentially indicates the credit worthiness of the borrowers and the probability that the borrowers will pay the interest and principal on due dates. A rated security is placed higher in the estimation of investors than an unrated security irrespective of better financial standing or reputation of the Issuer or Sponsor Company. Credit rating provides indicative guidance to the prospective investors on the degree of risk involved in the timely repayment of principal and interest. Thus 'credit rating' is essentially the task of determining the strength and prospects of a security/instrument offered in the market by differentiating it from other securities/instruments with the help of predetermined standards called 'grades' (typically these grades are symbolically represented, viz. A, AA, AAA etc). Credit rating is a source of reliable information for many users as rated instruments speak themselves about the soundness of the company and the strength of the instrument rated by the credit rating agency. Rating helps investors compare the issues by

providing them a short and clear guide. Credit Rating gives superior information about the rated product and that too at low cost, which the investor otherwise would not be able to get so easily. Thus the investor can easily recognize the risk involved and the expected advantage in the instrument by looking at the symbols. The rationale of rating service is to restore confidence in the minds of investors.

Credit Rating Agencies are thus essentially the corporations with specialized functions namely, assessment of the likelihood of the timely payments by an issuer on a financial obligation. In India the rating activities started with the incorporation of the Credit Rating Information Services of India Ltd. (CRISIL) in 1987 which commenced its operations of rating of companies in 1987-1988 and was promoted by Industrial Credit and Investment Corporation of India Ltd. (ICICI) and Unit Trust of India (UTI). The second rating agency Investment Information and Credit rating Agency of India Ltd. (ICRA) was incorporated in 1991 and was jointly sponsored by Industrial Finance Corporation of India (IFCI) and other financial institutions and banks. The other rating agency, Credit Analysis and Research Ltd. (CARE), incorporated in April 1993, is a credit rating information and advisory services company promoted by Industrial Development Bank of India (IDBI) jointly with Canara Bank, Unit Trust of India (UTI), private sector banks and financial services companies. Another rating agency Onicra Credit Rating Agency of India Ltd., which was incorporated in 1993, is recognized as the pioneer of the concept of individual credit rating in India. Further Duff and Phelps Credit Rating (India) Private Ltd. (DCR) was established in 1996, which is presently known as Fitch Ratings India Private Ltd.

One more rating agency SME Rating Agency of India Limited (SMERA), which was a joint venture of SIDBI, Dun & Bradstreet Information Services (D&B), Credit Information Bureau of India Limited (CIBIL), and 11 other leading banks in the country, was established in 2005. A new rating agency, Brickwork Ratings (BWR) which is based in Bangalore was incorporated in 2007. Besides CRISIL (Standard & Poor), ICRA (Moody's), CARE and Fitch, Brickwork Ratings is the fifth Credit Rating Agency to be recognized by SEBI.

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## II. OBJECTIVE OF THE PAPER

The main objective of the paper is to assess the consistency in rating methodology of rating agencies by verifying some of the common factors which determine the bond ratings. Consistency in rating methodology of each individual rating agency is assessed by taking companies belonging to same rating class (within group) including AAA, AA, A and BBB as sample.

## III. METHODOLOGY AND DATA COLLECTION

The paper is based on the secondary data. It is a study of four old SEBI recognized rating agencies including CRISIL, ICRA, CARE and FITCH. The time period of the study is from April 2001 to March 2006. Bond rating methodology has been analyzed corresponding to eight variables, viz. four liquidity as well as solvency ratios and four profitability ratios. The short-term liquidity ratios considered are Current ratio and Quick ratio whereas long-term solvency ratios include Debt-equity ratio and Interest Coverage ratio. Further the profitability ratios selected include Return on Capital Employed, Return on Net Worth, Profit after tax/Total Income (PAT/TI), and Profit before depreciation, interest and tax/Total Income (PBDITA/TI). These financial ratios are selected as these are commonly used by all the credit rating agencies and some of the previous studies also support these ratios.

The data regarding various rating grades has been collected from the reports of the rating agencies including various issues of CRISIL Rating Scan, ICRA Rating Profile and CARE Rating View, websites of these rating agencies and PROWESS database of CMIE. Further, the data relating to various financial ratios relating to the given period has also been collected from PROWESS database of CMIE.

All the agencies use similar basic symbols from AAA to D to rate long-term bonds and debentures, but in order to differentiate their symbols from one another, the agencies use various prefixes/ suffixes. In the present

study only the basic symbols have been used for the sake of simplicity.

For all the rating grades F-values using Analysis of Variance (ANOVA) is calculated for all the eight financial ratios selected. 25 per cent of the total number of manufacturing and trading companies whose debentures and bonds are rated by each rating agency during the time period 2001-02 to 2005-06 are taken as sample. Companies selected for each rating agency are further divided into four groups viz. AAA, AA, A and BBB. These rating categories have been chosen in the light of the fact that majority of rated companies fall under these rating classes. The main core of the analysis is that in case of within group sample companies, variance in mean values of ratios should be minimum. All calculations are done with the help of Statistical Package for Social Sciences (SPSS) version 16.

## IV. RESULTS AND DISCUSSION

The analysis bring to fore the following results:

### a) Comparison of AAA Rated Companies

'AAA' ratings denote the highest credit quality. The rated instrument carries the lowest expectation of credit risk.

The Table 1 mentions the F-values of eight financial ratios of different companies which were assigned AAA rating grade by CRISIL, ICRA, CARE and FITCH respectively. It is clear from the table that as far as companies rated by CRISIL are concerned, none of the financial ratios have significant F-values. Thus, the methodology adopted by CRISIL while assigning AAA rating grade was consistent as similar ratios were considered while assigning equivalent rating grade.

Further the table highlights that the F-values of all the ratios of companies which were assigned AAA rating by ICRA are not significant. This means that there is no significant difference between the similar ratios of similar AAA rated companies by ICRA. This highlights that ICRA has used consistent methodology while assigning AAA grade to different companies during the period of the study.

*Table 1 : Consistency in Bond Rating Methodology in case of AAA Rating Grade*

S. No.	Ratio	CRISIL		ICRA		CARE		FITCH	
		F Values	Sig.	F Values	Sig.	F Values	Sig.	F Values	Sig.
1	Current Ratio	1.14	0.35	0.17	0.85	0.94	0.48	1.81	0.31
2	Quick Ratio	0.52	0.61	0.67	0.55	1.73	0.32	0.90	0.50
3	Debt Equity Ratio	1.32	0.30	1.29	0.34	0.80	0.53	0.51	0.64
4	Interest Coverage Ratio	1.52	0.26	1.07	0.40	0.39	0.71	0.95	0.48
5	Return on Capital Employed	1.31	0.31	1.11	0.39	0.80	0.53	0.41	0.69

6	Return on Net Worth	1.43	0.28	0.49	0.64	0.16	0.86	0.25	0.79
7	Profit after tax/Total Income	0.08	0.93	1.68	0.26	59.189***	0.00	0.16	0.86
8	PBDITA/Total Income	0.70	0.51	1.49	0.30	2.13	0.27	0.15	0.87

\*\*\*Significant at 1 per cent level.

Moreover, as far as companies rated by CARE are concerned, the table highlights that the F-value for Profit after tax/Total income is significant while F-values for all other ratios are not significant. It implies that the Profit after tax/Total income ratio of various companies which were assigned AAA rating by CARE significantly differ from each other whereas all other ratios do not vary significantly from each other. Thus, it can be implied that in maximum cases, the methodology adopted by CARE while assigning AAA rating grade was consistent over the period of the study.

The table further highlights the F-values of AAA rated companies by FITCH. None of the F-values of companies rated by FITCH are significant, i.e., there is no significant difference between the values of all these ratios of different sets of companies which are assigned AAA by FITCH. Thus, there was consistency in methodology adopted by FITCH while assigning AAA rating grade.

#### b) Comparison of AA Rated Companies

The Table 2 depicts the F-values of the eight financial ratios of the companies which were assigned AA rating by all the rating agencies. It is clear from the table that in case of CRISIL, only quick ratio has significant F-value. It means that the quick ratio of different sets of companies which were assigned AA

rating grade by CRISIL is different from each other, while as far as all other ratios are concerned CRISIL had considered similar ratios while assigning AA rating.

The table further highlights that none of the F-values of the eight financial ratios of the companies which were assigned AA rating by ICRA are significant. It implies that there is no significant difference between the values of various ratios of the companies which were assigned LAA rating by ICRA, thus there was consistency in rating methodology of ICRA while assigning AA rating grade to different companies during the given period.

The table further depicts that none of the ratios of AA rated companies by CARE, have significant F-values. This means that the companies which belong to similar AA rating class by CARE have similar ratios thus showing the consistency in rating methodology of CARE over the period of study.

Table also highlights that in case of FITCH, the F-values of the ratios of companies belonging to AA rating class are not significant. This highlights that during the period of the study the financial ratios of the companies belonging to AA rating grade by FITCH were not significantly different from each other. This depicts the consistency in rating methodology of FITCH.

*Table 2 : Consistency in Bond Rating Methodology in case of AA Rating Grade*

S. No.	Ratio	CRISIL		ICRA		CARE		FITCH	
		F Values	Sig.	F Values	Sig.	F Values	Sig.	F Values	Sig.
1	Current Ratio	3.43	0.07	0.68	0.54	1.37	0.38	0.71	0.56
2	Quick Ratio	5.144**	0.02	0.27	0.77	0.90	0.50	0.33	0.74
3	Debt Equity Ratio	1.55	0.25	0.12	0.89	0.72	0.56	1.51	0.35
4	Interest Coverage Ratio	2.00	0.18	1.04	0.41	0.39	0.71	1.30	0.39
5	Return on Capital Employed	2.85	0.10	1.16	0.38	0.40	0.70	2.18	0.26
6	Return on Net Worth	2.28	0.15	0.07	0.93	0.32	0.75	1.57	0.34
7	Profit after tax/Total Income	1.73	0.22	1.71	0.26	0.03	0.97	0.63	0.59

8	PBDITA/Total Income	1.37	0.29	2.22	0.19	0.72	0.55	0.10	0.91
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*\*\*Significant at 5 per cent level.*

c) *Comparison of A Rated Companies*

*Table 3 : Consistency in Bond Rating Methodology in case of A Rating Grade*

S No.	Ratio	CRISIL		ICRA		CARE		FITCH	
		F Values	Sig.	F Values	Sig.	F Values	Sig.	F Values	Sig.
1	Current Ratio	0.56	0.59	1.22	0.36	1.02	0.46	0.56	0.62
2	Quick Ratio	1.01	0.39	2.03	0.21	1.09	0.44	0.44	0.68
3	Debt Equity Ratio	0.90	0.43	0.19	0.83	0.59	0.61	0.11	0.90
4	Interest Coverage Ratio	1.36	0.30	1.52	0.29	3.11	0.19	1.21	0.41
5	Return on Capital Employed	1.09	0.37	1.27	0.35	3.33	0.17	0.57	0.62
6	Return on Net Worth	0.74	0.50	0.69	0.54	3.77	0.15	0.52	0.64
7	Profit after tax/Total Income	0.97	0.41	1.16	0.37	3.85	0.15	0.73	0.55
8	PBDITA/Total Income	0.17	0.85	1.73	0.26	2.39	0.24	7.34	0.07

The Table 3 points out that the F-values of all the ratios are not significant in case of A rated companies by CRISIL, which means that there is no significant difference in the similar ratios of A rated companies. This highlights that during the period of study CRISIL has used similar methodology while assigning A grade to different companies.

The table also highlights that none of the F-values are significant for any of the ratio of companies which were assigned A rating by ICRA. It implies that there is no significant difference between the F-values of ratios which belong to the sets of companies which were assigned A rating by ICRA. Thus, ICRA has used consistent methodology while assigning A rating grade during the period under the study.

The table further clarifies that none of the values are significant for the companies which were assigned A rating grade by CARE. It implies that there is no significant difference in the value of each individual ratio which belongs to the sets of similar rated companies. Thus, the methodology adopted by CARE while assigning A rating grade was consistent as similar ratios were considered while assigning similar rating grade.

As far as the F-values of different ratios of various A rated companies by FITCH are concerned, it is visible from the table that all the ratios have in-significant F-values. Thus it is clear that methodology used by FITCH to assign rating grade A is consistent over the period of the study.

d) *Comparison of BBB Rated Companies*

Table 4 depicts the F-values of eight financial ratios of the companies which were assigned BBB rating by CRISIL, ICRA, CARE and FITCH. The table highlights that in case of CRISIL, all the ratios did not have significant F values. This means that the companies which belong similar BBB rating grade by CRISIL have similar ratios thus showing the consistency in rating methodology of CRISIL, over the period of the study.

Moreover, the F-values are not significant for any of the ratios belonging to BBB rated companies by ICRA. This highlights that during the period of study, the financial ratios of the companies belonging to similar BBB rating by ICRA are not significantly different from each other. This depicts the consistency in rating methodology of ICRA during the period under study.



Table 4 : Consistency in Bond Rating Methodology in case of BBB Rating Grade

S. No.	Ratio	CRISIL		ICRA		CARE		FITCH	
		F Values	Sig.	F Values	Sig.	F Values	Sig.	F Values	Sig.
1	Current Ratio	1.63	0.24	0.26	0.78	2.42	0.24	0.40	0.70
2	Quick Ratio	2.05	0.17	0.26	0.78	3.60	0.16	0.32	0.75
3	Debt Equity Ratio	0.26	0.77	0.44	0.67	1.61	0.34	1.06	0.45
4	Interest Coverage Ratio	3.24	0.08	0.95	0.44	1.07	0.45	2.67	0.22
5	Return on Capital Employed	3.31	0.07	2.13	0.20	1.21	0.41	2.44	0.24
6	Return on Net Worth	3.33	0.07	2.22	0.19	1.53	0.35	4.40	0.13
7	Profit after tax/Total Income	2.07	0.17	3.00	0.13	0.97	0.47	1.67	0.33
8	PBDITA/Total Income	1.30	0.31	0.72	0.53	0.74	0.55	6.55	0.08

Further, the table exhibits that none of the F-values are significant for companies which were assigned BBB rating by FITCH. It implies that there is no significant difference in the values of various ratios of the companies which were assigned BBB rating. This analysis highlights that during the period of study there was consistency in rating methodology of FITCH while assigning BBB rating.

## V. CONCLUSION

It has been assessed from the above analysis that all the rating agencies use consistent methodology while assigning a particular rating grade as there is no significant difference in the value of all the ratios which belong to different sets of similarly rated companies. The only exception to this is PAT/TI ratio of AAA rated companies by CARE and quick ratio of AA rated companies by CRISIL as there is significant difference in these ratios.

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# Enhancing Curriculum and Research in Higher Education with a Strategic Use of Knowledge Management

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**Abstract** - It's very important for organizations to "know what they know" and make maximum use of their knowledge. The problem today is not how to find knowledge, but how to manage it. Being the power house of knowledge in our society, universities and other higher educational institutions have immense knowledge. There are hidden, untapped reservoirs of intelligence that exist in almost every organization. There is a difference in ranking in two universities with identical numbers of faculty, degree programs, expenditures, and enrollment as those surveys conducted by U.S. News and World Report. Milam (2001) suggests that the difference is often intangible value that is added by effective Knowledge Management. Two important aspects of KM in Institution of Higher education is to: i) acquire new knowledge and ii) i) disseminate knowledge. Thus Curriculum development and enhancing research are the premier domain areas of higher education. This is primarily the reason for choosing these two key areas in the present study. Different strategic ways of conservation and dissemination of knowledge such as repository, portal, blog etc. are suggested in this paper, which can be used by institutions of higher education to achieve their ultimate goal of creating new knowledge, i.e., through research and disseminating knowledge through effective curriculum. An overview of technologies used in knowledge management (KM) and other factors such as leadership, structure, role etc. which influence the success of KM in higher education are discussed.

**Keywords** : Knowledge Management, Higher Education, Curriculum Design, Research Process, Perceived Benefits

**GJMBR-A Classification** : FOR Code : 150305 , JEL Code: I23,



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# Enhancing Curriculum and Research in Higher Education with a Strategic Use of Knowledge Management

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**Abstract** - It's very important for organizations to "know what they know" and make maximum use of their knowledge. The problem today is not how to find knowledge, but how to manage it. Being the power house of knowledge in our society, universities and other higher educational institutions have immense knowledge. There are hidden, untapped reservoirs of intelligence that exist in almost every organization. There is a difference in ranking in two universities with identical numbers of faculty, degree programs, expenditures, and enrollment as those surveys conducted by U.S. News and World Report. Milam (2001) suggests that the difference is often intangible value that is added by effective Knowledge Management. Two important aspects of KM in Institution of Higher education is to: i) acquire new knowledge and ii) i) disseminate knowledge. Thus Curriculum development and enhancing research are the premier domain areas of higher education. This is primarily the reason for choosing these two key areas in the present study. Different strategic ways of conservation and dissemination of knowledge such as repository, portal, blog etc. are suggested in this paper, which can be used by institutions of higher education to achieve their ultimate goal of creating new knowledge, i.e., through research and disseminating knowledge through effective curriculum. An overview of technologies used in knowledge management (KM) and other factors such as leadership, structure, role etc. which influence the success of KM in higher education are discussed.

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## I. INTRODUCTION

Today we are living in a knowledge world where intellectual capital plays a very important role. Educational Institutions being the home of intellectual capital can play a vital role in knowledge sharing and disseminating. Equally important is the role of Information and Communication technology in enhancing Knowledge sharing. We have moved from scarcity of information to its abundance due to information and communication technology, internet, television etc. Thus, KM has to play a vital role in transformation of economies into knowledge economies. Knowledge Management (KM) is the process of transforming data into information and

intellectual assets and thus enhancing its value. It also helps in connecting people with the knowledge that they need to initiate action (Kidwell et al, 2001). Infact, KM is making the right knowledge available to the right person/ processor (computer), at the right time in the right presentation for the right cost. (Holsapple, 1999). Its well said by Drucker in 1999 that "We have entered the knowledge society in which the basic economic resource...is knowledge...and where the knowledge worker will play a central role".

Like water, this rising tide of data can be viewed as an abundant, vital and necessary resource. With enough preparation, we should be able to tap into that reservoir -- and ride the wave -- by utilizing new ways to channel raw data into meaningful information. That information, in turn, can then become the knowledge that leads to wisdom (Les Alberthal,1995). Data is processed to provide information, which answers to "who", "what", "where", and "when" questions. Information embodies the understanding of a relationship of some sort, possibly cause and effect. In an organizational context, data represents facts or values of results, and relations between data and other relations have the capacity to represent information. Patterns of relations of data and information and other patterns have the capacity to represent knowledge. Knowledge is a gradual transition from data to information.

## II. LITERATURE REVIEW

Review of literature has been classified into two categories:

Knowledge Management  
Knowledge Management and Education

### a) Knowledge Management

The idea is that information, knowledge, and wisdom are more than simply collections. Rather, the whole represents more than the sum of its parts and has a synergy of its own. Knowledge is broadly defined as information combines with experience, context, interpretation and reflection, is a high value form of information that is ready to business process, decisions and actions. Knowledge refers to the sum of what is known: A familiarity, awareness or understanding gained through experience that, in a business context, guides operations and administrative processes (Coukos and

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Eleni, 2003). Knowledge represents a pattern that connects and generally provides a high level of predictability (Bateson 1988). People attain knowledge while performing specific tasks, taking decisions in crucial situations, and solving the problems. The new knowledge resides in their minds, but that has not been documented in a structured manner leading to its loss most of the time.

A common way to discuss knowledge is by dividing it into two dimensions, explicit knowledge and tacit knowledge.

Explicit knowledge can be expressed in words and numbers and is shared in the form of data, manuals, copyright and patents (Nonaka 1991; Smith 2001). Furthermore, explicit knowledge is carefully codified, stored in a hierarchy of databases and is accessed with high quality and fast information systems. The advantage of this type of knowledge is that it is easily accessible for other people, and can therefore be reused to solve similar problems (Smith 2001). Explicit Knowledge is documented information that can facilitate action. It is easily codified, communicable and transferable. It can be expressed in formal, shared language (Kidwell et al. 2000). Examples include formulas, equations, rules, and best practices.

Tacit knowledge is know-how and learning embedded within the minds of the people in an organization. It involves perceptions, insights, experiences, and craftsmanship. Humans are not always able to express all tacit knowledge and as opposed to explicit knowledge it becomes difficult to share it. Therefore, tacit knowledge is often seen as the iceberg below the surface of the water, i.e. unseen and embedded in our social identity and practice (Spender 1996). Tacit knowledge is deeply rooted in actions and experiences as well as in the ideals, values or emotions that an individual embraces (Nonaka and Nishigushi 2001). Therefore it is hard to formalize it and, difficult to communicate or share it with others. Due to this difficulty in formalizing tacit knowledge, it is often transmitted through face-to-face contact. Furthermore, tacit knowledge is technical or cognitive and is made up of mental models, values, intuitions, insights and assumptions. Technical tacit knowledge is demonstrated when people master a specific knowledge like the one gradually developed by master craftsmen (Smith 2001). Tacit knowledge is personal, context-specific, difficult to formalize, difficult to communicate and more difficult to transfer.

Knowledge Management is generally about the gathering, storing, disseminating and application of knowledge via the know-how and creation of work by the individuals in an organization (Miller, 1999). Bernborn (2001) explains that KM involves the "discovery and capture of knowledge, the filtering and arrangement of this knowledge, and the value derived from sharing and using this knowledge throughout the

organization". It is this "organized complexity" of collaborative work to share and use information across all aspects of an institution which marks the effective use of knowledge. Most business actions require the guidance of both explicit and tacit knowledge (Kidwell et al. 2000). These master craftsmen have years of experience and therefore also a wealth of expertise. Nevertheless, they often have difficulty in articulating the technical and scientific principles behind what they know.

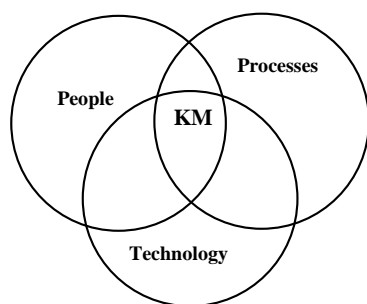
#### *b) Knowledge Management and Education*

Libraries, as well as colleges and universities, are facing major transformational change as digital technology fundamentally alters how services are provided, research is conducted, and learning is enabled. Technology is breaching the traditional disciplinary boundaries through which the institutions are organized and through which information is categorized and accessed (Hawkin, 2000). Knowledge Management is generally about the gathering, storing, disseminating and application of knowledge via the know-how and creation of work by the individuals in an organization (Miller 1999). Knowledge Management principles recognize that it is important for organizations to "know what they know." All institutions inherently store, access, and deliver knowledge in some manner. According to Thorn (2001), the problem is that it is such a "wide open area of study that it is difficult to understand the implications of Knowledge Management for an educational setting".

Realizing the importance of knowledge management, the Indian Government has established National Knowledge Commission (NKC) which was established on 13th June 2005. According to "National Knowledge Commission (NKC) of India: An Overview", the NKC is in particular concerned with the following aspects of Indian education. Higher education: Funding, regulatory frameworks, curricula, private sector participation, academic standards and research are all issues that require urgent attention and sincere resolution with a long term view in mind. Although there has been a great deal of recognition in business world that information and knowledge management can be vital tools in organizations, now the educational administrators and teachers have begun to look at how they might use knowledge management to assist in creating effective learning environment. Higher education institutions have "significant opportunities to apply knowledge management practices to support every part of their mission," explains (Kidwell et al. 2000).

According to Petrides and Nodine (2003) educational institutions however seem to be working in a more complex way, as these organizations are adaptive and are social systems where people co-operate with technologies to evolve processes to achieve common

goals. Just as ecosystems rejuvenate themselves through cycles and seasons, educational organizations grow and revitalize themselves through the knowledge they create, their processes facilitate passing that knowledge on to others and the exchanges and relationships that they foster among people. Knowledge Management therefore, very aptly brings together three core organizational resources – people, processes and technologies – to enable the educational institutions use and share information most optimally and effectively (Figure 2).



Petrides, et al. 2003

Fig. 1 : Key Realms of Knowledge Management

KM in education can therefore be thought of as a framework or an approach that enables people within the institution to develop a set of practices to collect information and share what they know leading to actions that improve services and outcomes (Petrides and Nodine 2003).

Now days educational institutions are facing intense competition because of emerging local and global educational institutions. The Porter's 5 Forces tool is a simple but powerful tool for understanding where power lies in a business situation. This is useful, because it helps you understand both the strength of your current competitive position, and the strength of a position you're considering moving into.

The competitive analysis of education sector based on Michael Porter 5 force model has been performed. There are many external forces like new entrants, bargaining power of customers, threat of substitute courses etc. which are bothering well established educational institutions. The analysis is shown in figure 2:

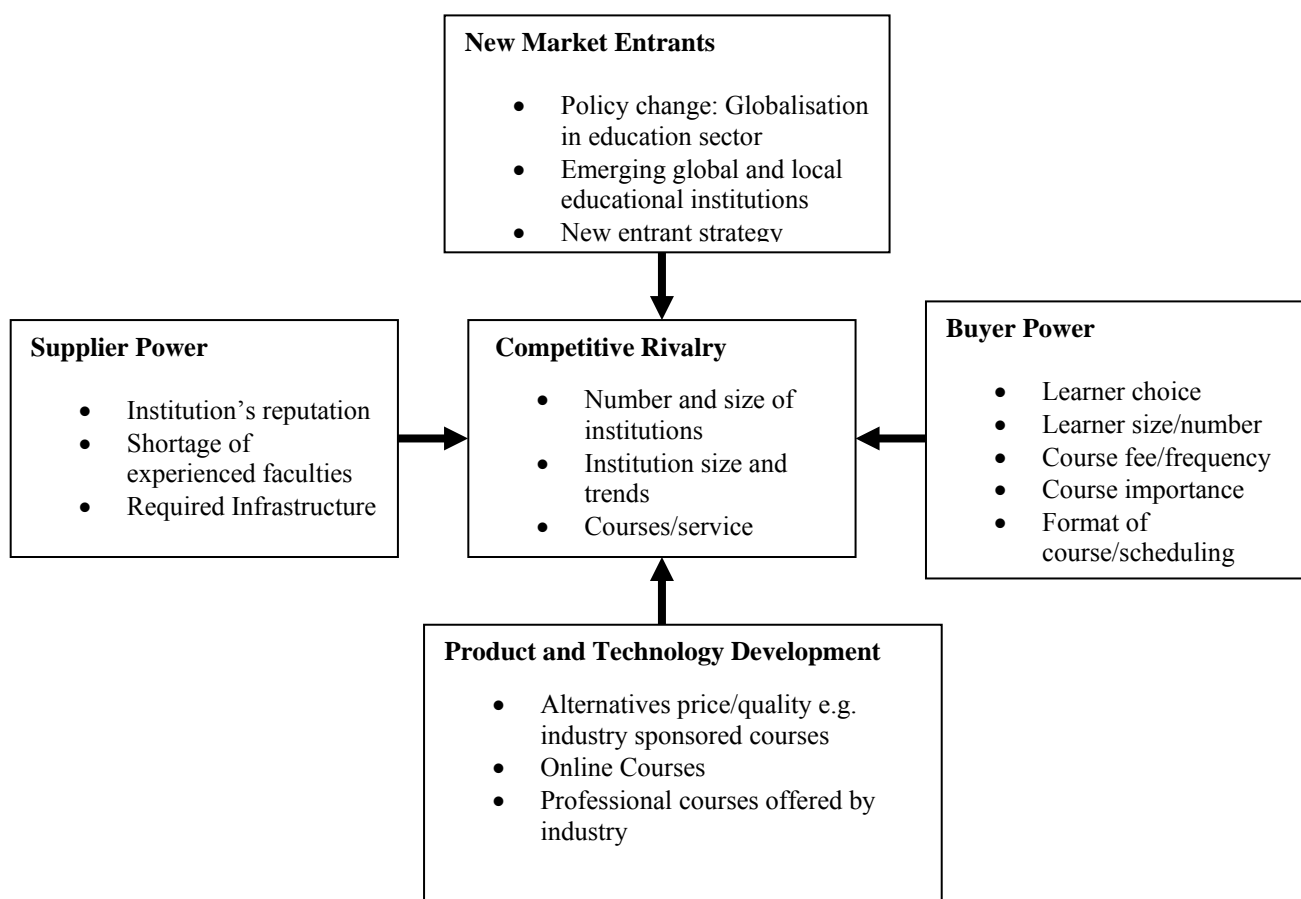


Fig. 2 : Porter 5 Force Analysis



Porter five forces analysis assumes that there are five important forces that determine competitive power in business situation which are discussed in the context of higher education:

*New Market Entrants* : Due to the globalisation the scope of higher educational institutions to have students across the borders is increasing. Infact the universities are opening their campuses in other countries. Already established institutions are now facing competition.

*Buyer Power* : With the emergence of technical era, the new skills demand from the industry specially information and technology (IT) and others are changing rapidly in comparison to the earlier days. Now students also want to take the courses which can place them above par and fetch them good jobs. Students are also concerned about course and fee structure because of the available choices. IHTE cannot go ahead with their regular courses, they have to upgrade their curriculum, new courses and flexibility according to the demand to the industry and learners.

*Product and Technology Development* : Before taking admission the learners are concerned about technology used by the IHTE and courses offered. Institutions should consistently upgrade their systems to remain competitive by having classroom response systems, podcasting, lecture webcasting and like. Supplier Power: The reputation of the institution, infrastructure and quality of the faculties play an important role for the establishment of the institution.

*Competitive Rivalry* : There are number of institutions which offer equally good courses and provide facilities. Then an institution has little power in the situation, because students can go elsewhere. . There is a difference in ranking in two universities with identical numbers of faculty, degree programs, expenditures, and enrollment as those surveys conducted by U.S. News and World Report. Milam (2001) suggests that the difference is often intangible value that is added by effective Knowledge Management.

The objectives of the present study are:

- To identify the KM technologies in IHTE.

- To identify the perceived benefits of KM for Curriculum development.
- To identify the perceived benefits of KM for Research.
- To propose a framework for KM Portal for research and Curriculum Development

### III. RESEARCH DESIGN AND METHODOLOGY

#### a) Research Design

The study uses a descriptive design.

#### b) Sample

The universe of the study is the IHTE in India. The study has taken top institutions covered by AC Nielson, India Today (2009) based on their rankings. The questionnaire were sent to 100 institutions / Universities but 40 were returned and out of these forty questionnaires from twenty eight Institutions/ Universities complete in all aspects have been taken for analysis. The no of respondents from these Institutions are 141. The responses have been collected from two groups: i) senior faculty viz. Heads of Dept/ Professors comprising of Leaders and managers of KM. The other group consists of Junior faculty the users of KM.

#### c) Research Tool

Data has been collected through a survey based on questionnaire based on Likert scale and supported by personal interviews. The questionnaire has been designed according to the following research objectives and it contains these sections:

- KM Technologies and IHTE
- Benefits of KM based portal for Research
- KM Portal for Curriculum Development
- Factors of KM based portal for research and Curriculum development.

The questionnaire has been tested for Reliability and Validity. For validation a pilot review was done for Five Institutions and Twenty five respondents. Analysis of pilot review and inputs from senior faculty through interviews helped in redrafting some of the questions in the survey. The reliability score is given below:

Table 1 : Reliability Index

Table 1 : Item wise Reliability			
S. No.	Factor	No.of Items	Cronbach Alpha
1.	KM technologies	8	.809
2.	Knowledge Management and Research Benefits	9	.870
3.	Knowledge Management and Curriculum Development Benefits	8	.871
4.	Knowledge Management based framework for Research Curriculum Development	16	.878
5.	Total	41	.879

## IV. RESULTS AND DISCUSSION

### a) Knowledge Management Technologies

**Table 2 : ANOVA Results for KM Technologies**

		Sum of Squares	Df	Mean Square	F	Sig.
KMT Internet (such as search engines)	Between Groups	.280	1	.280	1.148	.286
	Within Groups	33.933	139	.244		
	Total	34.213	140			
Intranet (such as internal portals)	Between Groups	6.861	1	6.861	5.153	.025*
	Within Groups	185.054	139	1.331		
	Total	191.915	140			
Extranet (such as knowledge bases)	Between Groups	1.227	1	1.227	.914	.341
	Within Groups	186.744	139	1.343		
	Total	187.972	140			
Data Warehousing	Between Groups	3.004	1	3.004	1.882	.172
	Within Groups	221.819	139	1.596		
	Total	224.823	140			
Document Management	Between Groups	4.921	1	4.921	4.019	.047*
	Within Groups	170.185	139	1.224		
	Total	175.106	140			
Blog	Between Groups	9.678	1	9.678	7.208	.008**
	Within Groups	186.634	139	1.343		
	Total	196.312	140			
Decision Support Systems	Between Groups	5.020	1	5.020	3.766	.050*
	Within Groups	185.250	139	1.333		
	Total	190.270	140			
Artificial Intelligence	Between Groups	3.095	1	3.095	2.278	.134
	Within Groups	188.863	139	1.359		
	Total	191.957	140			
Groupware	Between Groups	7.422	1	7.422	4.673	.032**
	Within Groups	220.791	139	1.588		
	Total	228.213	140			

The results of ANOVA highlight that there is a significant difference in senior management and Junior management in case of: i) Intranet, ii) Document Management, iii) Blogs, iv) Decision support System and Group ware technologies. Thus the present hypothesis cannot be accepted that there is no significant difference amongst the Senior academia, viz. the thought leaders of KM and Junior academia consisting of Assistant Professors and Lecturers, regarding Knowledge Management strategies.

### b) Knowledge Management and Research

Davenport and Prusak (1998) have said, 'Knowledge derives from minds at work'. When employees use knowledge management system, best practices are stored throughout the organization, and each employee accessing the system has similar power to the best employee (Markus, 2002). As stated by Syed Z. Shariq (1997), knowledge increasingly becomes the key strategic resource of the future our need to develop comprehensive understanding of knowledge processes for the creation, transfer and deployment of this unique asset are becoming critical. In the face of a globally expanding and highly competitive knowledge-based economy the traditional organizations are urgently

seeking fundamental insights to help them nurture, harvest and manage the immense potential of their knowledge assets for capability to excel at the leading edge of innovation. Schools (K-12), universities, and training organizations (traditional suppliers of knowledge); and businesses and knowledge based organizations in public sector (growing users of knowledge) are in need of an integrative discipline for studying, researching and learning about the knowledge assets – human intellectual capital and technology.

Just as businesses can improve efficiency and effectiveness of their organizations through sound knowledge management, similarly educational institutions can realize the potential of knowledge creation and the power of knowledge-sharing in order to enhance the learning of pupils, students and staff (Sallis and Jones). The need for universities to make better use of their information assets was stressed in, for example, the National Committee of Inquiry into Higher Education (1977), which called for the development of communications and information strategies in every university in UK by the turn of the millennium (McManus and Loughridge(1999). Knowledge Management is generally about the gathering, storing, disseminating

and application of knowledge via the know-how and creation of work by the individuals in an organization (Miller 1999). Orsenigo (2000) observed the fact that, while Western European countries do not lag behind the US in basic research or in applied R and D, they are comparatively slow to transform research into innovation and ultimately into market success. He identifies the organization of the innovation process as a particular European weakness.

Knowledge management system can create a common gateway to the data, information and knowledge that the people throughout the higher educational institutions need to effectively share information and work together on projects. When employees use Knowledge Management System, best practices are stored throughout the organization, and each employee accessing the system has power similar to the best employee (Markus, 2002).

In academia, most of the tacit knowledge associated with an area of study lies with the faculty who study it. The tacit knowledge of a literature may be what characterizes much of the informal, side-conversations at academic conferences, in discussions between graduate students and their mentors, etc. However, this information has always been informal, word-of-mouth, and not the province of the library or any other organisational unit. However, in commenting on knowledge management in the university context, Cronin and Davenport (2000) suggest that this informal knowledge can be captured by creating a space, and reconstituting the academic village, so that both explicit and tacit information can be combined and shared by faculty.

The challenge is to design a customized, yet flexible infrastructure that supports both individual and collective learning so the organisation, whether a corporation of a university, can adapt to discontinuous change in its operating environment. (Cronin and Davenport, 2000)

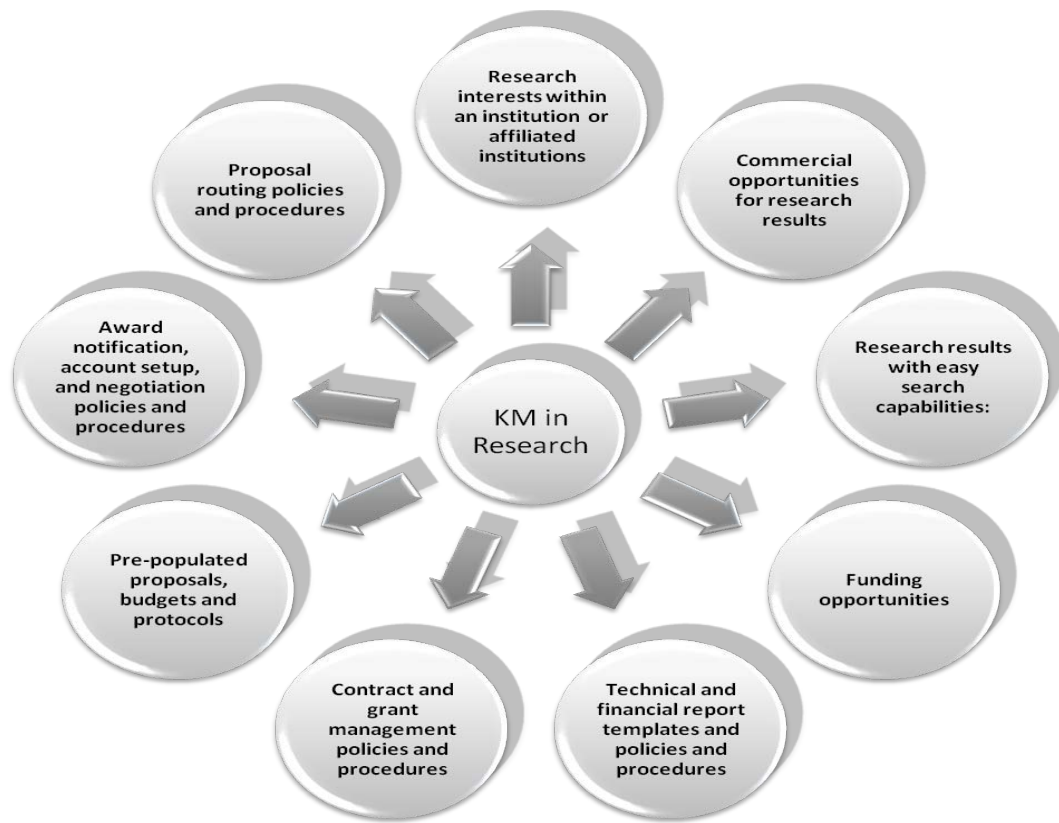
The academic community has been collecting tacit information for years. This tacit information is what one person argued is so valuable to be lost. However, for the most part, these have been "tools" or "aids" that are created by the individual, and this information is not systematized, and certainly not available to a broader community. Knowledge management can play a vital role to acquire, store and disseminate knowledge for the research process in higher technical institutions if implemented. It can be helpful to the novice if the following features are incorporated in knowledge management system:

1. *Research interests within an institution or affiliated institutions* : Every institution has particular areas in which it has niche in research. Research interests of a particular institution can be listed in this section.
2. *Commercial opportunities for research results* : Universities play a key role in several aspects in the process of industrial innovation, and university-

industry links and collaboration are crucial for the efficiency of that process. The list of subjects in which the ISTE is willing to sponsor projects along with their interest areas should be made available in this section.

3. *Research results (where possible) with easy search capabilities* : The list of all the projects undertaken by the research institution is listed in this section. The novice who wants to start a new research can have an impression of work being done. Thesis, articles and case studies can be obtained from previous research work. Industry can see the kind of research being conducted by the institution and can sponsor it also.
4. *Funding opportunities* : The list of all government, non government agencies which are willing to fund the research with their terms and conditions should be provided in this section.
5. *Technical and financial report templates and policies and procedures* : To save the time and maintain the uniformity technical report templates are provided by the institution which will guide the researcher to prepare his/her report.
6. *Contract and grant management policies and procedures* : How the contract can be placed and what procedures are to be followed is described.
7. *Pre-populated proposals, budgets and protocols* : Newcomers can have assistance from this section to draft proposal.
8. *Award notification, account setup, and negotiation policies and procedures* : The list of all the accounts and awards and their details are notified.
9. *Proposal routing policies and procedures* : All the administrative policies related to the proposal routing are encapsulated here which can save precious time of an apprentice.

Research scholars can get a direction/guidance from this section while kicking off new research. All the information regarding initiation of research in the particular institution is compiled.



*Fig. 3 :* KM for Research in Institutions of Higher Education

Effort has been made to capture the factors for enhancing research through KM. The above mentioned variables of research have been merged, coordinated

and ultimately reduced to three main factors. The details of these factors along with variable means and standard deviation are:

S No	Factor	Variables	Mean	Std Deviation
1	Research Initiation	i. Pre-populated proposals, budgets and protocols	4.16	0.77
		ii. Research funding opportunities	4.27	0.76
		Mean Score of Research Initiation	4.19	
2.	Research Finances	i. Contract and grant management policies and procedures.	4.18	0.76
		ii. Technical and financial report templates and policies and procedures.	4.25	0.79
		iii. Award notification, account setup, and negotiation policies and procedures.	4.16	0.71
		Mean Score of Research Finances	4.20	
3.	Research Commercialisation	i. Dissemination of Research results (where possible) and funding organizations (federal agencies, foundations, and corporations) with easy search capabilities.	4.32	0.82
		ii. Commercial opportunities for research results.	4.34	0.81
		Mean Score of Research Commercialisation	4.33	

The result highlights that research commercialisation carries higher weightage and is considered most important. Research Commercialisation is followed by research Financing. Research Initiation has comparatively lower mean score. The study tries to assess the benefits of KM for research.

### Perceived Benefits of KM for Research in Institutions of Higher Education

To find out if the academia confirm the perceived benefits extracted from the literature, proposed by the think tanks of Knowledge management, a survey was conducted. The perceived benefits considered are:

- i. Latest research can give good inputs to improve the curriculum development process

- ii. Quality research at the institution level will cultivate future scientists
- iii. Increased competitiveness and responsiveness for research grants, contracts, and commercial opportunities.
- iv. Reduced turnaround time for research.
- v. Minimized devotion of research resources to administrative tasks.
- vi. Facilitation of interdisciplinary research.
- vii. Leveraging of previous research and proposal efforts.
- viii. Improved internal and external services and effectiveness.
- ix. Reduced administrative costs.

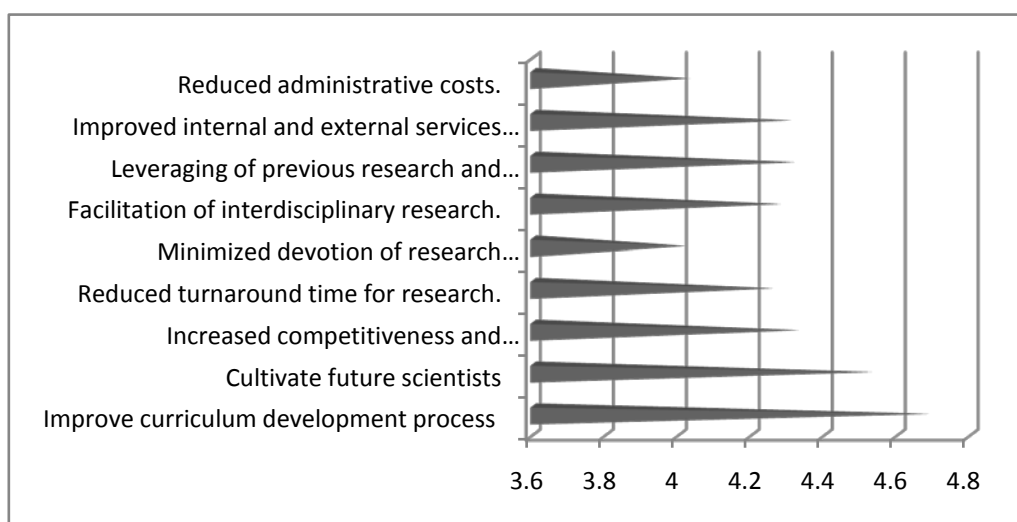


Fig. 4 : Perceived Benefits of Research

There was an overwhelming support from the academia for the knowledge management. The mean score of the following benefits have been the highest

- i. Latest research can give good inputs to improve the curriculum development process
- ii. Quality research at the institution level will cultivate future scientists

### c) Knowledge Management and Curriculum Development

There is a need for the educational institutions to offer stakeholder, i.e., learners to offer effective learning environment, state-of-art research, dynamic and industry oriented curriculum, which can place them above par. Although there has been a great deal of recognition in the corporate world that information and knowledge management can be vital tools in organizations, now the education administrators and teachers have begun to look at how they might use knowledge management to assist in creating an effective learning environment. Higher education institutions have "significant opportunities to apply

knowledge management practices to support every part of their mission," explains (Kidwell et al., 2001).

According to Petrides and Nodine (2003) educational institutions however, seem to be working in a more complex way, as these organizations are adaptive and are actually social systems where people co-operate with technologies to evolve processes to achieve common goals. One of the main aims of any ISTE is to impart knowledge to the students in the most efficient way, meet the needs of the students more effectively and improve the outcomes of the students. All of this can be accomplished by developing an ingenious curriculum. Curriculum development is the process whereby values are interpreted and arranged into learning experiences (Wiles and Bondi, 2006). Richards (2001) describes curriculum development as "the range of planning and implementation processes involved in developing or renewing a curriculum". Curriculum is a total plan for learning. All plans consist of a vision that interprets societal needs and a structure that translates those values into learning experiences for learner (Gupta



and Earnest, 2008). Curriculum can also be defined as an educational path, when discussing the technical education system (Balu, 1982).

The learning should always be planned and guided. The educator should always plan in advance what he/she is seeking to achieve and how will he go

about it. To facilitate the academia in devising the curriculum, the template of design and guidelines are provided and also previous lesson plans can be provided for the reference in the knowledge management system in the institutions of higher technical education.

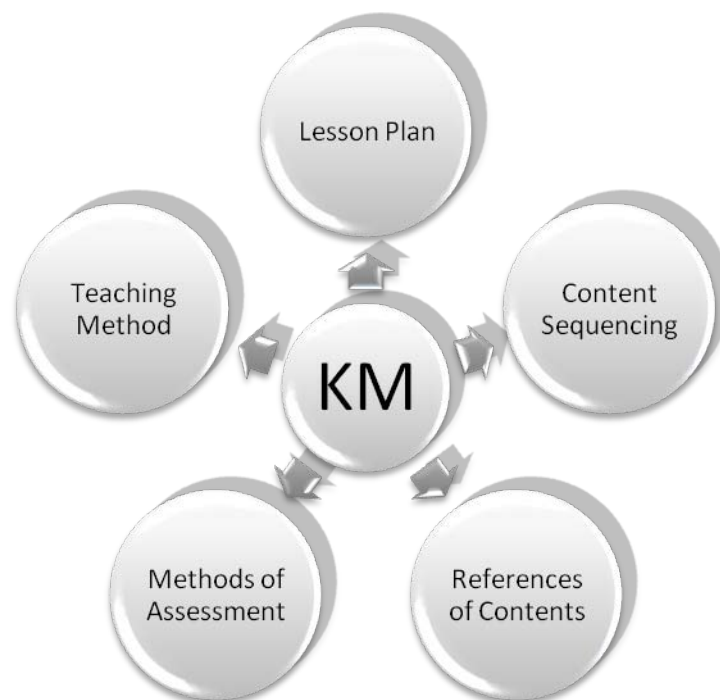


Fig. 5 : Knowledge Management and Curriculum Development

*Lesson Plan* : The educator outlines the course and kind of goals are addressed in the course.

*Content Sequencing* : The educator should determine the scope and sequence of the content in advance to improvise the dissemination of knowledge.

*Reference of contents* : All the instructions and help required by the educator to find the references is provided.

*Teaching Method* : There are various kinds of teaching methods which can be used by the educators like lecture, lecture with discussion, brainstorming, videotapes, class discussion, small group discussion, case study, laboratory/practical classes, role playing, problem based learning, worksheet/assignment. Their way of implementation, pros and cons are explained in this section.

*Methods of Assessments*: Selecting appropriate means for assessment is an essential step in assessment process. There are many different ways to assess the learning of the student:

- Direct versus indirect measures,
- Objective versus performance assessment
- Embedded versus add-on assessment
- Local versus Standardized assessment

By taking into account the number of learners and

considering the nature of the subject, the educator should decide the method of assessment. Different prospects and guidelines about assessment methods are given in this section.

*Interdisciplinary Curriculum* : Writing in the Chronicle of Higher Education, Jeffrey N. Wasserstrom (2006, January 20) complains that interdisciplinarity has become "so fuzzy that a university's commitment to it is close to meaningless" (p. B5). If programs claiming to be interdisciplinarity are fuzzy in their understanding of what interdisciplinarity is, then their curriculum will not provide the proven educational outcomes for students that interdisciplinary approach promises. Klein (1999) argues in Mapping Interdisciplinary studies that interdisciplinary curriculum must make sense locally and yet, to achieve quality, also ought to be informed by research and the national conversation (p. 16). Designing interdisciplinary curriculum, therefore, requires familiarity with the extensive literature on interdisciplinary approach. The IHTEs can share their ideas of interdisciplinary curriculum with educators through KM portal.

*Academia Guidelines and Assistance*

Every institute has its own set of rules, guidelines and recommendations which can be

elucidated in this segment with the following subdivisions given below:

- Teacher's Guidelines and Assistance
- Curriculum Development Guidelines
- Effective Teaching Styles
- Educator's Support Model
- PhD. Supervision
- Do's and Don't

### KM Factors for Enhancing Curriculum development

The variables identified through literature review and through interviews for enhancing Curriculum development have further been clubbed and reduced to three factors, viz. i) Curriculum Design and Improvisation, ii) Faculty Development and Knowledge bank and Corporate Feedback, Assessment Techniques and Lessons Learned

S No	Factor	Variables	Mean	Std Deviation
1	Curriculum Design and Improvisation	i. Curriculum revision efforts that include lesson plan, content sequencing, reference of contents and so forth.	4.56	.60
		ii. Content modularized and arranged to facilitate interdisciplinary curriculum design and development.	4.25	.65
Mean Score of Curriculum Design and Improvisation			4.40	
2.	Faculty Development and Knowledge bank	i. Faculty development opportunities, information related to teaching and learning with technology, outcomes tracking, technology overviews, and so forth.	4.54	.63
		ii Information in each disciplinary area, including updated materials, recent publications, applicable research, and so forth.	4.56	.62
		iii. New faculty with guides for developing curriculum, working with senior faculty, establishing effective teaching styles, advising do's and do not's, supervising PhD students and so forth.	4.39	.79
Mean Score of Faculty Development and Knowledge bank			4.50	
3.	Corporate Feedback, Assessment Techniques and Lessons Learned	i. Assessment techniques, including best practices, outcomes tracking and research.	4.43	.70
		ii. Analyzed student evaluations updated each semester for lessons learned and best practices for all faculty.	4.40	.71
		iii. Corporate relationships to identify curriculum design advisory task forces, guest speakers, adjuncts, case study sites and so forth.	4.45	.76
Mean Score of Corporate Feedback, Assessment Techniques and Lessons Learned			4.43	

The results highlight that Faculty Development and Knowledge bank factor has the highest mean score, followed by Corporate Feedback, Assessment Techniques and Lessons Learned

### Perceived Benefits of KM for Curriculum Development

According to a survey done by McAdam and McCreedy (1997), the perceived benefits of KM are the four top scoring items which are: improved quality, efficiency, management learning and reduced costs. They are seen to relate to improving internal efficiency within the organizations. Improve consistency and competitiveness through reduced costs, were seen as being associated with efficiency.

A survey was conducted to find out according to academia which could be the perceived benefits if Knowledge Management System (KMS) is implemented in the view of curriculum. The academia was asked to rank the following perceived benefits using a 5-point

Likert scale. The mean values for the usages were calculated on the following from highest to lowest scale that is from 5 = Very High and 4 = High to 2 = Low and 1 = Very Low.

### Perceived Benefits :

- Good curriculum will enhance the research.
- An industry oriented and latest curriculum will produce competent professionals
- Enhanced quality of curriculum and programs by identifying and leveraging best practices and monitoring outcomes.
- Improved speed of curriculum revision and updating.
- Enhanced faculty development efforts, especially for new faculty.
- Improved administrative services related to teaching and learning with technology.

- Improved responsiveness by monitoring and incorporating lessons learned from the experiences of colleagues, student evaluations, and corporate or other constituent input.
- Interdisciplinary curriculum design and development facilitated by navigating across departmental boundaries.

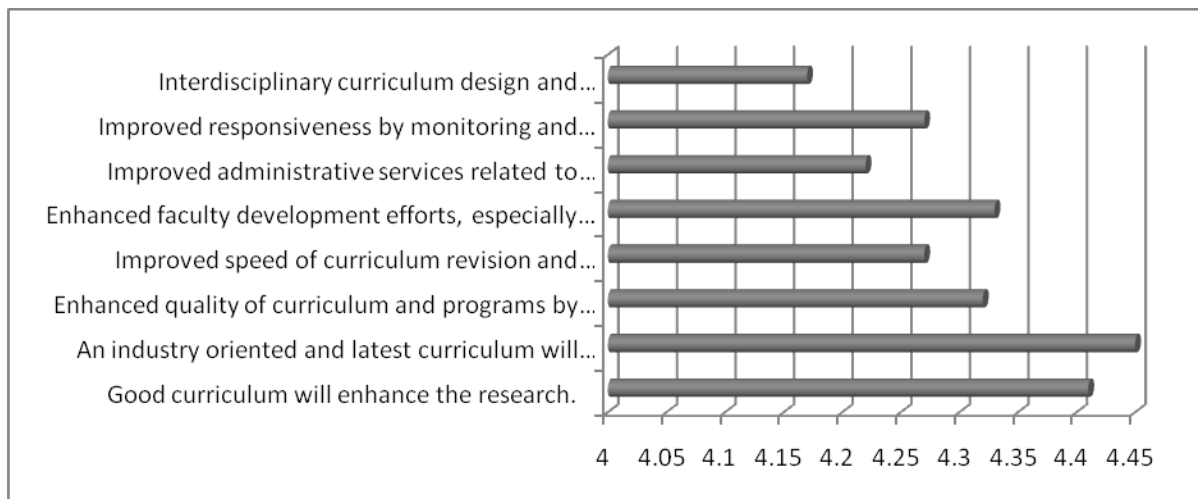


Figure 6: Perceived Benefits of Curriculum development

As explained in Fig.5 top priority has been given by academia to an Industry oriented and latest curriculum will produce competent professionals. This is followed by Good curriculum will enhance the research. Enhanced faculty development efforts, especially for new faculty was ranked at no. three. Lower ranks have been accorded to Interdisciplinary curriculum design and development facilitated by navigating across departmental boundaries and Improved administrative services related to teaching and learning with technology.

Knowledge is generated within the organization or outside which can be useful. The organization should make an effort to acquire that knowledge. In universities or higher educational institutions, it can be accomplished by dedicating resources to detect and obtain external knowledge. Such teams can focus on research institutions which are the power house of new knowledge. Faculties should be encouraged to participate in project teams with external experts. They can engross their knowledge and can gain from their experience.

The Academia perceives that Research will enhance Curriculum development process. This has the highest rating. This was followed by ability of research in cultivating future scientists. Another perceived benefit rated higher was 'reduced turnaround time for research' and 'facilitation of interdisciplinary research'. Conventional research education assumes to be on-campus and full-time, and prepares students for academic or other full-time research work often with single supervisor, but now time has come when focus needs to be given to interdisciplinary work, preparing Research scholars for future, working in teams. Another important point is that Low ranks were given to

'Reduced administrative costs' and 'minimized devotion of research resources to administrative tasks'.

## V. KM BASED FRAMEWORK FOR RESEARCH AND CURRICULUM DEVELOPMENT

On the basis of inputs from academia the following framework has been designed for enhancing research and Curriculum in IHTE.

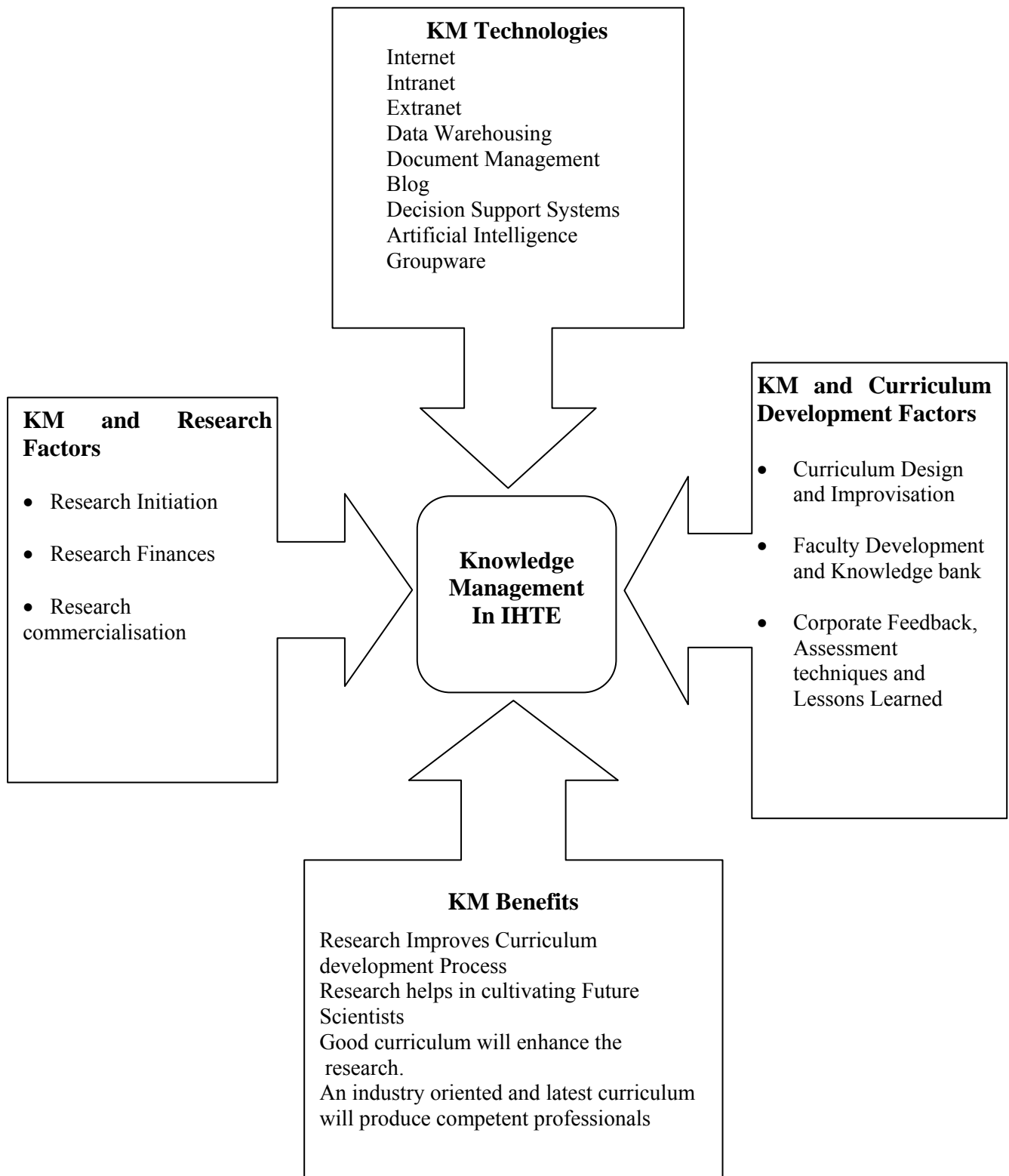


Fig 7 : KM Based Framework for Research and Curriculum development

**KM factors for enhancing Research** include : Research Initiation, Research Finances and Research Commercialisation. Research initiation through KM portal will help in providing Pre-populated proposals, budgets and protocols and Research funding opportunities, i. e. support from various funding agencies. These will help academia to devote less time in searching and facilitate writing of more research proposals. This can be advantageous for a person to initiate research activity at a faster pace in less time. Research Finances provide details about Contract and grant management policies and procedures supported by Technical and financial report templates and policies and procedures. Along with these there could be award notification, account setup, and negotiation policies to reduce procedural complications. The actual worth of research can be known by Research commercialisation. This determines the worth of research and its utility for fellow academicians and society.

**KM factors for enhancing Curriculum development** include : i) Curriculum Design and Improvisation with details of lesson plan, content sequencing, reference of contents and so forth. It also comprises of content modularization to facilitate interdisciplinary curriculum design and development. ii) Faculty Development and Knowledge bank comprises of: Faculty development opportunities, information related to teaching and learning with technology, information in each disciplinary area, facilitating new faculty with guides for developing curriculum, working with senior faculty, establishing effective teaching styles. Proper sequencing of lesson plans can facilitate even if the teachers are changing courses taught as these will assist in providing details of course coverage and contents of the courses. Iii) Corporate Feedback, Assessment Techniques and Lessons Learned the third factor comprises of Assessment techniques, including best practices, outcomes tracking and research, Analyzed student evaluations updated each semester for lessons learned and best practices for all faculty and Corporate relationships to identify curriculum design advisory task forces, guest speakers, adjuncts, case study sites and so forth. Thus KM technologies can help in improving Curriculum development.

**KM Technologies** : These have to be assisted by KM technologies. The KM technologies included in the study are: Internet, Intranet, Extranet, Data Warehousing, Document Management, Blog, Decision Support Systems, Artificial Intelligence and Groupware.

The **KM benefits** achieved would include: improves Curriculum development Process through research and cultivating Future Scientists. Good research enhances Curriculum development but good curriculum will also enhance the research and an industry oriented and latest curriculum will produce competent professionals. Thus the overall results will

better academic performance, improved research activities, interdisciplinary research, improved teacher-learner relation and enhanced societal benefits through commercialisation of research.

## VI. CONCLUSION

According to Kidwell et al (2000), implementing KM in higher education is as vital as it is in the corporate sector. KM can lead to better decision-making capabilities, reduced "product" development time (i.e. curriculum development and research), improved academic and administrative services and reduced costs. Kidwell et al., 2000 have emphasized that using Knowledge Management techniques and technologies in higher education is as vital as it is in the corporate sector. If done effectively, it can lead to better decision-making capabilities, and reduced "product" development cycle time. Colleges and universities have significant opportunities to apply Knowledge Management practices to support every part of their mission—from education to public service to research. But implementing Knowledge Management practices wisely is a lesson that the smartest organizations in the corporate and not-for-profit sectors are learning all over again (Kidwell et al. 2000).

There is a difference in ranking in two universities with identical numbers of faculty, degree programs, expenditures, and enrollment as those surveys conducted by U.S. News and World Report. The difference is often intangible value that is added by effective Knowledge Management. The results of the present study support this as KM will help in Improving Curriculum development Process and enhancing research through KM technologies will help in cultivating Future Scientists. Moreover good curriculum will enhance the research and an industry oriented and latest curriculum will produce competent professionals. Thus KM technologies may be used for enhancing research activities in the organisation and enhanced research will help in improving Curriculum development. Thus knowledge management Institutions/ universities will be better able to increase student retention and graduation rates; retain a technology workforce in the face of severe employee shortages; expand new web-based offerings; work to analyze the cost effective use of technology to meet more enrollment; provide information, not just data, for management; and compete in an environment where institutions cross the national borders to meet student needs anytime/anywhere (Milam2001).

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## Job Satisfaction in Private Banking Sector of Pakistan

By Yasir Hassan, Kashif-ud-din, Zark Mir, Khalil Ahmad, Abdul Mateen,  
Waseem Ahmad, Ahmad Bilal Nasir

*University of Lahore, Pakistan.*

**Abstract** - The aim of this study was to examine job satisfaction level in private banking sector of Pakistan. Job satisfaction is the favorableness or un-favorableness with which employees view their work. The employee's satisfaction and retention are critical to the conduct of business in the competitive marketplace and business environment today, and the banks enjoy no exception to it. The commercial banks have embarked on different management strategies as resorts to promote employees job satisfaction and thus employee retention. The paper discussed factors that are point of high concern to employees regarding their satisfaction. These factors are job security, organizational operations, working condition, incentives and rewards. The result of study reveals that most of the employees working in private banks are satisfied with their work, management functions and job positions.

**Keywords** : *Job Satisfaction, Managers Characteristics, Employment Satisfaction*

**GJMBR-A Classification** : *FOR Code : 150203, 150305 JEL Code: G21, M12,*



JOB SATISFACTION IN PRIVATE BANKING SECTOR OF PAKISTAN

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# Job Satisfaction in Private Banking Sector of Pakistan

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**Abstract** - The aim of this study was to examine job satisfaction level in private banking sector of Pakistan. Job satisfaction is the favorableness or un-favorableness with which employees view their work. The employee's satisfaction and retention are critical to the conduct of business in the competitive marketplace and business environment today, and the banks enjoy no exception to it. The commercial banks have embarked on different management strategies as resorts to promote employees job satisfaction and thus employee retention. The paper discussed factors that are point of high concern to employees regarding their satisfaction. These factors are job security, organizational operations, working condition, incentives and rewards. The result of study reveals that most of the employees working in private banks are satisfied with their work, management functions and job positions.

**Keywords :** *Job Satisfaction, Managers Characteristics, Employment Satisfaction*

## I. INTRODUCTION

A major part of man's life is spent in work which is a social reality and social expectation to which man seem to confirm. Even then only economic motive has never satisfied men. It is always of greater interest to know why men work and at which level and how he/she satisfied with the job. Job satisfaction refers to an individual's positive emotional reactions to a particular job. It is an affective reaction to a job that results from the person's comparison of actual outcomes with those that are desired, anticipated, or deserved.

The concept of job satisfaction has emerged and now there are several factors contributing to it which are monetary and non-monetary. Job satisfaction is the favorableness or un-favorableness with which employees view their work and it is affected by both the internal and external environment of the organization. Job design affect the job satisfaction, as jobs that are rich in behavioral elements such as variety autonomy, task unimportance and feedback contribute to employee's satisfaction. Similarly the employee's acceptance by the work group is important to job satisfaction. To sum up each element of the organization environment and system can contribute to

or detract from job satisfaction (William & JR. Keith, 2000).

The banking industry in Pakistan has been characterized by many problems that have badly affected the loyalty of the customers and employees. The employee's satisfaction and retention are critical to the conduct of business in the competitive marketplace and business environment today, and the banks enjoy no exception to it. The commercial banks have thus embarked on different management strategies as resorts to promote employees job satisfaction and thus employee retention.

Judge and his colleagues (Judge & Bono, 2001; Judge, Locke, Durham, & Kluger, 1998) found that a key personality trait, core self-evaluation, correlates with (is statistically related to) employee job satisfaction. They also found that one of the primary causes of the relationship was through the perception of the job itself. (Judge, Heller, & Mount, 2002).

## II. LITERATURE REVIEW

The achievements of individuals and organizational goals are independent process linked by employee work motivation. Individuals motivates themselves to satisfy their personal goals, therefore they invest and direct their efforts for the achievements of organizational objectives to meet with their personal goals also. It means that organizational goals are directly proportion to the personal goals of individuals. The Organizational climate is positively related to the job satisfaction and organizational commitment. The higher organizational climate will lead to higher job satisfaction and more organizational commitment (Pati & Reilly, 1977; Mahajan, Churchill, Ford, & Walker, 1984; Putti & Kheun, 1986; Ruth, 1992; Gratto, 2001; Clercq & Rius, 2007).

Employees' attitude towards their organization which has great impact towards their working ways and contributions, in consequence organizational climate causes organization performance because this relates directly to employees' motivation. Employee's perception to organization as defined in six factors Stringer (2002).

To have a satisfied, motivated, less stressed performing workforce an organization must have consistency amongst its structure, system, people, culture and good fit with the strategy. Impact of different

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factors on job satisfaction has been analyzed in the literature. Job satisfaction involves several different spheres such as satisfaction with pay, promotion opportunities, fringe benefits, job security and the importance/challenge of the job. (Nguyen, Taylor, & Bradley, 2003). (Iaffaldano&Muchinsky, 1985). Thus, these authors concluded that the presumed relationship between job satisfaction and performance was a "management fad" and "illusory." This study had an important impact on researchers, and in some cases on organizations, with some managers and HR practitioners concluding that the relationship between job satisfaction and performance was trivial.

Factors such as pay, the work itself, supervision, relationships with co-workers and opportunities for promotions have been found to contribute to job satisfaction. (Opkara, 2002). There is a significant difference in the job satisfaction levels of employees based on their income. Employees earning the lowest income report significantly lower levels of job satisfaction relative to the other income groups. Job autonomy, leadership behavior, social relations and the job itself are also among the important factors of job satisfaction (Dawson, 1987). Karatepe et al, (2006) argued that job satisfaction back-up is the role to keep employees in long term employment. There are six attributes, Work itself, Supervision, Colleagues, Compensation, Promotions, and Overall job security that appear to contribute to employee's job satisfaction (Lehal, 2004). The higher the education level the lower is the job satisfaction. (Nguyen, Taylor, & Bradley, 2003)

Kennedy and White (1997) found that the employee training programs within the organization for the particular job were revealed to be significant in improving and developing the level of service rendering by an organization as the skills of employees boosted with the particular training and ultimately it increased customer satisfaction and attachment with the business.

Mohanty (2009) presented specialized practices for retaining employees within organization. He stated that practices like open communication, employee rewards programs, career development programs performance based bonus, Recreation facilities and gifts at some occasion can help organization to retain potential human resources. He further added that open communication keep employees up-to-date on key issues and enable them to know that their opinions and that management is fully interested in their inputs, likewise, recreation facilities help staff away from stress.

The best way to improve productivity is by striving for the shared goals of employees and managers. By allowing worker input into developing the mission statement, establishing policies and procedures, determining perks, etc., you can improve communication and increase morale and satisfaction. For the success of banking, it is very important to manage human resource effectively and to find whether its employees are satisfied or not Workforce of any bank

is responsible to a large extent for its productivity and profitability. Efficient human resource management and maintaining higher job satisfaction level in banks determine not only the performance of the bank but also affect the growth and performance of the entire economy (Thakur, 2007).

### III. METHODOLOGY AND EMPIRICAL RESULTS

A structured questionnaire survey was conducted. The required information was collected from employees of private banking sector of Pakistan. A sample of 300 people was taken from private banks that were randomly selected from Lahore city and two other cities that are Sialkot and Daska. Questionnaire is mainly comprised of quantitative questions starting from their work, career and development, following with the relationship with managers and co-workers, about working conditions and compensation and then some questions regarding their bank and its corporate culture. The questionnaire includes close-ended questions and they were on likert scale of utilizing a five point categorical.

### IV. EMPIRICAL RESULTS

Following is the table which shows gender wise association with research questions.

Sr. No.	Questions	Gender		Total	P-values
		Male	Female		
1	I was given enough feedback on my performance.	230	56	286	0.001
2	I am satisfied with the job opportunities in the company.	229	55	284	0.000
3	Promotion goes to those who most deserve it.	230	56	286	0.001
4	I feel free to talk openly and honestly with members of my work group.	231	56	287	0.002
5	My workload is reasonable.	234	56	290	0.101
6	I feel free to contact my Manager / Supervisor as & when needed.	229	56	285	0.033
7	My manager is an effective leader (i.e. shows behavior that is consistent, positive & motivating).	227	55	282	0.824
8	Deadlines are realistic.	230	54	284	0.809
9	I am satisfied with the recreational activities provided by the bank, e.g. picnics and annual dinner.	232	55	287	0.824
10	I am satisfied with the bank's people programs, such as birthday announcements, valuable employee of the month, bulletins and newsletter, etc.	233	55	288	0.782

This table shows different research questions and their association with gender. First question is about enough feedback on performance. Total respondents who answered this question were 286 in which 230 were male respondents and 56 were female respondents. Its result shows that the feedback on performance is highly dependent on gender. Next question was answered by 284 total respondents from which the amount of male and female were 229 and 55 respectively. Its results show that satisfaction with job opportunities in the bank is highly dependent on gender of the employee. Third one is promotion which was answered by 230 male and 56 female respondents. Its result shows that the promotion of a bank employee is highly dependent on gender. Now the next question is about feels free to talk with members of work group which was answered by 231 male respondents and 56 female respondents and its result shows that it is dependent on gender that an employee feels free to talk openly and honestly with members of work group. Next question is about reasonable workload. Total 290 respondents answered that question from which the amount of male and female were 234 and 56 respectively. Its results shows that Reasonability of workload is also highly dependent on gender. Now there is a question about feel free to contact manager so total 285 respondents answered that question from which 229 were male and 56 were female and its result shows that an employee feels free to contact manager / supervisor is not dependent on gender. Now the seventh question was asked by respondents about effective leadership of manager and total 282 answered that question and its result shows that the effective leadership of an employee's manager is not dependent on gender of the employee. The eighth question which was answered by 230 male and 56

female respondents and its result shows that Realness of deadlines is not dependent on gender. Now there is second last question which was answered by 232 male and 55 female respondents and its result shows that it is not dependent on gender that a banking sector employee is satisfied with the recreational activities provided by the bank. Last question is about the satisfaction with the bank's people program which was answered by total 288 respondents from which 233 were male and 55 were female. Its result shows that with the bank's people programs is also not dependent on gender.

Following is the table which shows the association of age with different research questions.

Sr. No.	Questions	Age					Total	P-values
		Less than 20 Years	20-29 Years	30-39 Years	40-49 Years	50 Years and more		
1	My job is challenging and interesting.	3	187	75	23	5	293	0.977
2	I am getting enough relevant training for my present job.	3	187	73	23	5	291	0.801
3	I was given enough feedback on my performance.	3	186	75	22	5	291	0.723
4	My company makes every effort to fill vacancies from within before recruiting from outside.	3	184	75	22	5	289	0.736
5	Promotion goes to those who most deserve it.	3	187	74	22	5	291	0.677

This table is about association of research questions with Age. The first question is asked about interestingness of job. This question was answered by total 293 respondents from which from which 3 respondents had age less than 20. The respondents from age group 20-29 were 187 which is the highest number, 75 respondents were from age group 30-39. Respondents who had age 40-49 were 23, 5 respondents age was laid in 50 years and more. Its result shows that interestingness of job is dependent on age. Next question is about enough relevant training which was answered by total 291 respondents and the numbers of responses by different age groups are

shown in table. Its result shows that enough relevant training for present job is not dependent on age. Third question is about enough feedback on performance which is answered by total 291 respondents and its results shows that it does not depend on age. Next question is that Employees seem that bank's effort to fill vacancies from inside before recruiting from outside which responds by 289 respondents and its results tells that it is also not dependent on age. Last question is about promotion whose result shows that it is not dependent on age.

Following is the table which shows association of income with different research questions.

Sr. No.	Questions	Income							Total	P-values
		Less than Rs. 10,000	Rs. 10,000 - 19,000	Rs. 20,000 - 29,000	Rs. 30,000- 39,000	Rs. 40,000 - 49,000	Rs. 50,000- 59,000	Rs. 60,000 and more		
1	Overall, I am satisfied with my present job.	8	82	72	58	30	18	23	291	0.016
2	I feel free to contact my Manager / Supervisor as & when needed.	8	81	72	58	30	17	23	289	0.019
3	Work is fairly distributed in my work group.	8	82	72	56	30	17	23	288	0.010

4	Deadlines are realistic.	8	79	69	60	30	19	23	288	0.004
5	Politics is kept to a minimum.	7	76	70	59	27	19	23	281	0.005
6	I can trust what management tells me.	8	82	72	60	30	19	23	294	0.716

This table shows the association of income with different research questions. First there is a question about overall satisfaction with present job, 291 respondents answers this question from which 8 respondents had income below Rs.10,000, 82 respondents had income between Rs.10,000-19,000, 72 respondents had income between Rs.20,000-29,000, 58 had between Rs.30,000-39,000, 30 had income between Rs.40,000-49,000, 18 had income between Rs.50,000-59,000 and lastly 23 respondents had income Rs.60,000 and above. Its result shows that overall satisfaction of a private banking sector employee with present job is highly dependent on income. Next one is feeling free to contact Manager / Supervisor, 289 people respond to this and their income is given in above table

respectively. Its result shows that it is also highly dependent on income. Third question is about fairly distribution of work in group, 288 responds that question and it result shows that fairly distribution of work in group is highly dependent on income. Next question is about realness of deadline, total 288 respondents answered it and it result shows that it is dependent on income. Now there is a question that politics is kept to minimum, total 281 respondents answered it and it result shows that it is also highly dependent on income. Last question is about trust on what management tells and it result shows that it is not dependent on income.

Following is the table which shows association of education income with different research questions.

Sr. No.	Questions	Education						Total	P-values
		Illiterate	Primary	Matric	Secondary	Graduate	Post Graduate		
1	I am getting enough relevant training for my present job.	3	1	1	1	97	182	285	0.000
2	My manager recognizes and acknowledges my good performance.	3	1	1	1	99	182	287	0.000
3	Overall, I am satisfied with my present job.	3	1	1	1	100	180	286	0.006
4	I feel free to contact my Manager / Supervisor as & when needed.	3	1	1	1	99	179	284	0.000

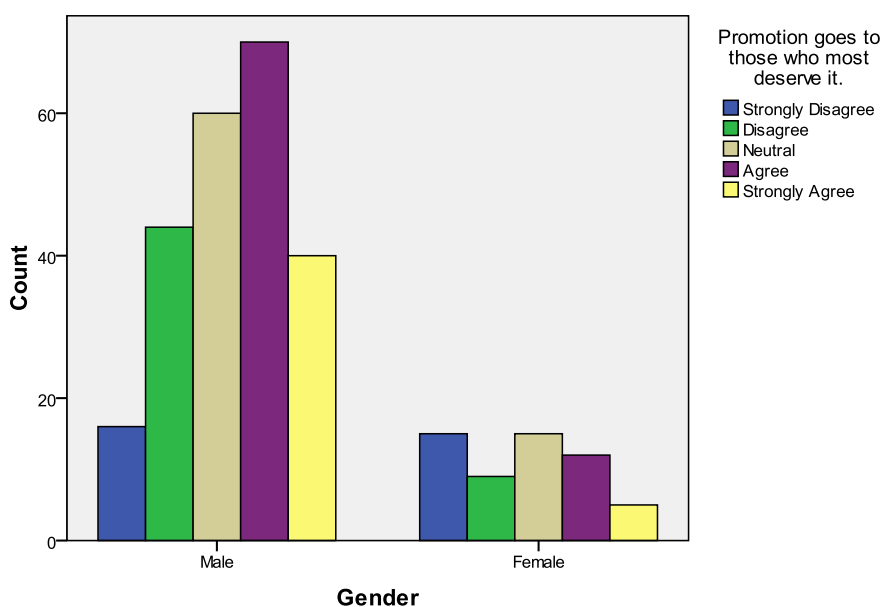
5	I am satisfied with the company's employee welfare programs such as rewards, incentives, food coupons, insurance and health care, etc.	3	1	1	1	101	188	295	0.512
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Now there is association of education with different research questions. First there is a question about getting enough relevant training for present job. Total respondents were 285 from which 3 was illiterate, the education of 1 respondent was primary, 1 person had just completed matric, 1 respondent had completed his secondary education, 97 were graduate and 182 were post graduate. Its result shows that getting enough relevant training for present job is highly dependent on education. Secondly there is a question about Recognition of manager for good performance. Total respondents were 287 from which respondents were from different education levels which are given in the table above. Next question is about overall satisfaction of the banking employees with present job, which is responded by 286 people and its result shows that it

highly depends on education. Next question is that employee feels free to contact Manager / Supervisor, which is answered by 284 people and its result shows that it is highly dependent on education. Last question is about satisfaction with the bank's employee welfare programs, 295 people respond that and its result tells that it is not on education.

Following are some graphs of different research questions showing respondents in different socio-demographic factors. In these graphs, the blue colour shows the frequency of respondents who strongly disagree with the statement of the question, green colour is for disagree; beige colour shows neutral, purple is for agree and yellow colour represents the frequency of respondents who was strongly agree with the statement of the question.

**Bar Chart**

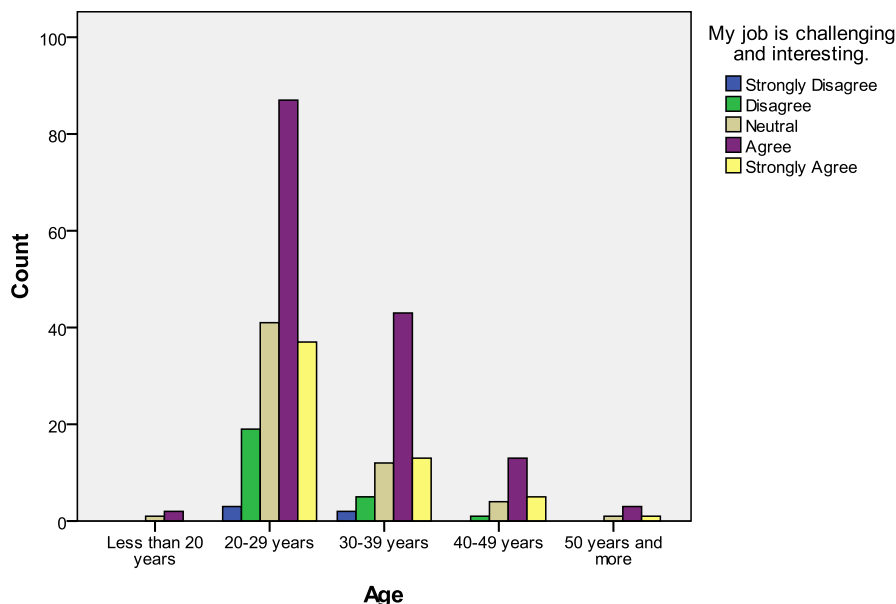


This graph shows gender wise frequency of the respondents for the question of promotion. The male respondents are more than female respondents. Majority of the male respondents (more than 60) agree that promotion goes to those who most deserve it. Very rare males strongly disagree with this statement. Whereas majority of the female respondents are strongly

disagree and neutral. A very less number of females are strongly agreed.



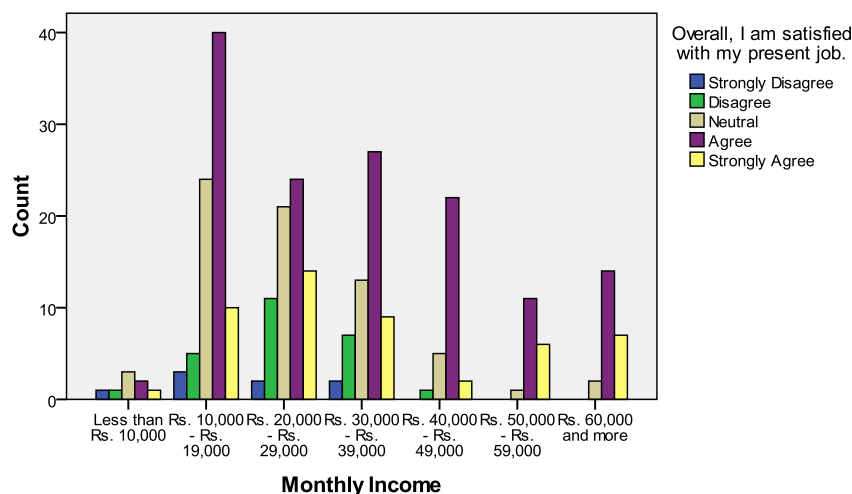
Bar Chart



The above graph represents the frequency of the respondents with respect to age. The question is about interestingness of job. The highest number of respondents' lies in age ranging from 20 to 29 years and lowest number of respondents are less than 20 years. In age category of 20-29 years, the majority (more than 80) are agree that their jobs are challenging and interesting and very few of them (below 20) are strongly disagree to

the statement. The highest numbers of respondents (more than 40) in age category 30- 39 years are also agree and the lowest number in this category are strongly disagree. The remaining respondents are lying in other age groups that are 40-49 years and 50 years and more. The other age categories almost follow the same trend of responses.

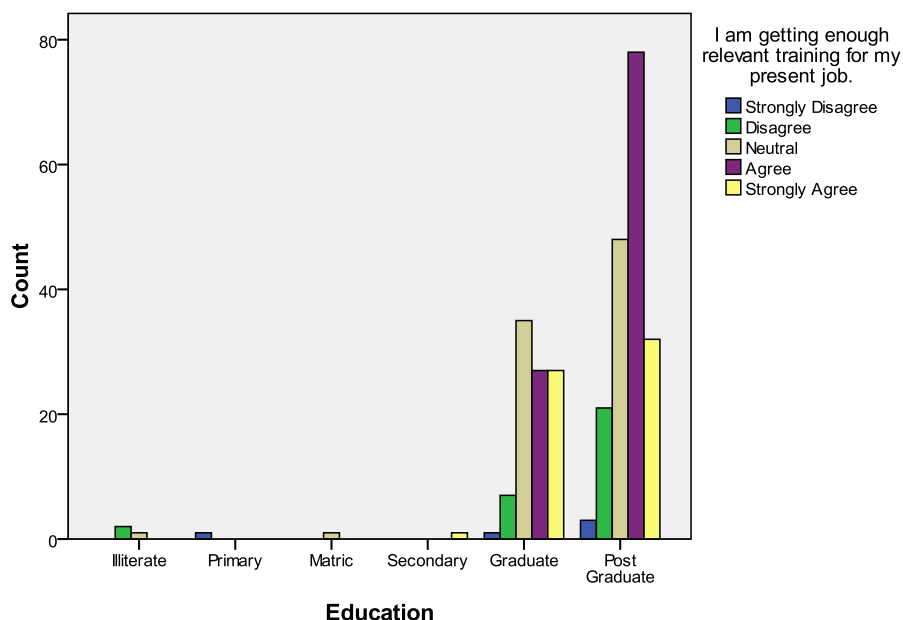
Bar Chart



The income wise frequency of the respondents is shown in the above graph for the question of the respondents overall satisfaction with their present job. The income category of Rs. 10,000 - Rs. 19,000 has the highest numbers of respondents whereas the lowest number of respondents is in income group of less than Rs. 10,000. The largest numbers of respondents (more than 40) with income from Rs. 10,000 - Rs. 19,000 are agree that overall, they are satisfied with their present

job and a small number (below 10) of them are strongly disagree. The majority of respondents fall in income category Rs. 30,000 – Rs.39, 000 are agree and a few of them are strongly disagree with the statement. Other income categories are Rs. 20,000 – Rs. 29,000, Rs. 40,000 – Rs. 49,000, Rs. 50,000 – Rs. 59,000 and Rs. 60,000 and more. The respondents in other income category almost follow the same trend.

Bar Chart



This graph represents education wise frequency of the respondents for the question related to training. Majority of the respondents are post graduates whereas very rare respondents are illiterate. The highest number (more than 60) of respondents who are post graduate are agree that they are getting enough training for their present job and a very few (below 20) of them are strongly disagree to this statement. The respondents lying in graduate category have the highest number responding neutral and a very small number responding strongly disagree in response to the question. The respondents who have education up to primary respond strongly disagree whereas respondents in matric & secondary categories respond neutral.

## V. CONCLUSION

The analysis of all the aspects of the job satisfaction among the private banking sector of Pakistan, it concludes that most of the employees working in private banks are satisfied with their work, management functions and job positions. The study reveals some factors that are point of high concern to employees regarding their satisfaction. These factors are job security, organizational operations, working condition, incentives and rewards. As employees are prime assets for an organization. So, to make loyal employees organization should pay attention to introduce managed operations, provide incentives and rewards to motivate employees, make job secure and also provide recreational activities to overcome workload. These activities might take much time and money in the short-run but are quite beneficial in the long-run.

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# Impact of Cultural Variation on Knowledge Management – Study of National versus Multinational Banks

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**Abstract** - This study was initiated to measure the role & impact of culture (sub-factors) in the process of knowledge management and to priorities cultural factors (variables) especially with respect to cultural variations. Moreover, study measured the extent/degree of contribution of different cultural factors (variables) in the adoption and implementation of knowledge management practices. This research was conducted in Banking Industry of Pakistan. Expert survey guided by well structured questionnaire was managed to achieve basic objectives. Knowledge sharing, cross functional & interdepartmental teams, intrinsic & extrinsic rewards, official language, interpersonal trust, group trust, organizational trust, institutional trust, sharing of routine information, external orientation i.e. use of consultant, trade journals, etc, on job training and transactional leadership were used as cultural constructs. Descriptive (mean) analysis and t-test were used to measure the extent of different cultural factors (variables) and their significance in adoption and implementation of knowledge management process. Outcomes exposed visible variations in term of priorities with respect to cultural variables and their contribution in the process of knowledge management. Moreover, Results revealed that knowledge as individual's power, local languages, sharing of sensitive information, transformational leadership, and off the job training are among the cultural variable considered less important in adoption and implementation of knowledge management. In addition, existing cultural variations creates differentiation of opinion in term of degree of contribution of different cultural variables in the process of knowledge management.

**Keywords** : Knowledge Management, Cultural Factors, Banking Industry of Pakistan

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## I. INTRODUCTION

Today, business organizations are using 'knowledge' as power over others to acquire better understanding and to formulate competitive strategies (Ducker 1994; Nonaka 1995; Zack 1999). At present, in a highly competitive business environment, main challenge for any organization is to produce skills and to create culture that must facilitate the adoption and application of knowledge management process. Knowledge can be classified as explicit and tacit and normally used to get know-how and this know-how

helps organizations to boost their performance (Milton 2002). Ford (2001, p.33) stated explicit knowledge as "knowledge that can be easily coded" (e.g., documented, identified, and articulated), while, tacit knowledge as "knowledge that is extremely difficult to code" (e.g., identified, articulated and documented). Vorbeck, Heisig et al. (2001) explained that every organization contain two types of assets, tangible and/or intangible assets. The key to success for any organization is to create culture that must convert their intangible assets to tangible assets and this can be achieved through a process known as knowledge management. According to Muhammad and Hayati (2006, p.2), knowledge management refers to "the process through which organization create, gather, organize, share and analyze its knowledge in terms of resources, documents and people skills".

Observing the benefits of knowledge management, now-a-days organizations are striving to create a 'culture' that must facilitate the process of knowledge management and help to preserve knowledge and experience of their employees so that it can be utilize in future (Dfouni and Croteau 2004; Goh et al. 2006). Benefits of the organizational culture that facilitate knowledge management occur at both individual level and organizational level and such culture will help organization to make faster decisions through empowerment of their employees (Milton 2002). Academicians and practitioners have presented number of theories, models and case studies focused on the relationship between knowledge management and culture. These studies have described organizational culture in various ways. According to Usoro and Kuofie (2006) organizational culture is defined as the way we do things around. Organizational culture set the rules, assumptions, values, norms, beliefs, and the way of doing things that will help organization to create, gather, organize, share and analyze its knowledge in terms of resources, documents and people skills. According to Hurely and Green (2005) organizational culture can be accessed by focusing on organizational task, structure, technology and people. Flynn (2004) stated that successful organizations are those who own up and intrigue their existing intellectual assets as well as devise new knowledge inside the organization. To be

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successful, an organization must address affairs related to culture, strategy, policy, and practice.

Van den Berg and Wilderom (2004) have explained the process of knowledge management through work practices based approach, which include five dimensions, i.e. autonomy, inter-departmental coordination, external orientation, human resource orientation and improvement orientation (Van den Berg and Wilderom 2004). Usoro and Kuofie (2006) have presented a model that classifies culture into two main streams a) organizational culture and b) societal culture. In order to measure the organizational culture two different approaches named value based approach and work practices approach along with various culture factors i.e. trust, free information sharing and positive working relationship have been suggested. While according to Davel and Snyman (2007), it's the organizational culture that guides members of the organization how to manage their knowledge effectively, however, organizational culture itself is the single largest hurdle toward successful implementation of knowledge management process (Mason and David 2003).

Much of the existing research have probed the role and contribution of existing culture in knowledge management, yet little attempts have been made to priorities various cultural factors with respect to cultural variation on knowledge management. To fill this knowledge gap this study has been initiated with two main objectives;

- Understand and measure the role & impact of culture in the process of knowledge management and to priorities cultural factors (variables) especially with respect to cultural variations.*
- To measure the extent of contribution of different cultural factors (variables) in the adoption and implementation of knowledge management.*

Further, the paper has been planned as; section 2 present current state of literature on cultural variables in context of existing theories and models normally perceived obligatory in adoption and implementation of knowledge management process. While, section 3 present snapshot of research methodology, followed by data analysis in section 4. Last section 5, discuss the findings and conclude the research along with future implication.

## II. LITERATURE REVIEW

Nemours practitioners have presented heterogenous theories, models and case studies explaining relationship between knowledge management and culture. Long (1997) has accessed organizational culture from behavioural (norms and practices) perspective and conclude that organizational knowledge and culture are closely allied. Moreover, Long (1997) has introduced a framework related to knowledge management that focuses on three major elements included are; work processes, technology,

and culture. He recommended four ways in which organizational culture impact behaviors central to knowledge management. 1) Culture and specifically subcultures outline our assumptions about what knowledge is 2) Culture conciliates the relationships between individual and organization-level knowledge. 3) Culture formulates the frame of reference for social interaction and 4) Culture silhouettes the procedures by which new organizational knowledge is taken, legitimated, and diffused (Long 1997). Tuggle and Shaw (2000) concluded that knowledge management can be enabled or impeded by organization's culture. One way to review an organization's culture is to cross examine the impact of knowledge management on an employee's set of activities, meetings and attitudes. If the organizational culture brings changes to the individual's daily work routines, then the employee will most likely be embrace to their new work system. They come forward with the model that can be used to gauge whether or not existing culture is appropriate for the successful implementation of knowledge management.

Choi (2004) attempted to scrutinize the knowledge supportive human resource (HR) factors that can influence the success of knowledge management. Results proved that top management support is a decisive factor for knowledge management success. Factors that were accessed and conceived to be compulsory for the success of the knowledge management are training, employee involvement, teamwork and collaboration, employee empowerment and leadership. The results of a study reveal that leadership performs a more consequential role toward human resources supportive environment. Flynn (2004) presented a knowledge management model and used the organization culture audit approach to identify those barriers that can hinder knowledge management process. Organizational culture related barriers to knowledge management identified by the number of authors, which are; unwillingness to share knowledge, fear of knowledge sharing (job security), mistakes are not tolerated, too little time to share knowledge, no use of appropriate technology, information overload, command and control culture.

These cultural variables have been observed by number of authors. Hurley and Green (2005) utilized the Leavitt's (1965) model of an organizational change as a framework to review the components essential for efficacious knowledge management culture. Results portray that task, structure, technology, and people conduce significantly to a knowledge management culture. Goh, Ryan et al. (2006) have identified some key cultural factors included are; collaboration, mutual trust, learning, Kiasu-ism, leadership and use of incentives or rewards, which have significant impact on the level of knowledge management practices. According to Nonaka and Konno (1998) organization's cultural factors

that are required for efficacious knowledge management are empowerment, leadership support and motivation. Moreover, human resource kindred factors that were singled out are, IT training, teamwork, communication, education, orientation and voluntary participation.

Muhammad and Hayati (2006) used case study approach to access the validity of research model known as “Banking Knowledge Management Model” (BKMM) in the banking sector. The model identifies impact of environment, people and technology on knowledge management processes. Moreover, they have acknowledged various cultural factors i.e. communication, reward systems, leadership, use of knowledge experts, group problem solving, sharing of new ideas and lack of training that can either facilitate or hinder knowledge management. Chen and Mohamed (2008) presented a theoretical framework on the business environment and tried to access the impact of organizational environment and technical environment on knowledge management from strategic perspective. According to them, every organization consists of internal business environment and this internal environment can help organizations to adopt and implement knowledge management process. Moreover, they suggest knowledge management requires trust and collaboration. The outcome of the study exhibited that both organizational environment and technical environment can impact organization knowledge management purists; however, it is the organizational environment that has greater repercussions for knowledge management practices.

In literature, Kiasu-ism refers to mentality that “knowledge is my power” and job insecurities leads to hoarding of knowledge by employees for self-preservation. Organizational culture with high Kiasu-ism will be unable to create culture of collaboration and mutual trust. Organizational culture should promote the belief that sharing leads to power rather using knowledge as a power. Organization has to make sure that their employees should get chance to learn and develop themselves at job. According to Milton (2002), organizational culture that does not help its employees to realize that knowledge sharing will increase collective power rather individual power. While, explaining the importance of trust, Levin et al. (2002) and Ford (2001) suggest that trust play vital role in knowledge sharing. This is due to the reasons that trust not only help to create coordination but also facilitate the exchange of explicit as well as tacit knowledge. Researchers have also investigated the role of leadership in knowledge management process. Leadership refers to the ability to influence and develop individuals and teams to achieve goals that have been set by the organization. Ambrosio (2002) stated that organizational culture in which leaders lead from front and support their employees will be able to create and share knowledge. In a similar tune, Haneberg and Practice (2009) concluded that

leadership influence organizational culture through its intuition, mission and strategies. Similarly, Crawford (2003) concluded that organizational culture which promotes transformational leadership will be able to implement knowledge management successfully.

Organizations that want to see their knowledge management initiatives to be successful, they have to introduce incentives and rewards in their culture. These incentives and rewards are the source of motivation. According to Goh et al. (2006) both intrinsic as well as extrinsic rewards facilitate the process of knowledge management. While, Amabile (1997) concluded intrinsic as well as extrinsic rewards influence motivation and therefore boost morale. In addition to above, many authors have identified the role of teams in the process of knowledge management. In this regard, it was established that organizational culture that does not encourage communities/teams building fails to institute knowledge management. To certify that knowledge sharing will take place among members, organization should make cross-divisional teams (Milton 2002). This drive will not only publicize the knowledge management, but it will also ease to amalgamate ideas from different sources (Nonaka 1995). By building teams organizations can exercise the hidden skills and experience of its members in the more productive ways (Choi 2004). Usoro and Kuofie (2006) observed that knowledge friendly culture is one in which employees work closely with each other. Teams promote collaboration, where, collaboration refers to “the degree to which people in a group actively assist one another in their task” (Hurley and Green 2005; p.47). Without collaboration knowledge sharing and creation can never be possible; this is because collaboration directs toward the concept of “togetherness”.

In literature, another key cultural dimension is training of employees by offering different programs i.e. mentorship programs, job rotation etc. Training can be provided on the job and off the job. These training session aid employees to enhance their knowledge (Gümüş and Hamarat 2004). Success of knowledge management initiative relies on skills and motivation, which can be advanced only through training. Some authors like Iftikhar et al. (2003) and Milton (2002) have observed the importance of language in knowledge management and have suggested that organizations should exercise common language at the workplace i.e. official language which in results creates ease for knowledge management. Knowledge based culture is one in which employees can share their information freely without any obstacle. Sharing of information will occur freely, when organization will use its knowledge as strength and employees had free access to all kind of relevant information i.e. routine and sensitive information without any hurdle. Moreover, it has been concluded that organizations that transfer their decision making initiative lower down in the hierarchy will be able to

implement knowledge management initiative successfully as compare to those organizations that make their decision at the top level.

Every organization deals with external environment factors e.g. competition and have to shape their strategy according to that environment. Firms not only depend on their internal source of knowledge but also from its external resources. Usoro and Kuofie (2006) suggest that it's the internal environment that sets the rules and guidelines regarding how to deal with external environment. While, according to Hafeez et al. (2000), organizations often use consultants or conduct benchmarking to make their knowledge management initiative successful. According to Iftikhar et al. (2003), to measure the success or failure of knowledge management some sort of valuation process has to be matured. To review the success of knowledge management in the organization, they advised four factors, which are organizational environment, technical and managerial support, strategy and goals for knowledge management projects and utilization of knowledge and technology (Iftikhar et al. 2003).

Organizational culture in which employees are penalized for their errors/mistakes will not lead toward knowledge management. Organizations that want their knowledge management initiative to be successful they have to promote a culture where employees may not be penalized for their errors (Milton 2002). It is due to reason that mistakes create opportunities for learning which will help organization to get new ideas. According to Iftikhar et al. (2003) those organizations will be successful in which sufficient time is available to employees to think creatively (Iftikhar et al. 2003). One of the cultural barriers to knowledge management is that no time is available to the employees to share their knowledge. Solution to this problem is that capturing and sharing of knowledge should be a part of routine work rather another addition to responsibility (Milton 2002). Organizations can utilize their official time as informal time period to promote their knowledge management initiative. Based on above discussion, it can be concluded that culture linked factors that can expedite knowledge management are, employee willingness, networks are formed, teams are built, employees are trained, staff is rotated, failure is seen as facilitator for learning, knowledge is shared at regular intervals, best practices are used, time is available to employees, free access to information, common language is spoken in the organization and rewards are given to those employees who support knowledge management.

### III. RESEARCH METHODOLOGY

This research was initiated to priorities cultural factors (variables) especially with respect to cultural variation in the process of knowledge management.

Moreover, intentions were to measure the degree/extent of contribution of different cultural factors (variables) in the adoption and implementation of knowledge management. To attain the basic objectives, study was conducted in Banking Industry of Pakistan. Due to cultural variations, data were collected from national and multinational banks. Based on literature synthesis different cultural constructs i.e. Kiasu-ism, communities/teams, rewards and incentives, tolerance for errors/mistakes, time, languages, trust, free sharing of information, autonomy, empowerment, external orientation, interdepartmental coordination, improvement orientation, leadership, training, and human resource content were observed. Proceeding paragraphs presents the operational definition of these cultural constructs/concepts.

Kiasu-ism reflects individuals believe that knowledge is just individual's power and one may not share it with others. For the sake of this research, the construct Kiasu-ism were operationalized through three different variables i.e. knowledge considered individual's power, sharing considered knowledge power, and culture of sharing. Two types i.e. cross functional and interdepartmental teams/communities have been used to measure the contribution of teams/communities in knowledge management process. Another cultural construct is rewards/incentives that facilitate knowledge management. Two basic types of rewards i.e. intrinsic and extrinsic were used to measure the role of rewards/incentive in adoption and implementation of knowledge management in banking industry of Pakistan. Next, tolerance for errors/mistakes generates opportunities for learning (knowledge), this was probed through a question i.e. management normally ignore unintentional mistakes. Based on literature synthesis time as cultural construct was operationalized i.e. capturing and sharing of knowledge considered a part of routine work. Similarly, the role of language was measured through two different variables i.e. official (formal) and local (informal) languages.

Next, Information sharing was operationalized through two different variables i.e. routine information sharing and sensitive information and sharing. Likewise, trust also contribute in knowledge management, trust was measured through four different variables i.e. "trust between employees", "trust between team members", "trust on organization by the employees" and "trust on organizational policies, procedures, and laws. Autonomy and external orientation as a source of knowledge management was probed by means of autonomy at work, industry trend analysis, use of consultants and academic journals etc. Similarly, interdepartmental coordination was checked through formal and regular interaction. Leadership considered imperative cultural construct that contribute in adoption and implementation of knowledge management. The role and extent of leadership were operationalized



through two different styles i.e. transformational leadership and transactional leadership. Last cultural construct under observation was training, which was operationalized as on the job training and off the job training.

Total 115 responses from 42 banks through well structured questionnaire were managed across banking industry of Pakistan that was classified as national and multinational banks. Snowball referencing was used to manage high response rate. Out of 115 responses, 73 i.e. (63%) were from national banks while 42 i.e. (37%) were from multinational banks. Descriptive (mean)

analysis was used to measure the role and extent of cultural variable in adoption and implementation of knowledge management process in national and multinational banks. High score mean describe the most important factors and low mean score depicts the least important factor. Independent sample t-test was administered to determine the difference of mean score. Low significance values (Sig. 2-tailed < 0.05) reveal all those variables on which respondents of both national and multinational banks deviate considerably. Table 3.1 present the snapshot of the banks remained under observation.

*Table 3.1 : Name Of The Banks Under Observation*

SR.	BANK NAME	ORG. LEVEL	SR.	BANK NAME	ORG. LEVEL
1.	State Bank of Pakistan	Head Office.	22.	Standard Chartered Bank Ltd.	Head Office.
2.	First Women Bank Limited	Corporate Office.	23.	United Bank Limited	Corporate Office.
3.	National Bank of Pakistan	Head Office.	24.	Trust Investment Bank Ltd.	Head Office.
4.	Punjab Bank Limited	Corporate Office.	25.	Prudential Investment Bank Ltd.	Head Office.
5.	Zarai Taraqati Bank Limited	Corporate Office.	26.	Orix Investment Bank Ltd.	Head Office.
6.	Allied Bank Pakistan Limited	Corporate Office.	27.	Islamic Investment Bank Ltd.	Corporate Office.
7.	Arif Habib Limited	Head Office.	28.	Dawood Islamic Bank Limited	Head Office.
8.	Askari Bank Limited	Head Office.	29.	Dubai Islamic Bank Pakistan	Head Office.
9.	Bank Al Habib Limited	Corporate Branch.	30.	Bank Al Habib Limited	Corporate Branch.
10.	Habib Bank Limited	Corporate Office.	31.	Rozgar Micro Finance Bank	Corporate Office.
11.	MCB Bank Limited	Corporate Office.	32.	BankIslami Pakistan Limited	Corporate Office.
12.	Bank Alfalah Limited	Corporate Office.	33.	Emirates Global Islamic Bank	Head Office.
13.	Atlas Bank Limited	Corporate Branch.	34.	Meezan Bank Premier Islamic Bank	Corporate Office.
14.	Barclays Limited	Head Office.	35.	Dawood Islamic Bank Limited	Head Office.
15.	Habib Metropolitan Bank	Head Office.	36.	Network Micro Finance Bank	Head Office.
16.	JS Bank Limited	Head Office.	37.	Karakuram Bank	Corporate Office.
17.	KASB Bank Limited	Head Office.	38.	Khushali Bank Limited	Head Office.
18.	Silk Bank Limited	Corporate Office.	39.	NRSP Micro Finance Bank Limited	Head Office.
19.	Citibank Limited	Corporate Office.	40.	Escorts Investment Bank Limited	Corporate Office.
20.	HSBC Limited	Corporate Office.	41.	Fidelity Investment Bank Limited	Branch Office.
21.	Royal Bank of Scotland Ltd.	Head Office.	42.	Crescent Investment Bank Limited	Head Office.

The structured questionnaire was designed to navigate the response and for the same measuring instrument include two main sections; section-1 was dedicated to priorities cultural factors that considerably contribute in the process of knowledge management, while section-II were designed to probe the degree/extent of contribution. The importance of cultural variables were measured on five point likert scale, where, 1 mean extremely important, 2 mean important, 3 mean neutral, 4 mean less important, 5 mean least important. Moreover, the degree of contribution of cultural variables were measured using five point likert scale, where 1 stand for strongly agree, 2 means agree, 3 means neutral, 4 means disagree and 5 stands for strongly disagree. Data were collected only from head office, corporate office, and/or corporate/regional branches, moreover, senior vice presidents, vice presidents and operation managers were selected as respondents. Some general information such as bank name, designation of the respondent, organizational level and contact information were also probed.

## IV. FINDINGS

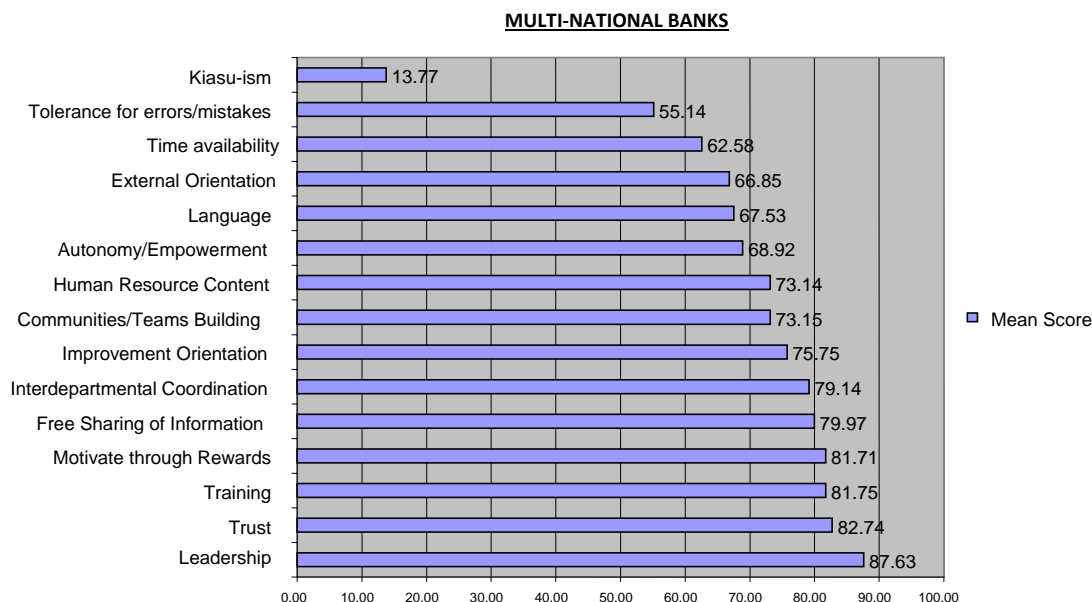
This section presents the finding on cultural factors that are perceived important for knowledge management. Each factor (variable) considered being independent of each other therefore respondents were required to score each factor out of 100 as per their importance. Results reveal visible variations in term of priorities with respect to cultural variables and their contribution in the process of knowledge management.

The degree of importance assigned by the national and multinational banks on various factors ranged from 87.6 to 13.7 and 88.1 and 15.3 respectively. It is quite interesting to note, though all the cultural factors considered important in term of their contribution in knowledge management, however, individual contribution of each cultural factor perceived differently e.g. leadership with mean rating 87.63 observed to be most important by national banks, on the other hand, trust with mean score of 88.1 observed important by respondents from multinational banks. Both national and multinational banks scored Kiasu-ism

at the lowest e.g. national banks ranked it with mean score of 15.3 and multinational banks scored it 13.7. On the basis this result it can be inferred that banking

industry viewed Kiasu-ism as hurdle in the process of knowledge management. Figure 4.1 and 4.2 comprehend score analysis.

*Figure 4.1 : Mean Analysis Of Culture Factors Considered As Necessary Contributor For Knowledge Management (Response Of Multi-National Banks)*

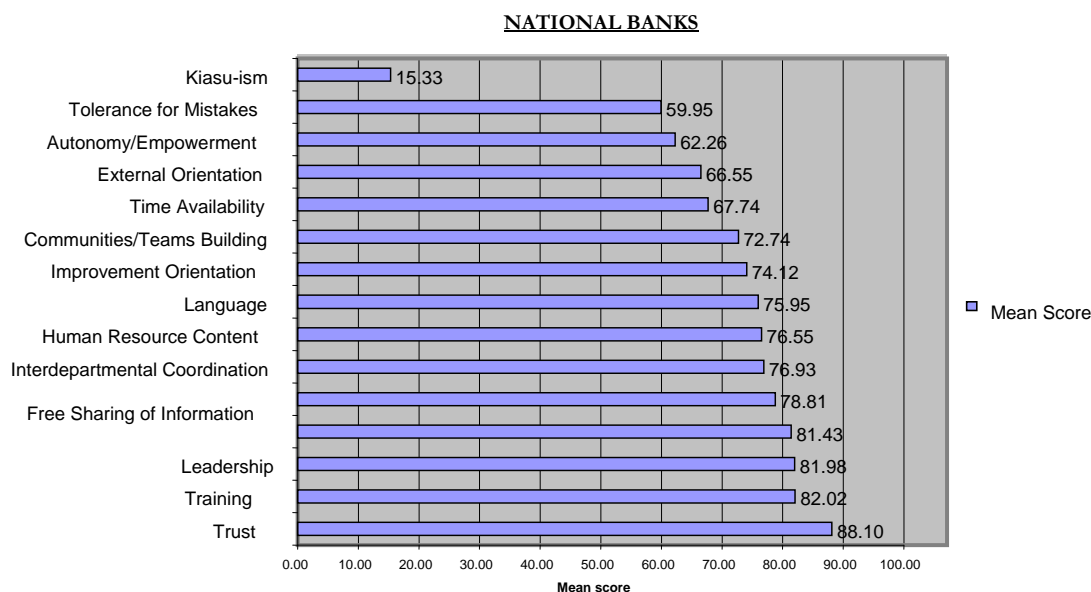


Based on the mean score of the multinational banks, it can be concluded that top ten cultural factors that are necessary for knowledge management are; leadership (mean score = 87.63), trust (mean score = 82.74), training (mean score = 81.75), use of reward and incentives (mean score = 81.71), free sharing of information between the employees (mean score = 79.97), interdepartmental coordination (mean score = 79.14), improvement orientation (mean score = 75.75), communities/team building (mean score = 73.15), human resource content (mean score = 73.14) and autonomy empowerment (mean score = 68.92). While, respondents of national banks priorities different factors that are obligatory for knowledge management are; trust (mean score = 88.10), training (mean score = 82.02), leadership (mean score = 81.98), use of reward and incentives (mean score = 81.43), free sharing of information between the employees (mean score = 78.81), interdepartmental coordination (mean score = 76.93), human resource content mean score = 76.55, use of common language at the workplace to share ideas (mean score = 75.95), improvement orientation (mean score = 74.12) and building teams or communities to share knowledge (mean score = 72.74). Based on cultural variation, results reflect variation in term of priorities that means local culture (national) and multinational culture requires different variables in the adoption and implementation of knowledge management.

Descriptive statistics have been used to testify the contribution of cultural variables in adoption and implementation of knowledge management process. First cultural construct was Kiasu-ism, which was measured through four different questions i.e. "Organization considered task/job expertise/skills as individual's power"; respondents from both the national and multinational banks disagree with the statement with mean value of 4.12 and 4.37, respectively. Next question under observation was "Organization believes task/job expertise/skills sharing with colleagues and subordinates enhance knowledge power"; respondents from both national and multinational banks accept the statement with mean value of 1.31 and 1.35 respectively. Third question related to Kiasu-ism was "In my organization, there is a culture of sharing i.e. when ever I and/or my colleagues face any problem at work (during assignments and tasks), seniors/head of the department always show positive gesture to guide/help"; results reflect differentiation, respondents from multinational banks accept the statement with mean value of 2.17, while, respondents from national banks remained neutral with mean value 2.97. Outcomes reflect that Kiasu-ism observed as hurdle to promote knowledge management. Similarly, it is worth mentioning that multinational culture is more conducive to promote the culture of sharing which is lacking in national/bureaucratic culture.



**Figure 4.2 :** Mean Analysis Of Culture Factors Considered As Necessary Contributor In Knowledge Management (Response Of National Banks)



Second variable under observation was teams/communities. In banks, formal teams can be classified as cross functional and interdepartmental teams. Teams/communities contribution in adoption and implementation of knowledge management process was measured through two different questions i.e. "Please specify the role of cross functional teams/communities in adoption and implementation of knowledge management process in your bank", and "Please specify the role of interdepartmental teams/communities in adoption and implementation of knowledge management process in your bank". Respondents of national (a mean value of 2.42 & 2.50 for cross functional teams and interdepartmental teams respectively) and multi-national banks (a mean value 2.43 & 2.57 for cross functional teams and interdepartmental teams respectively) perceive positive about the role cross functional and interdepartmental teams/communities perform in adoption and implementation of knowledge management process. Moreover, in response to measure the degree of contribution, respondents of multinational bank (a mean value of 2.33) perceive positive about cross functional teams as compared to interdepartmental team/communities (a mean value of 2.60). However, the perception emerge differently as respondents of national bank believe interdepartmental teams/communities (a mean value of 2.17) contribute better then cross functional teams/communities (a mean value of 2.53). Based on these results, it can be inferred that cross functional teams in multinational organization can be more useful, while, in national/bureaucratic organization, interdepartmental teams are more effective to implement knowledge management.

Rewards and incentives facilitate knowledge management process. Two different classification of rewards included were intrinsic and extrinsic were probed through two different questions i.e. "Please specify the role of intrinsic rewards in adoption and implementation of knowledge management process in your bank", respondents of multi-national banks showed neutral response (a mean value of 3.21), while, results generated from national banks (a mean value of 2.06) reflect positive attitude towards intrinsic rewards. On the other hand, response regarding question i.e. "Please specify the role of extrinsic rewards in adoption and implementation of knowledge management process in your bank", respondents of multinational banks strongly agreed (a mean value of 1.79) about the extrinsic rewards as a source to adopt and implement knowledge management process. Similarly, respondent form national bank though agreed, yet the mean value (i.e. 2.26), is lower then the responses of multinational banks. In addition, respondents of multinational bank (a mean value of 1.83) perceive extrinsic rewards/incentives contribute better in knowledge management process then intrinsic rewards/incentives (a mean value of 2.64). However, respondents of national bank believe intrinsic rewards/incentives (a mean value of 2.17) contribute better then extrinsic rewards/incentives (a mean value of 2.35). This variation in opinion is because of noticeable differentiation in pay structure.

Next, tolerance for errors/mistakes generates opportunities for learning, this was probed through a question i.e. "Management normally ignore unintentional mistakes", respondent from both national and multi-national banks agreed with mean value of 2.13, and

2.24, respectively. Other cultural construct was time, which was operationalized as i.e. "Capturing and sharing of knowledge considered a part of routine work rather than to be considered as additional responsibility"; results remained neutral with mean value of 2.90 and 3.00 from national and multinational banks respectively. Quite interestingly, as a whole, banking industry has ignored the importance of time in the process of knowledge management.

Similarly, the role of language was measured through two different questions i.e. "Please specify the role of official (formal) language in enhancing job/task skills and expertise in your bank", respondents of both national (a mean value of 1.90) and multi-national (a mean value of 2.01) banks agreed that formal language play vital role in enhancing skills and expertise. Next

question was "Please specify the role of local (informal) languages in enhancing job/task skills and expertise in your bank", the results reflect that local/informal languages considered less important in enhancing skills and expertise in both national (a mean value of 2.98) and multi-national (a mean value 2.80) banks. In addition respondents of both national (a mean value of 2.31) and multinational banks (a mean value of 2.45) perceive that frequent use of official (formal) language normally help their banks to create, share, and analyze knowledge. Here it is worth mentioning that the importance of local (informal) languages in knowledge management is not yet realized by both national (a mean value of 3.47) and multinational banks (a mean value of 3.26).

*Table 4.1 : Mean Analysis Of Cultural (Sub-Factors)*

CULTURAL VARIABLES	NATIONAL BANKS	MULTI - NATIONAL BANKS	NATIONAL BANKS	MULTI - NATIONAL BANKS
	ROLE OF VARIABLE		DEGREE OF IMPORTANCE	
Job Skills/Expertise Considered as (Individual's) Power	4.12	4.37		
Sharing Considered Knowledge Power	1.31	1.35		
Culture of Sharing	2.97	2.17		
Cross Departmental Teams	2.42	2.43	2.53	2.33
Intra Departmental Teams	2.50	2.57	2.17	2.60
Intrinsic Rewards/Incentives	2.06	3.21	2.17	2.64
Extrinsic Rewards/Incentives	2.26	1.79	2.35	1.83
Tolerance for Mistakes/Errors			2.13	2.24
Capturing and Sharing Knowledge Considered as Part of Routine Work			2.90	3.00
Role of (Formal) Official Language	1.90	2.01	2.31	2.45
Role of (Informal) Local Language	2.98	2.80	3.47	3.26
Sharing of Routine Information			1.71	1.64
Sharing of Sensitive Information			3.57	3.33
Interpersonal Trust			1.97	1.83
Group Trust			2.14	2.12
Organizational Trust			1.85	2.12
Institutional Trust			2.14	2.64
Autonomy at Work	3.79	1.62	2.74	2.11
External Orientation			2.59	2.54
Interdepartmental Coordination (Formal)	2.97	1.91	4.17	2.67
Transactional Leadership Style	1.71	1.63		
Transformational Leadership Style	4.33	4.28		
On the Job Training	1.73	1.45	3.12	2.09
Off the Job Training	1.97	3.24	2.33	3.53

*Note : Based on 5-point likert scale.*

Information sharing was probed through two different questions i.e. "Do you think organization has provided healthy and suitable environment to share routine information freely without any hurdle", respondents of multinational banks (a mean value 1.64) and of national banks (a mean value of 1.71) agreed

that their bank has healthy and suitable environment to share routine information freely without any hurdle. However, results regarding "Do you think organization has provided healthy and suitable environment to share sensitive information freely without any hurdle" reflect that both national (a mean value of 3.57) and

multinational (a mean value of 3.33) banks remained some what disagree with the situation. It means knowledge management process must be synchronized through routine information sharing. Trust was measured through four different variables i.e. "trust between employees (a mean value of 1.83 and 1.97 for multinational and national banks, respectively)", "trust between team members (a mean value of 2.12 and 2.14 for multinational and national banks, respectively)", trust on organization by the employees (a mean value of 2.12 and 1.85 for multinational and national banks, respectively)" and "trust on organizational policies, procedures, and laws (a mean value of 2.64 and 2.14 for multinational and national banks, respectively). Results reflect irrespective of the type and level of trust, still it seems to be important contributor in adoption and implementation of knowledge management process.

Autonomy at work was measured through four different questions i.e. "Please specify the role of autonomy in adoption and implementation of knowledge management process in your bank", respondents of multinational (a mean value of 1.62) agreed, however, respondent of national banks (a mean value of 3.79) disagreed with the statement, that means multinational banks offer better autonomy at work. For next question i.e. "Do you think autonomy at work normally help your bank to create, gather, organize, share, and analyze knowledge", results of multinational banks reflect (a mean score of 2.11), autonomy at work facilitate knowledge management process. External orientation as a source of knowledge management was probed i.e. "Organization believes external sources e.g. industry trend analysis, use of consultant and academic journals etc. contribute in knowledge management". Both multinational (a mean value of 2.54) and national banks (a mean value of 2.59) seems somewhat agreed that means external consultancy, industry analysis and trade journal are considered nice facilitator to adopt and implement knowledge management process in bank industry of Pakistan.

Interdepartmental coordination were measured through questions like, "Organization has formulated regular interaction mechanism e.g. formal and informal meetings to resolve on the job and off the job problems", respondent of multinational banks agreed (a mean value of 1.91), while, respondents of national bank (a mean value of 2.97) remained neutral. Result for question i.e. "Do you think regular interaction normally help your bank to create, gather, share, and analyze knowledge", reflect respondents of national banks (a mean value of 4.17) reject the statement, however, respondent of multinational banks (a mean value of 2.67) remained neutral. Unexpectedly, banking industry reject the importance of regular interaction as a source to create, gather, share and analyze knowledge management. Another variable that contribute in knowledge management is leadership. The role of leaders i.e. transformational leaders and transactional

leaders were measured through different questions i.e. "Do you think that transformational style of leadership promote the culture of knowledge management", and "Do you think that transactional style of leadership promote the culture of knowledge management", results from both multinational (a mean value 4.28) and national (a mean value 4.33) banks reject the contribution transformational style of leadership, however, industry consider transactional style necessary to promote the culture of knowledge management (a mean value 1.63 and 1.71 for multinational and national banks, respectively).

Last factor under observation was training, which were measured through two different variable i.e. on the job training and off the job training. Question like "Please determine the importance of 'on the job training' in adoption and implementation of knowledge management process in your bank" and "Please determine the importance of 'off the job training' in adoption and implementation of knowledge management process in your banks". Respondents of both multinational (a mean value of 1.45) and national bank (a mean value of 1.73) favored 'on the job training', however, regarding off the job training respondents of the national banks (a mean value of 1.97) remained positive, while, respondents of multinational banks (a mean value of 3.24) remained neutral.

Independent sample t-test was administered to determine the difference of mean score. The degree of importance assigned by respondents of multinational banks ranged from 1.64 to 3.53 and for national banks it ranged from 1.85 to 4.17. The highest rated sub-factor by multinational and national banks was a belief that sharing is power, with a mean rating of 1.31 and 1.35 respectively. The lowest rated sub-factor by multinational and national banks was a belief that skills/expertise is of individual's power, with a mean rating of 4.12 and 4.37 respectively, results reflects this sub-factor does not contribute in knowledge management. Mean score of multinational banks depict sub-factors like on the job training (mean value = 1.45), transactional leadership (mean value = 1.63), access to routine information (mean value = 1.64), extrinsic rewards (mean value = 1.79), interpersonal trust (mean value = 1.83) and official language (mean value = 2.00), as key contributor in knowledge management. In comparison, mean score of national banks depict factors like transactional leadership (mean value = 1.71), access to the routine information (mean value = 1.71), on the job training (mean value = 1.73), off the job training (mean value = 1.97), organizational trust (mean value = 1.85), use of official language (mean value = 1.90), interpersonal trust (mean value = 1.97), are among the key contributor to promote knowledge management.

Table 4.2 : Independent Sample T-Test For Sub-Factors

Variables	LEVENE'S TEST FOR EQUALITY OF VARIANCES		T-TEST FOR EQUALITY OF MEANS						
	F	SIG.	T	DF	SIG. (2-TAILED)	MEAN DIFFERENCE	STD. ERROR DIFFERENCE	95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
								LOWER	UPPER
Knowledge is Power.	0.296	0.588	1.363	113	0.176	0.301	0.22	-0.1368	0.739
Sharing is Power	0.201	0.655	-0.74	113	0.463	-0.103	0.14	-0.3818	0.175
Cross Departmental Teams	0	0.988	0.049	113	0.961	0.009	0.19	-0.386	0.405
Intra Departmental Teams	1.763	0.187	0.347	113	0.73	0.075	0.21	-0.3553	0.505
Intrinsic rewards	5.862	0.017	3.705	105.8	0**	0.790	0.21	0.3675	1.213
Extrinsic rewards	1.588	0.21	-2.38	113	0.019**	-0.467	0.19	-0.8562	-0.078
Formal Time	0.632	0.428	0.501	113	0.618	0.108	0.21	-0.3221	0.539
Informal Time	2.443	0.121	1.284	113	0.202	0.295	0.23	-0.1607	0.752
Official Language	2.132	0.147	0.213	113	0.831	0.047	0.22	-0.3943	0.489
Local Language	0.661	0.418	0.728	113	0.468	0.176	0.24	-0.3041	0.657
Interpersonal Trust	0.503	0.48	-0.87	113	0.387	-0.140	0.16	-0.4614	0.180
Group trust	1.58	0.211	-0.11	113	0.917	-0.019	0.18	-0.3895	0.350
Organizational Trust	0.72	0.398	1.399	113	0.165	0.266	0.19	-0.1108	0.643
Institutional Trust	2.768	0.099	2.554	113	0.012**	0.500	0.19	0.11242	0.889
Access to Sensitive Information	0.291	0.591	1.034	113	0.304	0.242	0.23	-0.2219	0.705
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Use of Consultants	0.002	0.964	-0.2	113	0.839	-0.047	0.23	-0.507	0.412
Benchmarking	1.169	0.282	1.105	113	0.272	0.226	0.20	-0.1795	0.632
Transformational Leadership	1.32	0.253	-0.21	113	0.832	-0.045	0.21	-0.4701	0.378
Transactional Leadership	2.784	0.098	-0.47	113	0.641	-0.084	0.17	-0.4407	0.272
On the Job Training	1.023	0.314	-2.09	113	0.038**	-0.286	0.13	-0.5566	-0.015
Off the Job Training	0.884	0.349	1.123	113	0.264	0.270	0.24	-0.2065	0.747

Note : Based on a 5-point likert scale. \*\* Sig. (2-tailed<0.05) depict those factors on which respondents of multinational and national banks differ significantly.

Significance value ( $p < 0.05$ ) reveals all those variables on which employees of both multinational and national banks deviated/differed considerably. Factors having ( $p > 0.05$ ) depict all those variables which seemed to be significant i.e. on these variables both national and multinational banks didn't differ. Two different rewards including intrinsic and extrinsic were considered as effective contributor in the knowledge management. Table 4.2 confirm statistically significant difference of mean on intrinsic rewards between national and multinational banks as ( $t = 3.70$ ,  $p = .000$ ). Results reflect that employees of national banks believe that intrinsic rewards like personal satisfaction add more positively in knowledge management. In contrast,

employees of national banks seem to be different. National banks have a higher mean score on extrinsic rewards 1.79 than multinational banks 2.26. The results reflect national banks see extrinsic rewards i.e. bonuses, pay increment etc as more effective tool for knowledge management as compare to multinational banks.

Trust also contribute in knowledge management, the results depict statistically significant difference between the mean on institutional trust for national and multinational banks ( $t = 2.55$ ,  $p = 0.01$ ). National banks had a statistically significant mean score of 2.14 than multinational banks 2.64. National banks believe that organizational laws, policies and regulations play an important role in the knowledge management

process. Last factor under observation was training, which had statistically significant difference between the mean for on the job training as ( $t = -2.09$ ,  $p = 0.038$ ). Multinational banks have a mean score of 1.45 for "on the job training" while on the other hand mean score for national banks remained 1.73, results reflect that multinational banks prefer on the job training for the effective knowledge management.

## V. CONCLUSION

Based on descriptive analysis, it can be inferred that banking industry firmly believes on sharing of skills and expertise. In this regard, the culture of multinational bank seems more encouraging as compared to national banks. Respondent from both national and multinational banks declared that importance of cross functional and interdepartmental teams in the process of knowledge management. Interestingly, results reflect that in multinational banks intrinsic incentives perceive less important as compared to extrinsic rewards. However, the opinion remained somewhat different in the national banks where intrinsic rewards play perceived more crucial. In addition, outcomes reveal high tolerance for unintentional mistakes/errors and official time can create favorable climate for knowledge management. Moreover, it was observed that formal language play vital role in enhancing skills and expertise. Industry has affirmed unanimously that culture of information sharing is suitable for knowledge management. Mean analysis reflect trust between employees, trust within the group, trust on organization, and trust on organizational policies, procedures, and laws considered key ingredients for adoption and implementation of knowledge management. However, respondents of multinational banks remained indifferent regarding trust on organizational policies, procedures, and laws. Overall results reveal that banking industry is frequently acquiring benefit from external sources e.g. use of consultants, industry trend analysis and academic journals. Interdepartmental coordination through formal and informal meetings to resolve on the job and off the job problems remained questionable in national banks that means existing culture is hostile in national banks, conversely, better interdepartmental coordination through formal meetings was observed in multinational banks. Results regarding leadership style i.e. transformational and transactional illustrate that banking industry unanimously rejected transformational leadership style and recognize transactional leadership style as facilitator to knowledge management. Lastly, on the job training perceived key contributor in knowledge management.

Over all results reveal that cultural factors add positively toward knowledge management. To formulate knowledge based culture organizations should address issues i.e. trust, leadership, training, use of rewards/incentives, free sharing of information,

interdepartmental coordination, human resource content, language, improvement orientation and building communities/teams to share information. Based on outcomes, one can be conclude that the process of knowledge management is in evolutionary stage in banking industry of Pakistan. Survey analysis reveals that without addressing cultural factors knowledge management cannot be implemented successfully. Similarly, it can be concluded that existing cultural in the banking industry in general and national banks particular need transformational changes, which must be synchronized with knowledge management process.

Finally, the findings of this research will enable the management of banking sector to get know-how about all those cultural factors that contribute positively in knowledge management. By addressing these factors management will be able to create knowledge based culture. This initiative will help management to deliver quality service and get good return on investment on major decisions. In this regard, transformational changes may be required in national banks to adopt and implement knowledge management process. This paper is unable to draw any deep conclusion as per various classifications in the banking industry because of low response rate in some categories. Therefore, this paper presents holistic view of cultural contribution in knowledge management. The results of this study can be generalized, if the scope of research extends to more banks. Similarly, systematic sampling could also add to the validity of findings.

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