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**CONTENTS**

- 1 Publisher, Editor in Chief, Managing Editor and Editorial Board**
- 2 IMPACT OF DIVIDEND POLICY ON SHAREHOLDERS WEALTH: A COMPARATIVE STUDY AMONG DIVIDEND PAYING AND NON-PAYING TECHNOLOGY BASED FIRM'S IN USA**  
SAHIBZADA MUHAMMAD HAMZA, ZUBAIR HASSAN
- 3 DIVIDEND POLICY AND SHAREHOLDER'S WEALTH: EVIDENCE FROM CEMENT SECTOR OF PAKISTAN**  
ZARAK FARAZ, SAIRA ISHFAQ, ASAD KHAN
- 4 ENTERPRISE RESOURCE PLANNING (ERP) MODEL FOR SMALL AND MEDIUM SIZED MANUFACTURING FIRMS BASED ON UML**  
YOUSEF K. KHALEEL, AYMAN N. ALKHALDI
- 5 CHALLENGES FACED BY SMALL & MEDIUM ENTERPRISES (SMES) INCLUDING INDIAN SMALL SCALE INDUSTRIES AND WTO**  
JAYANT SONWALKAR, NEHA SONI
- 6 THE BENEFIT OF ELECTRONICS BANKING SYSTEM IN NIGERIAN BANKS**  
OKOLI IFEANYI E., MONANU OGE G., ADIBE CHARLES GOZIE.
- 7 ASSESSING THE PERFORMANCES OF COFFEE MARKETING COOPERATIVES IN YIRGACHEFFE WOREDA, GEDEO ZONE, SNNPRS, ETHIOPIA**  
MUHABIE MEKONNEN MENGISTU
- 8 EARLY MARRIAGE IN ETHIOPIA: SO LITTLE DONE BUT SO MUCH TO DO**  
MUHABIE MEKONNEN MENGISTU
- 9 RELATIONSHIP BETWEEN HUMAN RESOURCE ACCOUNTING IN MANAGEMENT DECISION MAND BEHAVIOR OF EMPLOYEES IN COMPANY STOCK BASED ON STRUCTURAL EQUATION MODELING**  
M.SHAFIEE RODPOSHTI, F.BAHRAMI, M.AHMADKHANI
- 10 A REGRESSION ANALYSIS OF PERCEIVED ORGANIZATIONAL SUPPORT, INTERPERSONAL RELATIONSHIP AND EMPLOYEE TURNOVER INTENTION IN SOUTHWEST NIGERIA**  
ENOCH OLUWATOMIWO OLADUNMOYE
- 11 THE TRANSMISSION MECHANISMS FOR MONETARY POLICY: THE CASE OF EMERGING COUNTRIES**  
SAOUSSEN OUHIBI, SAMI HAMMAMI
- 12 INTERCULTURAL SENSITIVITY AND ITS IMPLICATIONS IN LANGUAGE TEACHING**  
JAVAD AHMADI FATALAKI

- 13      ASSESSMENT OF ORGANIZATIONAL MATURITY FOR THE IMPLEMENTATION OF THE  
PERFORMANCE APPRAISAL SYSTEM CASE STUDY: NATIONAL IRANIAN OIL COMPANY**  
SAJAD SHOKOHYAR, RUHOLLAH TAVALLAEI, NAGHMEH IRANI QOMI
- 14      AN EMPIRICAL ANALYSIS OF PRE AND POST MERGER IMPACT ON FINANCIAL  
PERFORMANCE: A CASE STUDY OF JORDAN AHLI BANK**  
YUSUF ALI KHALAF AL-HROOT, ALI AHMAD DIAB MSSADEH, MOHAMMAD SAADAT LUTFI AMIREH, MOHAMMAD  
DAOUD HASSAN OTHMAN
- 15      OWNERSHIP AND CONTROL STRUCTURES A CASE STUDY**  
MICO APOSTOLOV
- 16      TO ENHANCE REVENUE GENERATION VIA UTILIZATION OF GOVT., INSTITUTIONS AND  
SMES RATHER THAN TAXES**  
MUHAMMAD ZUBAIR SAEED, LIU JUN QI, KRAMAT HUSSAIN, AMMARA ZULFIQAR
- 17      INFLUENCE OF ENTREPRENEURSHIP EDUCATION, GENDER, AND PARENT BACKGROUND  
TO RELATIONSHIP BETWEEN SELF EFICACY AND ENTREPRENEURSHIP INTENTION**  
SINGGIH SANTOSO

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# **IMPACT OF DIVIDEND POLICY ON SHAREHOLDERS WEALTH: A COMPARATIVE STUDY AMONG DIVIDEND PAYING AND NON-PAYING TECHNOLOGY BASED FIRM'S IN USA**

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## **Abstract**

The purpose of this study is to investigate the impact of Dividend Policy on Shareholders Wealth in Technology Companies of USA. The research is carried on 60 companies divided into two Strata's of Paying and Not Paying Dividend listed under Technology sector at NYSE and AMEX stock exchanges which covered the period of 2010-2014, total observations of 150 firms-years. The dependent variable are Lagged Price Ratio, Capital Gain Yield Ratio and Return on Equity and independent variables is Dividend Payout Ratio. The data was analysed using E-views software. The research employed correlation coefficient and linear regression analysis and the findings shows independent variable (Dividend payout ratio) place no significant impact on all three Dependent Variables in Strata 1 of paying Dividend companies. While in Strata 2 of Not paying Dividend, Dividend payout ratio place no significant impact on Lagged price ratio and Return on Equity whereas, places significant positive impact on Capital Gain Yield Ratio. Therefore, only Capital Gain Yield Ratio is found to be positively correlated with dividend payout ratio in Strata 2. However, it can be concluded that paying dividends places no significant impact while paying no

dividends only significantly increases the stock gains of the shareholders in technology companies registered in NYSE and AMEX. Further, it was recommended to use other firm specific factors with a wider time span and greater sample size to portray a clearer picture for the topic. Though, this research will help the corporate world and research community with the knowledge of new dimensions regarding the topic. Hence, for future studies other developed and developing economies can be examined in context of this research topic. Lastly, a comparative study between low dividend paying sectors like Technology and high dividend paying companies like Tobacco can also be conducted to see the variation in the impact.

**Key Terms:**

Dividend Policy, Dividend Payout Ratio, Shareholders Wealth, Lagged Price Ratio, Capital Gain Yield Ratio, Return on Equity.

**1. Introduction**

The purpose of this research carried out is to enquire the impacts of dividend policy on shareholder's wealth on Technology companies of United States of America listed in NYSE and AMEX Stock Markets. Magnifying Dividend policy has always been a puzzled issue for economist and financial analyst (Bhattacharyya, 2007). These different attitudes and approaches of shareholders lead numerous financial scholars notably amongst them was Linter (1956) and Black (1976) to address dividend as a puzzled issue. In last 3 years, when the technology sector has reported to be the highest contributor to Dividend payout in S&P 500, as technology sector records for nearly 15% up from just 3.6% at the height of Technology drift in 2000 (Hart and Connolly, 2013). There are numerous studies conducted in developed countries as well as emerging and non-developed countries although few researches have been made to gauge the impact of dividend policy on shareholders wealth in Technology industry of developed economies (Chenchehene and Mensah, 2015; Uddin and Osman, 2008; Hashemijoo, Ardekani and Younesi, 2012; Shubiri, 2012). In USA, very few studies have been made, some notable scripts amongst them are Asquith and Mullins, 1983; Gill, Biger and Tibrewala, 2010; Baker and Powell, 2000; Hilliard and Jahera Jr. 2014;

Amoako-Adu, Baulkaran and Smith, 2014; Baker and Powell, 1999 and Morgan, 2011).

### **1.1 Research Rationale**

The impacts of Dividend policy on shareholder's wealth is an unresolved issue and has been discussed in many empirical discussions within finance literatures (Rafique, 2012). So the problem is that how much company should spend on Dividend payout and what they should keep as retained earnings (Periyathamby and Navaratnaseelan, 2012). Once a stable dividend policy is adopted it cannot be changed without affecting the investor's attitude and financial standing of the company severely as a cut in dividend is like a cut in salary so because of this severe de-motivating affect on shareholders (Malkawi, Rafferty and Pillai, 2010).

Dividends has been became a much more puzzling issue today as companies are able now to return cash to stockholders through stock repurchases which are more advantageous over dividends (Bhattacharyya, 2007). Secondly, if President Barrack Obama makes his way to make dividends back to their tax disadvantaged position, so this will make the situation more mystified (Skinner, 2012). This study would be benefitting the author by providing him with sufficient knowledge regarding the empirical exploitation of the dividend policy impacts as well as about its current dynamics in the present corporate world as no study with a comparative approach between Dividend paying and Not paying companies impact on shareholders wealth on Technology companies registered in NYSE and AMEX has been conducted earlier. Furthermore, it would be benefitting the strategy makers for making an efficient set of dividend policies for attracting stock investors. Moreover, it would also be assisting general community in making relevant investing decisions regarding stock investments and lastly, the research students through providing a rich literature and portraying a wider picture of the impacts places by dividend policy on shareholders wealth.

### **1.2 Research Objectives**

1. To determine the impact of Dividend Payout ratio on Lagged Price Ratio.



2. To analyze the impact of Dividend Payout ratio on Capital Gain Yield Ratio.
3. To scrutinize the impact of Dividend Payout ratio on the Return on Equity.

## **2. Literature Review**

Since the early time of corporate history, managers are addressing the significance of dividend policy in satisfying shareholders expectations (Al-Malkawi, Rafferty and Pillai, 2010). Nissim and Ziv (2001) refer dividend policy as a set of guidelines and regulations which are defined by company for paying dividends to shareholders. Furthermore, Dividend policy has been evolve to be more nowadays in corporations to address issues like whether the cash should be distribute through share repurchase or through specially designated rather than regular dividends (Hussainey, Mgbame and Mgbame, 2011).

According to Modigliani and Miler (1961), Dividend policy of a firm is Irrelevant as it doesn't places any impact on shareholders wealth (Pujari, 2015). They are considered the pioneers in proposing that dividends and capital gains are identical when investor considers return on investment (Rajeswari, 2012). Modigliani and Miller (1961) argue whatsoever increases the firm's value from the payments of dividends will be counterbalance by the fall in the market prices of the shares due to external. Numerous empirical studies evidences the M&M Theorem of irrelevance (Black and Scholes, 1974; Hess, 1981; Miller and Scholes, 1978, 1982 and Sørensen and Arveschoug, 2004) also provide evidences to support of dividend irrelevance hypothesis.

Unlike Modigliani – Miller (1961) approach of Dividend irrelevance, Walter states that in the long term share prices reflect only the current value of expected dividends (The Institute of Chartered Accountants of India, 2014). Walter believes that the investment policy of the company cannot be separated from its dividend policy; they are interconnected, so a relevant dividend policy will place a definite impact on firm's value (Hasan, Asaduzzaman and Karim, 2013).

Furthermore, Gordon relates the market value of the company with its dividend policy; He argues that

dividend policy influences the value of the shares in a scenario even when the return on investment of the company is the same with capitalization rate (The Institute of Chartered Accountants of India, 2014). The Gordon's Model was been widely appreciated in financial literatures because of its simplicity and clarity for valuing stable-growth of the firms paying dividends and for valuing broad based equity indices (Kinkki, 2001).

The Bird-In-Hand Theory urges that outside shareholders demands a high dividend; they demand a dividend today to a highly uncertain capital gain from an unpredictable future investment (Gordon, 1961). Gordon (1959) recommended three possible hypotheses to know the possible reasons why an investor would buy a stock. Firstly, to get dividends and earnings both, to get dividends and lastly to gain earnings, he tested the three hypotheses through using different regression models. Although, Gordon founds that dividend are greatly influencing share price than retained earnings (Al-Malkawi, 2007).

Priya and Azhagaiah (2008) conducted a secondary research to investigate the impact of dividend policy on shareholders wealth in India's organic and inorganic chemical companies for the period of 1996-1997 to 2005-2006. Gauges like Retained earnings per share, Lagged market price, Dividend per share, Lagged price earnings ratio were used to examine the dependent variable Market price per share through multiple regression method and stepwise regression models. The finding shows that the shareholders are been significantly influenced from mainly five variables Growth in sales, Capital investment decisions (Both working and fixed capital), Improvement of Profit Margin, Cost of Capital (Dividend on equity, Interest on debt) and Capital Structure Decisions.

Gul, Sajid, Razzaq, Iqbal and Khan (2012) scrutinizes the influence of dividend policy on shareholders wealth of 75 companies which are listed in Karachi stock exchange for duration of six years from 2005-2010 through using multiple regression and stepwise regression. The result shows that the difference in average market value relative book value of equity is highly significant amongst dividend paying firms and non paying firms. Although retained earning shows to be Insignificant in influencing market value of equity. Dividend policy significantly place impacts on shareholder's wealth in dividend

paying companies. Whereas, lagged market value of equity place no impact on dependent variable and Lagged price earnings ratio is not significantly influencing the market price per share (Gul, Sajid, Razzaq, Iqbal and Khan, 2012).

Chenchehene and Mensah (2015) have decided to debate on the concept of dividend policy and how does it impacts shareholders wealth in the UK retail industry during the time period of 2004-2008. Hence, 25 firms was selected and examined through general regression models using indicators like earnings, share price, firm size, investment, leverage and profitability. The findings show that current dividend payout, firm size and current investment do not significantly affects shareholder's wealth. Cumulating all the result shows that dividend policy has positive impact on shareholders wealth (Chenchehene and Mensah, 2015).

Hashemijoo, Ardekani and Younesi (2012) conducted a study to scrutinize the relationship amongst dividend policy and share price fluctuation testing consumer product companies listed Malaysian Stock exchange. The result of the study indicates major negative relationship between share price volatility through two key gauges of dividend policy that is dividend yield and dividend payout. Furthermore, a clear negative relationship amongst share price volatility and size is tested. Based on the outcome of this study, size and dividend yield have the main impact on the share price volatility amongst the other variables (Hashemijoo, Ardekani and Younesi, 2012).

Periyathamby and Navaratnaseelan (2012) try to address an unresolved of gauging the impact of dividend policy on shareholders wealth in Sri Lanka. So the study investigates the companies registered in Colombo Stock Exchange within the period of 2005-2006 to 2010-2011 using Person's Product Movement Correlation and Descriptive statistics. Conclusions of the research indicate that the dividend policy places no impact on shareholders' wealth (Periyathamby and Navaratnaseelan, 2012).

According Hussainey, Mgbame and Mgbame (2011) investigates the impact of Dividend policy on share price volatility in the companies listed in UK stock exchange as gauging variables like Price volatility,

Dividend yield, Dividend payout, Size, Earnings volatility, Debt and Growth were been tested using Multiple regression analysis to explore the conjunction amongst share price fluctuation and both dividend yield and dividend payout ratio. The finding illustrates a positive relation amongst dividend yield and changes in stock price and a negative relation amongst dividend payout ratio and changes in stock price. Furthermore, it also shows that a firm's debt level, growth rate, size and earnings are relevant indicators for gauging changes in stock prices (Hussainey, Mgbame and Mgbame, 2011).

## 2.1 Conceptual Framework

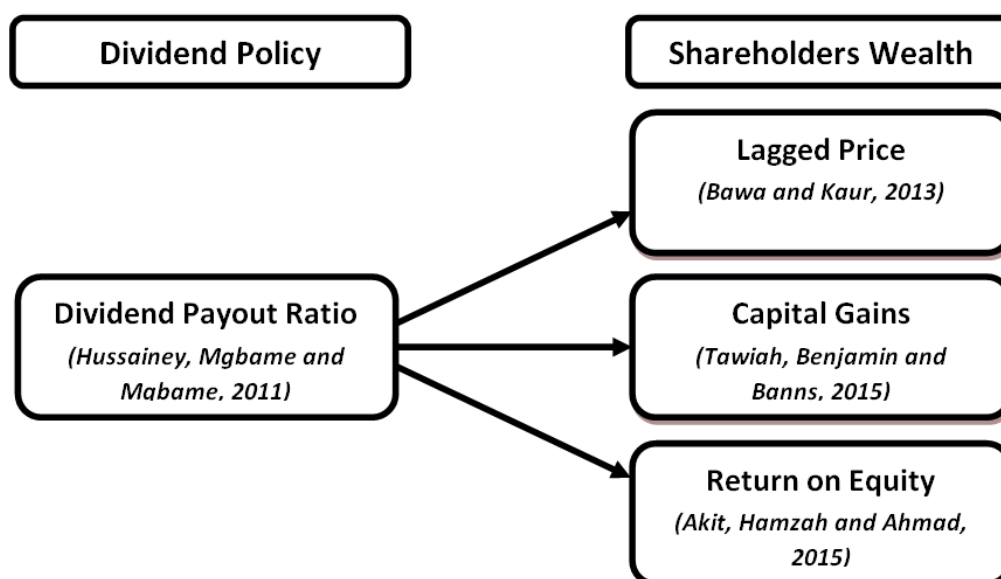


Figure 1: Impact of dividend policy on firm's performance

Abundant studies has been done for investigating the impact of dividend policy using factors like dividend Price volatility, Dividend yield, Dividend payout, Size, Earnings volatility, Debt and Growth as proxies (Hussainey, Mgbame and Mgbame, 2011; Sarwar, 2013; Bawa and Kaur, 2013). Past studies shows that uplift in dividend drives to an increase in share price, therefore a decline in dividend leads to a decrease in share price (Azhagaiah and Priya, 2008; Wet and Mpinda, 2013).

Ong, Yantoultra and Boon (2010) founds Price earnings ratio as a key indicator for future stock returns

and though according to dividend discount model a higher payout will lead to increase in Lagged price ratio. Unlike Bawa and Kaur (2013) who specified that lagged price ratio is not worthy for dividend. Similarly, Gul et al. (2012) and Joshi (2012) discovered that lagged price earnings ratio is not a significant factor in determining shareholders wealth. Therefore we assumed that

*H1: Dividend payout ratio significantly impact on Lagged price ratio*

According to Bugeja and Rosa (2010) the capital gains to be volatile by high dividend payout announcements as this will encourages the share demand. Shareholders can receive their return on their investments either in the form of dividends or capital gains (Kapoor, 2006). Although the findings of Kapoor (2006) shows that the preferred capital gains in IT sector of India are cash dividends rather than the gains through uplift in the stock prices. But Tawiah and Benjamin (2013) argues that there is a wide variation in capital gains over the period than dividends. Therefore we assumed that

*H2: Dividend payout ratio significantly impact on Capital gains*

Decisions for paying dividends is decided by General Meeting of Shareholders begins from the profits earned by the company, which mean the company's dividend verdicts is the most crucial factor that can affect firm's profitability level (Damodaran, 2007). The above mentioned statement shows the relevancy of this ratio (**ROE**) for my study. Further this statement is also been supported by numerous empirical studies like according to Lintner (1956) and Fama and French (2001), Kumaresan (2014), De Angelo et al (2005), Ezejiofor, Nwaolisa, P.K and Chidiebere, 2014). Therefore we assumed that

*H3: Dividend payout ratio has a significant impact on Return on equity*

### **3. Research Design and Methodology**

#### **3.1 Research Design**

This study is a descriptive explanatory research as Creswell (2009) founds descriptive and This study is a descriptive explanatory research as Creswell (2009) founds descriptive and explanatory both research

designs demand propositions, and the research questions for this study demands to be translated into propositions. Likewise, the researcher requires generating assumptions based on empirical literature as what the outcomes of the study is expected to be followed by data analysis for supporting the research propositions (Greener, 2008).

### **3.2 Research Methodology**

This study is persuading with a quantitative method which will lead to generalize research findings as the data will be abstracted from randomly selected samples of greater size which will reflect the research context in a broader picture (Sukamolson, 1997). Further this method was also adapted as this allows testing hypothesis, collecting large number of data which may be more appropriate to answer the research question (Ramona, 2011).

### **3.3 Data Collection Methods**

Secondary data collection is adapted for this study because the basic incentive of using secondary data is time saving as the era of internet pace streaming and accessibility has made it more speed up, which is enough evident for the statement (Daas and Tóth, 2012). Though this study will be collecting financial data for each year from the same year financial statement of that year for example components like profit for 2010 will be abstracted from the financial statement of 2010 so even besides being old this data wouldn't be irrelevant for my study.

Furthermore, panel data analysis is used for this research as Baccala and Sameshima (2011) founds panel data analysis as a bias free analysis because of it controlling individual heterogeneity which is not taken into account by cross sectional and time series analysis as seen to the study of Agung (2009).

### **3.4 Population and Sampling**

On behalf of this study the population is all the 208 technology companies registered in NYSE and AMEX, in which 188 is pooled by NYSE and while other 20 is from AMEX (NASDAQ, 2015). This will be examined during year 2010-2014. Furthermore, the sample size is 60 companies which are selected

proportionally from the entire population of the both stock exchanges as shown in **Table 1**. Further all the companies can only lie in any of the two strata as mentioned in **Table 2**.

Table 1: Strata Sampling

No.	Stock Exchange	Total Companies registered (Technology Industry)	Required Sample Size	Proportion	Calculation	Chosen Sample
1.	NYSE	188	60 Companies	54.23%	$188/208*60$	54
2.	AMEX	20		5.76%	$20/208*60$	6

Lastly, Stratified proportional random probability sampling is used for choosing research sample for this study as for this study. Stratified random probability sampling is most appropriate as this technique will ensures a high level of representativeness from all the layers and strata of the population (Kruskal and Mosteller, 2006).

### 3.5 Reliability

So to ensure reliable data set, only annual reports which were filed to United States Securities and Exchange Commission and statistics available on official stock exchange websites were referred where the financial statistics is already reviewed by the Government authorities (SEC, 2015).

### 3.6 Accessibility

The statistical data for this study is collected from published annual reports of the sample companies which are easily accessible from the company official websites.

### 3.7 Ethical Consideration

This research is a secondary quantitative research with a non experimental approach which means the ethical issues lies with this study are less complex and harmful.

### 3.8 Data Analysis Methods

To examining data for this study three statistical methods will be took into consideration; regression analysis, correlation analysis and descriptive statistics. Since this research will be using correlation analysis just to gauge the relation between the variables. Hence three regression models were developed for each Stratum in order to determine the impact of independent variable on dependent variable;

$$\begin{aligned} \text{LPR} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{CGYR} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{ROE} &= \text{CONSTANT} + \beta_1 \text{DPO} \end{aligned}$$

## 4. Results and Discussion

### 4.1 Descriptive Statistics

Table 2: Descriptive Statistics (Strata 1)

	N	Min	Max	Mean	Std. Deviation	Skewness/Kurtosis	
	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>
DPO	300	0	1	0.299409	0.331152	1.065937	2.702261
LPR	300	-32.61	497.75	20.122	42.35641	9.743455	109.4995
CGYR	300	-55.22	217.08	14.8042	34.10764	1.779452	10.92885
ROE	300	-1.5	1.27	0.232769	0.292612	0.026371	12.48704

As Interpreting Table 2, it was found that in the strata of paying dividend; most of the technology companies pay an average dividend of 30% of their net earnings and the standard deviation is 0.33. While the entire technology industry experiences 2 % of average dividend paid annually this is quite low from the selected sample (NASDAQ, 2015). The dividend paying technology companies experiences earnings of 20% on outstanding shares within the observation period and the standard deviation is 42.35 (NASDAQ, 2015). The average capital gains earned by the stockholders of the dividend paying technology companies registered in NYSE and AMEX is 14.80% per share and the standard deviation is 34.10. The return on equity has an average mean is 23.27% and standard deviation is 0.29. Since the full industry practices a return of 16.19% which is low than the return found for selected sample (NASDAQ, 2015).



Table 3: Descriptive Statistics (Strata 2)

	N	Min	Max	Mean	Std. Deviation	Skewness/Kurtosis	
	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>
DPO	300	0.01	0.03	0.0174	0.008227	0.511542	1.672193
LPR	300	-1767	903.45	5.877367	203.5924	-4.193138	43.99053
CGYR	300	-83.8	401.81	17.27707	64.56286	2.771523	15.26565
ROE	300	-5.72	1.5781	-0.066695	0.701858	-4.634857	33.55037

Seeing to Table 3, it is established that the strata of not paying dividend; Most of the technology companies registered in NYSE and AMEX pays an average dividend of 0.01 from their net earnings and the standard deviation is 0.00. The Non Dividend paying technology companies experiences earnings of 5.87% on outstanding shares and standard deviation is 203.59 (NASDAQ, 2015). The average Capital Gains for the common stock shareholders is 17.27% per share within the observation period and the standard deviation is 64.56. Lastly, the return technology companies have made in against shareholders investment is -0.06 and the standard deviation is 0.70. Thus the full industry practices a return of 16.19% this indicates that the only companies making loss on return of their equity (NASDAQ, 2015).

## 4.2 Correlation analysis

Table 4 : Correlation Analysis (Strata 1)

Correlation				
<i>Probability</i>	<i>DPO</i>	<i>LPR</i>	<i>CGYR</i>	<i>ROE</i>
DPO	1			
	-----			
LPR	-0.06955	1		
	0.3977	-----		
CGYR	0.007672	-0.04919	1	
	0.9258	0.55	-----	
ROE	0.055278	0.085153	0.023581	1
	0.5017	0.3002	0.7745	-----

\*\*Correlation is significant at 0.05 levels

According to table 4, The Lagged Price Ratio is negatively correlated with Dividend payout ratio and the relationship strength amongst the two variables is -0.06 which is a weak relationship. Further the Lagged Price Ratio variable is insignificant of 0.39 which is quite high from 0.05 levels. The Capital Gain Yield Ratio is positively correlated with Dividend Payout Ratio and the relationship between both of the variables is 0.007 which indicates a weak relationship. Moreover, the Capital Gain Yield Ratio is not significant with 0.92 which is quite high from 0.05 levels. The Return on Equity is positively correlated with Dividend Payout Ratio and the relationship between the two variables is 0.05 which is weak relationship. Further, the return on equity variable is not significant with 0.50 which is high from 0.05 levels.

Correlation				
<i>Probability</i>	<i>DPO</i>	<i>LPR</i>	<i>CGYR</i>	<i>ROE</i>
DPO	1			
	-----			
LPR	0.129927	1		
	0.113	-----		
CGYR	0.167165	0.123867	1	
	0.0409	0.131	-----	
ROE	-0.02023	0.032661	-0.10541	1
	0.8059	0.6915	0.1992	-----

\*\*Correlation is significant at 0.05 levels

Interpreting Table 5, the Lagged Price Ratio is positively correlated with Dividend Payout Ratio and the relationship amongst the two variables is 0.12 which is weak relationship. Further, the Lagged price ratio is not significant with the value of 0.11 which is high than the scale 0.05. The Capital Gain Yield Ratio is positively correlated with Dividend Payout ratio and the relationship between these two variables is 0.16 which is weak relationship. Moreover, the Capital Gain Yield ratio is significant with the value 0.04 which is below the scale of 0.05. The Return on equity ratio is negatively correlated with dividend payout ratio and the relation between two variables is -0.02 which is referred to weak negative relationship. Further, The Return on Equity ratio is not significant with the value of 0.80 which is higher than the scale of

0.05.

### 4.3 Regression Analysis

Table 6: Regression Analysis (Strata 1)

	<b>LPR</b>	<b>CGYR</b>	<b>ROE</b>
Constant	17.84547	12.03005	0.24403
Standardized Beta Coefficient	7.603413	9.265433	-0.03761
Std. Error	28.63856	24.91643	0.121342
T-Values	0.265496	0.37186	-0.309954
P-Values (P<0.05)	0.7911	0.7107	0.7571
R-Square	0.212449	0.080646	0.703756
Adjusted R-Square	0.013907	-0.151123	0.629073
F-statistics	1.070047	0.347959	9.423192
F significance	0.384915	0.999314	0
Durbin Watson	2.553036	2.499833	2.522466

\* Independent Factors: Dividend payout ratio

\* Dependent Variables: LPR, CGYR, ROE

#### 4.3.1 Impact of Dividend Payout Ratio on Lagged Price Ratio

$$\text{LPR} = \text{CONSTANT} + \beta_1 \text{DPO}$$

$$\text{LPR} = 17.84 + 7.60(\text{DPO})$$

In accordance with table 6, the model shows that coefficient of determinant (R square) is 0.21 which indicates that only 21.2% of the dependent variable (Lagged Price Ratio) is explained by Independent variable (Dividend Payout Ratio). Though, 78.8% of the dependent variables is being explained and addresses by other factors which are not considered in this study. The adjusted R square is shown 0.01, which signals that 1.39% of variation in Lagged Price Ratio can be point to Dividend Payout Ratio. Which shows that model is not a good fit according to general thumb rule because the variation is less than 60% (Rawlings, Pantula and Dickey, 1998). Further, the F-significance is 0.38 which shows that the model is insignificant. Though, the F-Value of 1.07 shows that there is no relationship between Lagged Price Ratio and Dividend Payout Ratio. The Durbin Watson static Test is 2.55 which show auto correlation between the samples selected for the study as it is above 2.5 which indicates auto correlation

according to (Dufour and Dagenais, 1985). The Standardized Co-efficient beta value for Lagged Price ratio is 7.60 with the P- Value of 0.79 which is high than 0.05 which indicates positive insignificant impact of Dividend Payout Ratio on Lagged Price Ratio.

#### 4.3.2 Impact of Dividend Payout Ratio on Capital Gain Yield Ratio

$$\begin{aligned} \text{CGYR} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{CGYR} &= 12.03 + 9.26(\text{DPO}) \end{aligned}$$

Interpreting Table 6, the model illustrates that coefficient of determinant (R square) is 0.08 which shows that only 8.06% of the dependent variable (Capital Gain Yield Ratio) is influenced by the independent variable (Dividend Payout Ratio). However, 91.94% of the dependent variable is been explained by other components which are not been taken into consideration for this research. The adjusted R Square is -0.15 which indicates -15.11% of variation in Capital Gain Yield Ratio can be point to dividend payout ratio. This shows that model is not a good fit according to general thumb rule because the variation is less than 60% (Rawlings, Pantula and Dickey, 1998). Moreover, F-significance is 0.99 which specifies the model is not significant. Though, the F-value is 0.34 which shows a relationship between Capital Gain Yield Ratio and Dividend Payout Ratio. The Durbin Watson Static test illustrates a value of 2.49 which specifies no autocorrelation amongst the chosen samples adapted for this study as it lies within the range of 1.5 to 2.5 which indicates no auto correlation according to (Dufour and Dagenais, 1985). The Standardized Co-efficient beta value for Capital Gain Yield Ratio is 9.26 with the P-value of 0.71 which is high from 0.05. The result illustrates a positive insignificant impact of Dividend Payout on Capital Gain Yield Ratio.

#### 4.3.3 Impact of Dividend Payout Ratio on Return on Equity

$$\begin{aligned} \text{ROE} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{ROE} &= 0.24 - 0.03(\text{DPO}) \end{aligned}$$

According to Table 6, the model shows that the coefficient of determinant (R square) is 0.70 which indicates that 70.37% of the dependent variable (Return on equity) is influenced by the independent

variable (Dividend Payout Ratio). However, 29.63% of the dependent variable is been enlightened by other factors which are not taken into consideration for this study. The Adjusted R square is 0.62 which shows 62.90% of variation in Return on equity is influenced by Dividend Payout Ratio. The figure defines that model is a good fit according to general thumb rule because the variation is more than 60% (Rawlings, Pantula and Dickey, 1998). Furthermore, F-significance is 0.00 which specifies that the model is significant. Though, the F-Value is 9.42 which indicate a relationship between Return on Equity and Dividend Payout Ratio. The Durbin Watson static test found a value of 2.52 which shows auto correlation amongst the samples chosen for the study as it is above 2.5 which indicate auto correlation according to (Dufour and Dagenais, 1985). The Standardized Coefficient Beta value for Return on Equity is -0.03 with the P-value 0.75 which is high from 0.05. The finding establishes an insignificant negative impact of Dividend Payout ratio on Return on Equity.

Table 7: Summary Result of Hypothesis tested

Hypotheses	Significant Level	Result	Explanation
H <sub>1</sub> : Dividend Payout ratio has a significant impact on Lagged Price Ratio.	0.7911	Rejected	The p-value is 0.79 which is more than 0.05 significant levels. This shows that Dividend Payout Ratio is not significant with Lagged Price Ratio of the companies.
H <sub>2</sub> : Dividend Payout ratio has a significant impact on Capital Gain Yield Ratio.	0.7107	Rejected	The p-value is 0.71 which is more than 0.05 significant levels. This shows that Dividend Payout Ratio is not significant with Capital Gain Yield ratio of the companies.
H <sub>3</sub> : Dividend Payout ratio has a significant impact on Capital Gain Yield Ratio.	0.7571	Rejected	The p-value is 0.75 which is more than 0.05 significant levels. This shows that Dividend Payout Ratio is not significant with Return on Equity of the companies.

Table 8: Regression Analysis (Strata 2)

	<b>LPR</b>	<b>CGYR</b>	<b>ROE</b>
Constant	-58.58495	-7.041773	-0.018761
Standardized Beta Coefficient	3704.731	1397.634	-2.75479
Std. Error	2251.424	692.7618	6.266766
T-Values	1.645506	2.017482	-0.439587
P-Values (P<0.05)	0.1025	0.0459	0.7571
R-Square	0.070201	0.124613	0.393842
Adjusted R-Square	-0.164203	-0.096073	0.241029
F-statistics	0.299486	0.564663	2.577279
F significance	0.999844	0.964036	0.000156
Durbin Watson	2.782041	2.49595	2.355575

\*\* Independent Factors: Dividend payout ratio.

\* Dependent Variables: LPR, CGYR, ROE.

#### 4.3.4 Impact of Dividend Payout Ratio on Lagged Price Ratio

$$\text{LPR} = \text{CONSTANT} + \beta_1 \text{DPO}$$

$$\text{LPR} = -58.58 + 3704.73(\text{DPO})$$

Interpreting Table 8, the coefficient of determinant (R square) is 0.07 which shows that 7.02% of the dependent variable (Lagged Price Ratio) is influenced by independent variable (Dividend Payout Ratio). Therefore, 92.98% of the dependent variable is been described by other elements that are not considered for this study. The Adjusted R square is -0.16 which shows -16.42% of variation in Lagged Price Ratio is influenced by Dividend Payout Ratio. The statistics defines that model is not a good fit according to general thumb rule because the variation is less than 60% (Rawlings, Pantula and Dickey, 1998). Furthermore, F-significance is 0.99 which specifies that the model is insignificant. Though, the F-Value is 0.29 which indicate a weak relationship between Lagged Price Ratio and Dividend Payout Ratio. The Durbin Watson static test found a value of 2.78 which shows auto correlation amongst the samples chosen for the study as it is above 2.5 which indicate auto correlation according to (Dufour and Dagenais, 1985). The value of Standardized Co-efficient beta is 3704.73 with the P-value of 0.10 which is high than 0.05. The findings construct a positive insignificant impact of Dividend Payout Ratio on Lagged Price Ratio.

#### 4.3.5 Impact of Dividend Payout Ratio on Capital Gain Yield Ratio

$$\begin{aligned} \text{CGYR} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{CGYR} &= -7.04 + 1397.63(\text{DPO}) \end{aligned}$$

In accordance with Table 8, the coefficient of determinant (R square) is 0.12 which defines that 12.46% of the dependent variable (Capital Gain Yield ratio) is influenced by independent variable (Dividend Payout Ratio). Therefore, 87.54% of the dependent variable is been described by other variables that are not considered for this research. The Adjusted R square is -0.09 which shows -9.60% of variation in Capital Gain Yield Ratio is influenced by Dividend Payout Ratio. The figure illustrates that the model is not a good fit according to general thumb rule because the variation is less than 60% (Rawlings, Pantula and Dickey, 1998). Moreover, F-significance is 0.96 which shows that the model is insignificant. Though, the F-Value is 0.56 which indicates a relationship between Capital Gain Yield Ratio and Dividend Payout Ratio. The Durbin Watson static test found a value of 2.49 which shows no auto correlation amongst the samples chosen for the study as it lies within the range of 1.5 to 2.5 which indicates no auto correlation according to (Dufour and Dagenais, 1985). The Standardized Co-efficient Beta value is 692.76 with the P-value of 0.04 which is below than 0.05. Hence, the result shows a positive significant impact of dividend payout ratio on capital gain yield ratio.

#### 4.3.6 Impact of Dividend Payout Ratio on Return on Equity

$$\begin{aligned} \text{ROE} &= \text{CONSTANT} + \beta_1 \text{DPO} \\ \text{ROE} &= -0.01 - 2.75(\text{DPO}) \end{aligned}$$

According to Table 8, the coefficient of determinant (R square) is 0.39 which shows that 39.38% of the dependent variable (Return on equity) is influenced by independent variable (Dividend Payout Ratio). Therefore, 60.62% of the dependent variable is been described by other factors that are not took into consideration for this research. The Adjusted R square is 0.24 which shows 24.10% of variation in Return on Equity is influenced by Dividend Payout Ratio. The figure defines that the model is not a good fit according to general thumb rule because the variation is less than 60% (Rawlings, Pantula and Dickey,

1998). Furthermore, F-significance is 0.00 which shows that the overall model is significant. Though, the F-Value is 2.57 which indicate a relationship between Return on Equity and Dividend Payout Ratio. Further, The Durbin Watson static test shows a value of 2.35 which founds no auto correlation amongst the samples chosen for the research as it lies within the range of 1.5 to 2.5 which indicates no auto correlation according to (Dufour and Dagenais, 1985).

The Standardized Beta Co-efficient value is -2.75 with the P-value of 0.75 which is high than 0.05. Therefore, the result shows that Dividend Payout ratio has a negative insignificant impact on Return on Equity.

#### 4.3.7 Summary Result of Hypothesis tested

Hypothesis	Significant Level	Result	Explanation
H1: Dividend Payout Ratio has a significant impact on Lagged Price Ratio.	0.1025	Rejected	The p-value is 0.1025 which is more than 0.005 significant levels. This shows that Dividend Payout ratio is not significant with lagged price ratio of the No Dividend paying companies.
H2: Dividend Payout ratio has a significant impact on Capital Gain Yield Ratio.	0.0459	Accepted	The p-value is 0.0459 which is less than 0.05 significant levels. The shows that dividend payout ratio is significant with Capital Gain Yield Ratio of the No Dividend paying companies.
H3: Dividend Payout ratio has a significant impact on Capital Gain Yield Ratio.	0.757	Rejected	The p-value is 0.757 which is more than 0.05 significant levels. This shows that Dividend Payout Ratio is not significant with return on equity of the No Dividend paying companies.

## 5. Conclusion and Recommendation

The subsequent discussion in this chapter will examine at what extent that the research objectives are achieved; though it is concluded shows that Dividend payout is not a vibrant factor to impact price earnings volatility of the common shareholders of Dividend Paying or Not Paying Companies in Technology companies listed under NYSE and AMEX. Further specifies that the investing behavior of common shareholders is not been influenced by dividend payout policy and more they look toward is stock gains to maximize their wealth (Bawa and Kaur, 2013). Hence, further it was sum up that whether



paying or not paying dividends do not affect the equity returns of the Technology Companies registered in NYSE and AMEX which shows that the profitability of companies are mainly determined by Capital Gains rather than Dividend Payouts (Alzomaia and Al-Khadhiri, 2013).

### **Implication for managers and researchers**

The main contribution of this study is pooling new knowledge about the consequences of Dividend policy on shareholders wealth in Technology companies registered in NYSE and AMEX. The research findings will assist the corporate managers in designing relevant Dividend Policy keeping its impacts on shareholders wealth as the primary responsibility for a corporation management is to maximize shareholders wealth. Furthermore, this study will also help the research community in identifying the dividend behavior of the most advanced technology sector on Globe. Moreover, it will also help in studying the different dynamics of dividend policy of such an industry in which no or fewer dividends are paid like technology.

### **Recommendation**

Recommendation for future researchers is to investigate other factors to gauge shareholders wealth as the variables chosen for this study are not significantly impacted by Dividend Payout Ratio. While some other variables like Size, Holding period yield ratio, Leverage etc could be used to find that whether these gauges to measure shareholders wealth are been significantly impacted from dividend payout ratio. Secondly, the future researchers should consider a data with a wider time span and huger sample size which will lead to more accurate outcomes as might the impact cannot be seen in short-term and might would be visible in long terms.

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# **DIVIDEND POLICY AND SHAREHOLDER'S WEALTH: EVIDENCE FROM CEMENT SECTOR OF PAKISTAN**

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## **Abstract**

This study aims to find the effect of dividend policy on the wealth of shareholders in cement sector of Pakistan for time period of eight years from 2007 to 2014. Techniques of descriptive statistics, Correlation and Multiple linear regressions were used to analyze the data. Variables like dividend per share (DPS), retained earnings per share (REPS), return on equity (ROE) and lagged market price per share (LAGMP) were used to measure dividend policy and regressed against the market price per share (MPS) as a proxy for shareholder's wealth. The results of study revealed that 49.37% variation in shareholder's wealth is due to change in independent variables. It further revealed that DPS, REPS and LAGMP have statistically positive significant relation with MPS. Results confirm the fact that, wealth of shareholders is significantly related to its dividend policy in cement sector of Pakistan.

**Keywords:** Dividend per Share, Retained Earnings per Share, Market Price per Share

## **1.0 Introduction**

Dividend policy is always two pronged strategy, one that is distributed to shareholders, and other which is retained by the firm for the purpose of investing in projects that can add value to the firm (Chenchehene & Mensah, 2015). At same time dividend policy is one of the most important pillars of a firm's financial management beside its capital structure and corporate governance. Dividend policy is significant because



it addresses the most important and riskier stakeholders of firm that are its shareholders (Chenchehene & Mensah, 2015). That is why businesses are always in quest of an ideal dividend policy to keep all stakeholders associated and interested in firm's long term goals (Azhagaiah & Priya, 2008). However, identification of best or a universal dividend policy remains a mystery, because of diverse shareholders and investment expectations, unique businesses and market dynamics (Balagobei & Selvaratnam, 2015). These variations in dividend policy across the globe are attributed to difference in investor's preferences, tax laws, rules, regulations, government policies and institutional and capital markets (Zameer et al., 2013).

The relevance of dividend policy is deep rooted in Miller and Modigliani (1961) perfect market assumption, that in perfect market, firm's market value is irrespective of its dividend policy. But, with absence of perfect market, which is a reality, dividend policy do matter (Mokaya, Nyang'ara & James, 2013). As of today dividend policy is among the most debatable topics and still a puzzle in finance (Zameer et al., 2013). Still it is considered as one of the most important decision that, weather to retain firms income for future investment or distributed to shareholders (Ansar, Butt & Shah, 2015). It is the ultimate responsibility of financial managers and researchers to find the best fit among the alternatives, and maximize the wealth of shareholders (Azhagaiah & Priya, 2008).

Most of the empirical research and determinant of dividend policy are developed, tested and recertified in developed countries in the context of their national dynamics (Sarwar, 2013). Developing counties like Pakistan bring its unique set of country specific dynamics, which can significantly influence the decisions of financial managers (Shah & Hijazi, 2004; Khan, Bibi & Tanveer, 2016). These country specific factors can range from uncertain political and economic condition, lack of future investment and financing opportunities, underdeveloped capital market and a bank based financial system (Zameer et al., 2013; Alam, 2015; Zaidi, 2015; Khan, Tanveer, Shah & Jamil, 2015; Pakistan Interest Rate, 2016). Hence to develop a basic understanding and to find the impact of these indigenous country specific factors on firm's dividend policy in cement sector is the core objective of the study. Further, Khan, Ali and Sohail (2016) argue that cement sector is one the most vibrant and growing sector in Pakistan, providing jobs

(3% of total labor force), paying taxes (almost 30 billion per year) and source of foreign exchange (contributing 2.1% country total exports). Currently cement sector's installed production capacity is around 45 million tons per year (Ali, 2015). Further, realizing future demand from traditional international markets like Africa, Middle East and Afghanistan and local projects under China Pakistan Economic Corridor (CPEC), the major player like Cherat Cement, Lucky Cement, Attock and DG Khan Cement have already announced future expansion, which will increase the production capacity up to 53 million tons (Business Recorder, 2011; The News, 2015).

### **1.1 Research objectives**

The purpose of the study is to understand the distinctive feature of dividend policy of cement industry, or more specifically:

1. To determine the significant factors effecting the dividend policy decision in cement industry of Pakistan
2. Do the decision related to dividend policy in cement industry of Pakistan, are consistent with theorized models developed in advance economies.
3. To understand the impact of local industry dynamics and Pakistan's economic and financial dynamics on dividend policy of cement industry of Pakistan.

This paper is organized as follows. Section 2 discusses the theoretical background base on previous literature on dividend policy, and development of variables and hypothesis respectively. Section 3 describes the methodology of the research. Section 4 shows the empirical results and discussion and in Section 5 the conclusion of the study is delineated.

### **2.0 Theoretical Background and Development of Hypotheses**

The foundation of dividend policy can be rooted back to the research conducted by Miller & Modigliani (1961), who proposed that in perfect market shareholder's wealth is irrespective of the firm's dividend policy. Whereas, shareholder's wealth depends upon the firm's income and not on how it is distributed.

But existence of perfect market is a rare phenomenon, and in real life, it is almost impossible to hold the assumption of perfect market (Wet & Mpinda, 2013). Other theories like Bird in hand theory, opposed the view point of Miller and Modigliani, and suggested that increase in dividend payments will increase the shareholder's wealth. Because, most of the investors are risk averse, they prefer cash dividends instead of future capital gains to save themselves against future uncertainties (Gordon, 1963). Likewise dividend signaling theory states that increase in dividends will convey a positive message to the market and hence will increase the share price (John and Williams, 1985). On the other hand agency theory states that investors may also prefer cash dividends to reduce agency cost (Easterbrook, 1984). In contrast to the above discussed theories the Tax preference theory recommends that low dividends increase the shareholder's wealth because investors prefer future capital gains instead of cash dividends to save them from taxes (Litzenberger & Ramaswamy, 1982).

These variations on dividend policy in modern finance always attracted the attention of researchers and policy makers. Dividend policy is important for managers, investors, lenders and other stakeholders and mostly influenced by company's management decision to invest in future projects (Khan, 2012). Investors have always shown keen interest in dividend policy, because it is a sign of stability and maturity. Similarly lenders of a company also take it as positive sign as cash have been generated beyond creditor's requirements. That is why in modern financial economies dividend policy is one of the most testing and constantly evolving topics, and still a complicated conundrum (Attah-Botchwey, 2014).

## **2.1 Shareholder's Wealth**

The primary objective of a company's management is to maximize shareholder's wealth, instead of profit and dividend policy is one of the factors that influence shareholder's wealth (Akit, Hamzah & Ahmad, 2015). In most of the cases shareholders' wealth is represented by the market price of the company's common stock, which in turn is the function of the company's investment, financing and dividend decision (Balagobei & Selvaratnam, 2015; Azhagaish & Priya, 2008; Bawa & Kawr, 2013). A number of previous researches (e.g. Ojeme, Mamidu & Ojo, 2015; Wet & Mpinda, 2013; Akit, Hamzah & Ahmad, 2015; Bawa & Kaur, 2013; Sarwar & Naseem, 2014) have used market price per share as a proxy for

shareholder's wealth. So in this study, shareholder's wealth was measured by market price per share.

## 2.2 Dividend per Share

In various studies dividend per share is used as one of the most important measure dividend policy (Mokote & Marangu, 2014; Balagobei & Selvaratnam, 2015). If we look at the previous literature, majority of the previous studies are showing positive and significant relation between dividend per share and market price per share. Research studies held by (Al-Hassan, Asaduzzaman & Al karim, 2013; Mokote & Marangu, 2014; Akit, Hamzah & Ahmad, 2013; Wet & Mpinda, 2013; Balagobei & Selvaratnam, 2015; Joshi, 2012; Menike & Prabath, 2014; Kibet, Jagongo & Ndede, 2016; Sulaiman & Migiyo, 2015) revealed positive significant association between dividend per share and market price per share. Bawa & Kaur (2013) concluded in their research that, in long run shareholder's wealth increased significantly of dividend paying companies as compared to dividend non-paying companies of Indian IT sector from 2006 to 2010. Dividend payment affects the shareholder's wealth but payment of dividend is not the only factor that affects the shareholder's wealth (Ojeme, Mamidu & Ojo, 2015). Similarly the research conducted by Azhagaish & Priya (2008) confirmed that dividend per share relates significantly with wealth of shareholders of Indian organic chemical companies, but in case of inorganic chemical companies, shareholder's wealth has no relation with dividend per share. According to Balakrishnan (2016) there is insignificant relation between dividend per share and Market price per share of companies listed in National Stock Exchange of India. On the basis of above researches, we propose the first hypothesis of our study that

***H1: Dividend per share has significant impact on shareholder's wealth.***

## 2.3 Retained Earnings per Share

Shareholders like cash dividends also want the growth of the company by reinvesting the funds (Ansar, Butt & Shah, 2015). Retained earnings are one of the most significant sources to finance corporate growth (Bawa & Kawr, 2013). The interaction of retained earnings per share with shareholders wealth was used by number of previous researchers. Al-Hassan, Asaduzzaman & Al karim (2013) found positive

significant relation of retained earnings per share with market price per share of 28 sample companies in Bangladesh. Akit, Hamzah & Ahmad (2013) revealed significant relation between retained earnings per share and shareholder's wealth of Malaysian Shariah as well as non-Shariah compliance companies from 2004 to 2013. Joshi (2012) revealed a positive significant relation between retained earnings per share and market price per share of banking and non-banking sector of Nepal. Similarly the study conducted by Bawa & Kaur (2013) also confirmed that retained earnings per share have positives significant impact on shareholder's wealth of Indian IT companies from 2006 to 2010. There are many previous researches in which both dividend per share and retained earnings per share were used to measure dividend policy and both variables have positive significant relation with market price per share (Bawa & Kawr, 2013; Al-Hassan, Asaduzzaman & Al karim, 2013; Akit, Hamzah & Ahmad, 2013; Joshi, 2012). So the second hypothesis of our study is

***H2: Retained Earnings per Share has significant impact on shareholder's wealth.***

## **2.4 Return on Equity**

Return on Equity is also an important variable to explain market price per share. Firms with high return on equity pay more dividends which play a vital role in effecting market prices of common equity (Akit, Hamzah & Ahmad, 2013). Masum (2014) revealed that return on equity has positive significant relation with market share prices of commercial banking sector listed in Dahaka stock exchange. Balagobei & Selvaratnam (2015) proposed a positive significant relation between return on equity and shareholder's wealth of Sri Lankan manufacturing firms listed in Colombo stock exchange from 2008 to 2012. Majanga (2015) found positive correlation between return on equity and market price per share of companies listed in Malawi stock exchange from 2008 to 2014. Akit, Hamzah & Ahmad (2013) showed significant relation between return on equity and shareholder's wealth of Malaysian shariah and non-shariah compliance companies. Research conducted by Khan (2012) showed that return on equity has insignificant relation with shareholder's wealth Pakistani Chemical and Pharmaceutical industry. Hunjra et al., (2015) revealed insignificant relation between return on equity and market price per share of Pakistani Non-financial. On the basis of above researches, the third hypothesis developed for this study is

*H3: Return on equity has significant impact on shareholder's wealth.*

## 2.5 Lagged Market Price per Share

Joshi (2012) revealed a positive significant relation between lagged market price per share and market price per share of banking and non-banking sector of Nepal. Research study held by Bawa & Kaur (2013) also revealed that lagged market price per share has significant association with shareholder's wealth of Indian IT sector. On the basis of these researches, Fourth hypotheses developed for this research is

*H4: Lagged market price per share has significant impact on shareholder's wealth.*

## 3.0 Research Methodology:

Primarily this study was designed to study all Pakistan Stock Exchange listed firms in the cement sector of Pakistan. But, due to unavailability of data, the sample size was reduced to 18 firms as a convenience sampling, which is 75% of a total population. The time period of the study is eight years from 2007 to 2014. The data of sampled firms were collected from the website of State Bank of Pakistan. To analyze the data we used E-Views software. Regression analysis was used in this study to measure the impact that dividend policy on shareholder's wealth. Regression model used in the study is as under.

$$MPS_{it} = \alpha + \beta_1 DPS_{it} + \beta_2 REPS_{it} + \beta_3 ROE_{it} + \beta_4 MPS_{it-1} + e$$

Where MPS is Market price per Share, DPS is Dividend per share, REPS is Retained earnings per share, ROE is Return on equity,  $MPS_{it-1}$  is the Lagged market price per share, and e is the Error term.

## 3.1 Data Stability Tests

Before the application of different techniques, data was checked for any discrepancy. Multicollinearity was checked through Variance Inflation Factor (VIF). Value of VIF must be less than 5 and Tolerance value must be between 0 and 1. Table 5 shows the results of multicollinearity analysis, where all VIF values are less than 5, and Tolerance values are between 0 and 1, so there is no harmful multicollinearity in the data.

**Table 1: Multicollinearity Analysis**

Variables	Tolerance	VIF
<b>DPS</b>	0.788	1.270
<b>REPS</b>	0.968	1.034
<b>ROE</b>	0.999	1.001
<b>LAGMP</b>	0.805	1.242

Similarly Breusch Godfrey test was applied to check autocorrelation in the data. Probability value of Chi square must be more than 0.05 for not having autocorrelation. When this test was applied on the original data, probability value of chi square was 0.0000, which show a very high autocorrelation. To remove autocorrelation, data was transformed to first difference. After transformation, the result was quite satisfactory and probability value of chi square was 0.8211. It shows no autocorrelation in transformed data. Similarly data was normally distributed after first difference.

#### 4.0 Results and Discussions

In this section various quantitative analysis were performed to identify the relationships and associations between variable of the study and also to verify the above stated hypotheses.

##### 4.1 Descriptive Statistics

Descriptive statistics are shown in table 2. Mean and median values of dividend per share are 1.13 and 0.00 while mean and median values of retained earnings per share are 2.85 and 0.93. These values show that cement companies of Pakistan prefer to retain their earnings rather than paying it as a dividend to shareholders. The standard deviation of dividend per share and retained earnings per share are 2.49 and 6.69 respectively, which shows that retained earnings per share have more variation as compared to dividend per share. Mean and median values of ROE are -0.10 and 0.05 respectively, which shows that on average, profitability of cement sector remains very low during the time period from 2007 to 2014. So on average the performance of cement sector is below at par, but standard deviation of ROE i.e. 1.51, which means that there is high variation in this sector, and some firms are having very high returns as well. The Mean (Median) values of lagged market price and market price per share is 35.84 (17.69) and

41.24 (17.69) respectively. Standard deviation of lagged market price and market price per share are 49.33 and 66.13 respectively. Mean and median values of lagged market price per share and market price per share show that market share values of cement companies of Pakistan remained moderate from 2007 to 2014. Standard deviation of lagged market price per share and market price per share shows high dispersion of these variables from their central values. Minimum (Maximum) value of lagged market price and market price per share are 1.29 (410.30) and 1.29 (519.62) respectively.

**Table 2: Descriptive Statistics**

Variable	Mean	Median	Std.Dev	Minimum	Maximum
<b>DPS</b>	1.13	0.00	2.49	0	14.49
<b>REPS</b>	2.85	0.93	6.69	-14.73	32.90
<b>ROE</b>	-0.10	0.05	1.51	-17.74	0.63
<b>LAGMP</b>	35.84	17.69	49.33	1.29	410.30
<b>MPS</b>	41.24	17.69	66.13	1.29	519.62

## 4.2 Correlation Analysis

The correlation analysis shows the nature and intensity of relation between two variables. Parsons Correlation is shown in Table 3. Correlation between the variables is being checked at 1% and 5% level of significance.

Correlation between Dividend per share and retained earnings per share is -0.149, which is negative and insignificant correlation. Correlation between dividend per share and return on equity is 0.000, which is zero correlation between them. There is significant positive correlation of 0.432 between dividend per share and lagged market price per share. It means that there exists 43.2% association between lagged market price per share and dividend per share, which is relatively strong correlation. Correlation between dividend per share and market price per share is 0.459, which is positive and significant. Which mean that there is 45.9% positive association between dividend per share and market price per share. There is positive and relatively weak correlation of 0.220 exists between retained earnings per share and market price per share. It means that there exist 22% positive association between market price per share and retained earnings per share, which is significant. There is positive and strong correlation of 0.623 exists



between lagged market price per share and market price per share that is significant. This value indicates that 62.3% positive association exists between lagged market price per share and market price per share.

**Table 3: Correlation Table**

	DPS	REPS	ROE	LAGMP	MPS
DPS	1	-0.149	0.000	0.432**	0.459**
REPS		1	0.021	0.024	0.220**
ROE			1	-0.020	0.020
LAGMP				1	0.623**
MPS					1

**\*\*.** (Significant at 1% level of significance)

**\*.** (Significant at 5% level of significance)

### 4.3 Regression Analysis:

Table 4 is showing the results of Regression analysis. Significance of the relationship between dependent and independent variables was checked at 5% level of significance.

**Table 4: Regression Results**

Variable	Coefficient	t-statistics	Probability
DPS	7.2560	4.3986	0.0000
REPS	1.6823	4.2189	0.0000
ROE	0.3481	0.4103	0.6822
LAGMP	0.5438	7.3870	0.0000
R Square	0.4937		
Adjusted R Square	0.4828		
Standard error	20.0282		
F value	33.900		
Sig. F	0.0000		

Above table 4 is showing that coefficient value of dividend per share is 7.2560, which means that with 1 unit change in dividend per share, 7.2560 units change occurs in market price per share. Probability value of dividend per share is 0.0000. Dividend per share has positive and significant impact on shareholder's

wealth. Similarly retained earnings per share have positive and significant relation with shareholder's wealth. Whereas return on equity has positive but statistically insignificant relation with shareholder's wealth. We can also confirm a positive and significant relation between lagged market price per share and market price per share. The model goodness of fit which is shown by R square is 0.4937, which mean that 49.37% variation in the dependent variable is being explained by independent variables.

## 5.0 Conclusion

This study was conducted to examine the relationship between dividend policy and shareholder's wealth of cement sector of Pakistan. The main objective of this study was to examine the impact of dividend policy on shareholder's wealth. Our First Hypothesis which states that, dividend per share has significant impact on shareholders wealth is accepted. This result is consistent with the findings of Gajalakshami & Azhagaiah (2015), Al-Hassan, Asaduzzaman & Al karim (2013), Bawa & Kaur (2013), Wet & Mpinda (2013), Azhagaish & Priya (2008), Joshi (2012), Akit, Hamzah & Ahmad (2013). Balagobei & Selvaratnam (2015) and Sarwar (2013). Which implies that dividend per share is a motivating factor for investors to invest in Pakistani cement sector which is strong enough to increase market share prices of Pakistani cement firms. Second hypothesis is also being accepted that is retained earnings per share have significant relation with shareholder's wealth, consistent with the findings of Bawa & Kaur (2013), Al-Hassan, Asaduzzaman & Al karim (2013), Akit, Hamzah & Ahmad (2013) and Joshi (2012). This shows that investors like cash dividends but they also want the growth of the cement firms through reinvesting the funds that are retained from the profit. But dividend per share has more impact on market price per share as compared to retained earnings per share. So there must be an optimal combination of dividends and retained earnings to increase shareholder's wealth. Third hypothesis says that return on equity has significant relation with shareholder's wealth. This hypothesis is being rejected according to results of regression analysis. This result is consistent with the findings of Khan (2012) and Hunjra et al., (2015). Fourth hypothesis was lagged market price per share has significant relation with shareholder's wealth. It is also being accepted. This result is consistent with the findings of Joshi (2012) and Bawa & Kaur (2013). So market price per share is an accelerating factor to increase the market price of shares of

subsequent year. This study comes up with the conclusion that dividend policy has significant impact on shareholder's wealth of cement sector of Pakistan during the time period 2007-2014.

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# ENTERPRISE RESOURCE PLANNING (ERP) MODEL FOR SMALL AND MEDIUM SIZED MANUFACTURING FIRMS BASED ON UML

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## Abstract

With the opening up of the global economy, manufacturing small and medium enterprises (SMEs) have found it necessary to utilize the benefits of Enterprise Resource Planning (ERP) system. The functional modules of ERP systems in large scale manufacturing SMEs cannot be treated similarly. Hence, there is a need to develop ERP system functions to meet the specific characteristics and needs of manufacturing SMEs. In this paper, conceptual ERP model for small and medium-size manufacturing firms has been proposed by using “4+1” views, based on Unified Modelling Language (UML). Three ERP modules were selected to be included in the proposed conceptual ERP model: manufacturing, inventory control, and human resources management. These modules were considered as being commonly used major ERP modules within manufacturing SMEs. The proposed ERP model overcomes the issues that hinder the ERP system adoption within manufacturing SMEs sector; and sustains their competitiveness and survives in global markets.

## Keywords:

ERP, SMEs, Manufacturing, UML, “4+1view” architecture model.

## 1. Introduction

The vast development of Information and Communication Technology (ICT) in the last decades is a result of the growth occurs in various industries such as electronic, computer, telecommunication, and others

that have had dramatic effects on different aspects of organizations' functions. An optimal introduction and integration of a primary technology that effectively utilizes an ICT system in the organization and workforce, specifically an Enterprise Resource Planning (ERP) system, will have an enormous positive long-term effect on large, medium or small enterprises (Ravarini, 2010). One of the key business applications that help enterprises to manage their resources is ERP, which is a multi-module application software package system that integrates key business and management processes across an enterprise (McGaughey and Gunasekaran, 2007).

A successful implementation of the ERP system helps enterprises to manage and integrate all the business functions within their borders. The ERP typically contains a set of mature business application and tools for financial and cost accounting, sales and distribution, materials management, human resource, production planning and computer integrated manufacturing, supply chain, and customer information (Boykin, 2001; McGaughey and Gunasekaran, 2007). Furthermore, an ERP system can be used as a tool to help in improving the performance level of a supply chain network by helping to reduce cycle times (Gardiner, Hanna, and LaTour, 2002; Lambert, García-Dastugue, and Croxton, 2005; Stadtler, 2015).

With the opening up and opportunity of the global economy the Manufacturing small and medium sized enterprises (SMEs) whose headcount or turnover falls below certain limits have found difficulties to sustain, since they do not have the strength to compete with large enterprises (Singh et al, 2008). Manufacturing SMEs have to tap the power of IT and integrated information systems to stay competitive and customer oriented (Ghobakhloo et al, 2011). As stated earlier, ERP is often considered the answer for enterprises survival (McGaughey and Gunasekaran, 2008; Rao, 2000; Shehab et al., 2004). Since ERP software market has become one of today's largest IT investments worldwide (Moon, 2007; Shehab et al, 2004), as enterprises, and SMEs in particular, realized the abilities and promises of ERP.

Despite local and international ERP vendors have come up with various solutions or packages to cater the needs of SMEs, it is inadequate to raise awareness for the targeted markets to embrace the system (Johansson and Sudzina, 2008; Olson, 2003). Most SMEs are proving to be laggards of the ERP system (Safavi et al, 2014; Shahawai and Idrus, 2010a). SMEs could not afford the risk of investing time,

money and effort for a system that could ultimately fail (Haddara and Zach, 2011). The current trend in handling the SME market for ERP vendors is still a huge grey area (Supramaniam and Kuppusamy, 2010). The adopted ERP solutions within SMEs found to be either, of-the-shelf ERP system, in which enterprises purchase the ERP system offered by the vendors from the IT products markets. The other form, In-house ERP system, where enterprises utilize their own IT departments to develop a specific system functions (Shahawai and Idrus, 2010a). The provided ERP solutions have not met the mark with the majority of Manufacturing SMEs that it was targeting (Noudoostbeni et al, 2009; Shahawai and Idrus, 2010b).

To sum up of the foregoing, small and medium-size industries have smaller information technology departments and less experience with large-scale projects such as ERP. Thus, the researcher proposes a new approach to obtain ERP systems for SMEs efficiently. This approach harmonize with that ERP systems must be simple, cheap, compact size and easy to meets needs of an enterprises, budgets and culture (Park and Lee, 2006).

In this paper, conceptual ERP model for small and medium-size manufacturing firms has been proposed by using “4+1” views, based on Unified Modelling Language (UML). Three ERP modules were selected to be included in the proposed conceptual ERP model. These modules are: (1) manufacturing, (2) inventory control, and (3) human resources management. These modules were considered as being commonly used major ERP modules within manufacturing SMEs.

## **2. Literature Review**

Through a review of previous studies has been realized that the ERP modelling untapped enough the object oriented technology and its properties to develop business information system. Object-oriented technology has been highlighted to overcome software obstacles (Park and Lee, 2006). Therefore, object-oriented is a well-adopted programming style that uses interacting objects to model and solve complex programming tasks in business information systems. Object-oriented system development is commonly recognized as improving efficiency and reducing system maintenance costs (Larman, 2012).

Traditional approaches to the modelling of complex manufacturing systems are expensive, time consuming, and of limited value. Recent developments in several areas (i.e., knowledge engineering,



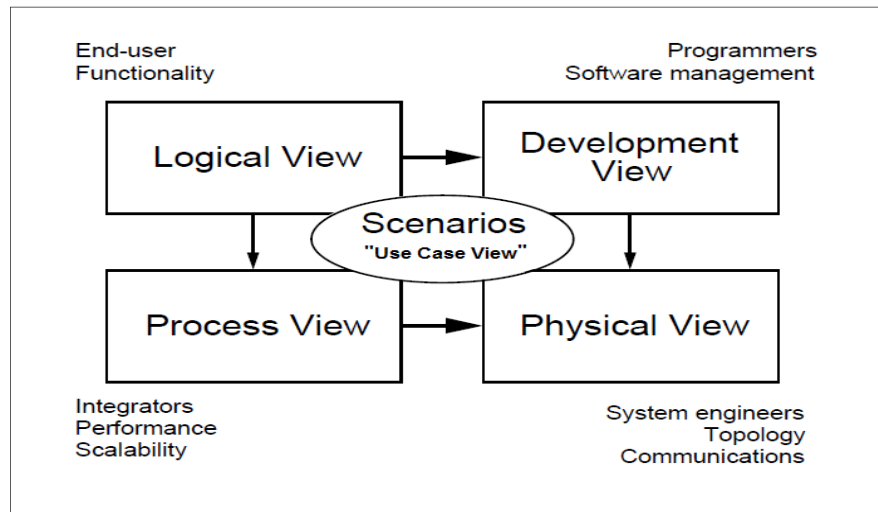
software engineering, modeling formalisms, engineering workstations, and database systems) are now to the point that a meaningful convergence can be crafted to yield a modelling environment far superior to any we have known in the past. Fundamental to this new approach to modelling are the recent developments in object-oriented programming and related technologies (Fellow et al., 1992). A research team at Oklahoma State University has been exploring alternative approaches to the modelling and simulation of complex manufacturing systems since 1985.

UML is an industry standard modelling language adopted by Object Management Group in 1977 (Park and Lee, 2006). The UML is derived of a shared set of commonly accepted concepts which have successfully been proven in the modelling of large and complex systems, especially software systems. With the UML extension for business modelling, a first object-oriented UML terminology has been defined for the domain of business modelling (Eriksson and Penker, 2000). UML are based on integrated Meta models supported by several modelling tools (Evans et al, 2014; Fowler, 2004). The core business modelling concepts of both methodologies will first be introduced and compared afterwards (Nüttgens et al, 1998).

### **3. Architecture Model**

The “4+1” architecture model is a view model, designed by Philippe Kruchten for "depicting the architecture of software-intensive systems, depending on the employment of manifold, simultaneous views” (Krunten, 1995). The views are employed to depict the system from the viewpoint of stakeholders, such as end-users, developers and project managers.

According to UML and Rational Unified Process (RUP), the viewpoint of depicting system is based on the “4+1” views. Fig. 1 below, represents the “4+1” views of UML to describe system architecture (Krunten, 1995; and Park and Lee, 2006).



**Fig. 1“4+1view” architecture model**

Source: Park and Lee 2006

- The “4+1View” architecture model comprises of five views, which have been adopted using UML diagrams to model the ERP system as follows:
- Logical view: The logical view is associated with the functionality that the ERP system offers to end-users and relationship from the terminology of the problems and their solutions. The logical view facilitates the functional needs of the system. Fundamentally the UML diagrams, including class diagram and depict the logical view.
- Development view: the development view an ERP system is also is also known as the implementation view, which constitutes the components and files, which are employed to accumulate and discharge the physical system. It employs the component diagram and package diagram.
- Process view: the process view covenants with the active features of the system, elucidates the system processes and how they correspond, and concentrates on the runtime behaviour of the system. UML Diagrams are employed to symbolize process view including the sequence diagram and activity diagram.
- Physical view: physical view of a system is also known as the deployment view and encloses the nodes, which constitute the system’s hardware topology, on which the system functions. It is associated with the topology of software components on the physical layer, and the physical link

among these components. UML Diagrams employed to symbolize physical view include the Deployment diagram.

- **Scenarios:** The depiction of architecture is exemplified using a small set of use cases, which become a fifth view called as use case view. The use case view of a system encloses the use cases that describe the performance of system in the context of end users, analysts, and testers. Furthermore, it also illustrates the proposed functionality of the system, as professed by external actors and it states the aspects that shape the system's architecture. In UML, it is captured by use case diagrams.

The five "4+1" views are typically demonstrated using the UML approach. As aforementioned the UML is a language for identifying, building, envisaging and documenting the software system and its components (Ngadiman et al, 2008). The UML is selected based on its affinity as a modelling language, which enables to identify, design, and develop and document the aspects in software. It has also been established as a language, which can successfully model a huge and multifaceted system by generating normal and simple design, for making the users to comprehensively utilize it (Ngadiman et al, 2008; Park and Lee, 2006). In the following section, the researcher represents results of modeling conceptual ERP system for small and medium size manufacturing companies by using "4+1" views

#### **4. Conceptual ERP Model**

Even though, the implementation of ERP system involves some risks, the ERP systems have become very important aspect in business operations among large organizations (McGaughey and Gunasekaran, 2008). These systems have a lot of advantageous features and values, which have driven a lot of large to endow time, endeavour and millions of Ringgits in ERP system (Shahawai and Idrus, 2011a). Nevertheless, the acceptance of ERP system in small and medium size manufacturing enterprises is still low as against the large enterprises. The reasons for the low level acceptance is the complication of the system, huge cost incurred from the pre-implementation until the post-implementation, irrelevancy of business operation and the low level consciousness towards ERP system or ICT (Shahawai and Idrus, 2010a). Based on the previous studies of pre-determined factors towards the adoption of ERP system in manufacturing SMEs, a lot of SMEs in are slow in employing the

ERP system (Seethamraju, 2015; Shahawai and Idrus, 2010b).

With respect to the manufacturing SMEs, which have implemented ERP system, all the sub-sectors of manufacturing SMEs and their industries chose one of the forms of adopting ERP. A number of industries require a different kind of ERP modules for their business operations, based on the type of industry; hence, the ERP system has to be customized. While other industries have implemented generic ERP system (Shahawai and Idrus, 2010a). Both forms seem to have own risk of implementation, where the complexity and high cost are the major concerns.

The need of design custom ERP modules using “4+1view” architecture model has emerged because of the benefits offered by the customization, these benefits meet the manufacturing SMEs needs as follows: (1) developing uncomplicated ERP functions fit the organizations’ business process, (2) compatible and adequate ERP functions, and (3) low cost and time of implementation, where that customization will shorten the business processes re-design as much as possible, which require time and high cost (Raymond and Uwizemungu, 2007).

In this section, the functions of the ERP system have been envisaged and described, based on “4+1” views architecture model using the UML diagrams. As discussed in previous, the “4+1” views of UML comprise five views such as: use case view, logical view, process view, physical view and development view. Each “4+1” view is carried out using UML diagrams for the purpose of depicting the architecture of the proposed ERP system.

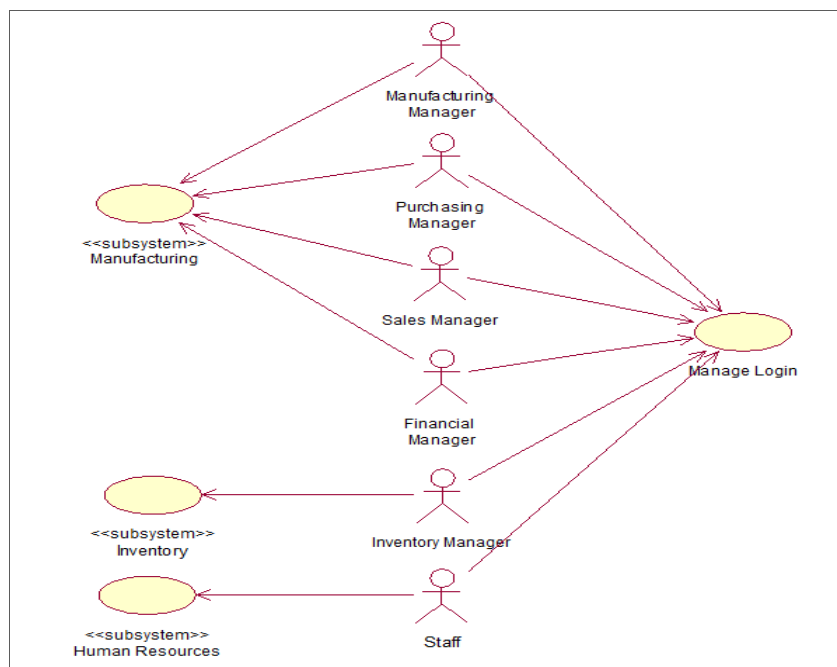
Three ERP modules were selected to be included in the proposed conceptual ERP model. These modules (subsystems) are: (1) manufacturing, (2) inventory control, and (3) human resources management. These modules were considered as being commonly used major ERP modules within manufacturing SMEs.

#### **4.1Use Case View**

A use case is distinctive interactions between the user and ERP system and it describes the functionalities of an ERP system (Dennis et al., 2008; Park and Lee, 2006). The principle of employing use case diagram is to show use cases of a system, actors, and relationships between actors and use cases

among ERP system. In this analysis step, two levels of use case diagrams have described. One level illustrates the division of the whole system into subsystems (system modules). Whereas, the second level illustrates how to thoroughly depict each subsystem such as, manufacturing, inventory control, and human resource.

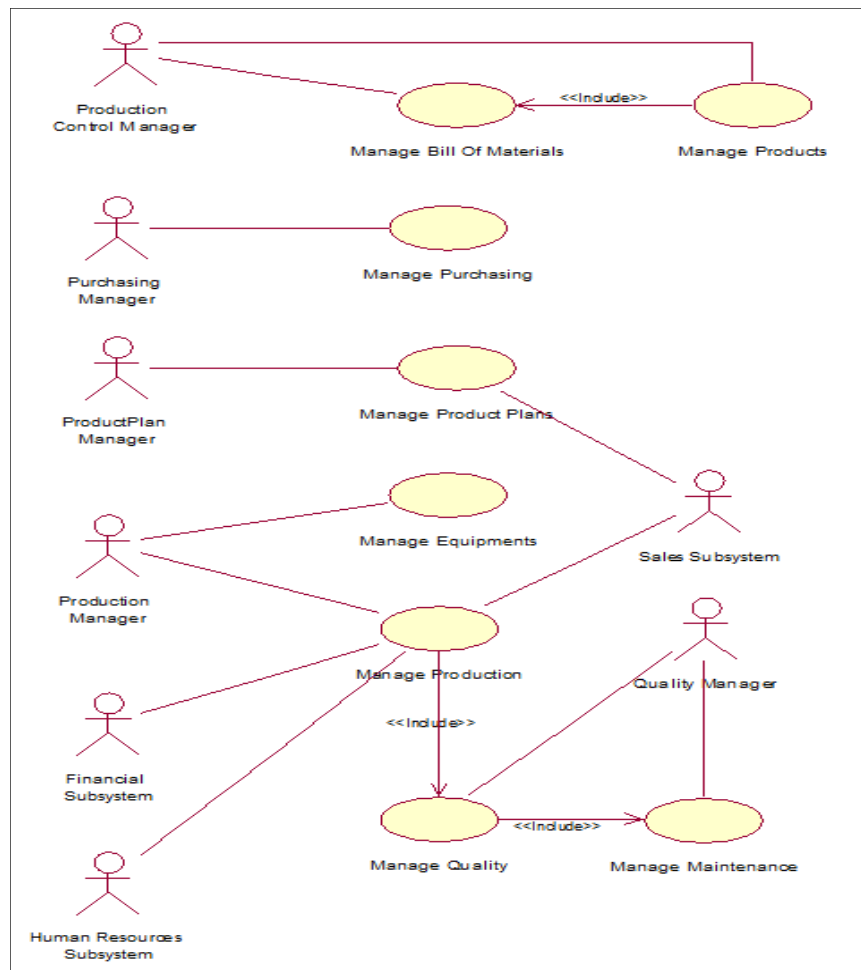
As the ERP system is a huge and composite package, it has been divided into number of subsystems. Generally, the subsystems are employed to manage a large-scale information systems into smaller units and to make it more clear or convenient, hence they can be more easily elucidated to others (Park and Lee, 2006; Youngs et al., 1999). As illustrated in the Fig. 2, each ERP module is considered as a subsystem, the ERP system can be classified into three subsystems such as: manufacturing, inventory, and human resource.



**Fig. 2 Use case diagram at high level**

The use cases represent a subsystem unless for “manage Login” use case. Each actor of use cases including, manufacturing manager, sales manager, purchasing manager, inventory manager, human resource manager and enterprise’s staff, embody external persons linked with subsystem. For instance, when portray the human resources subsystem in detail, the actor staff can be separated into “HR admin”, and “enterprise’s staff”.

The proposed ERP system consists of three main subsystems, which are “Manufacturing”, “Inventory”, and “Human Resources”. The “Purchase” and “Sales” subsystems are not included in the proposed ERP system. But there are some purchasing and sales functions required for manufacturing system functions, therefore the required purchasing and sales functions have been integrated into the manufacturing subsystem and the purchase and sales managers can access them through the manufacturing subsystem.

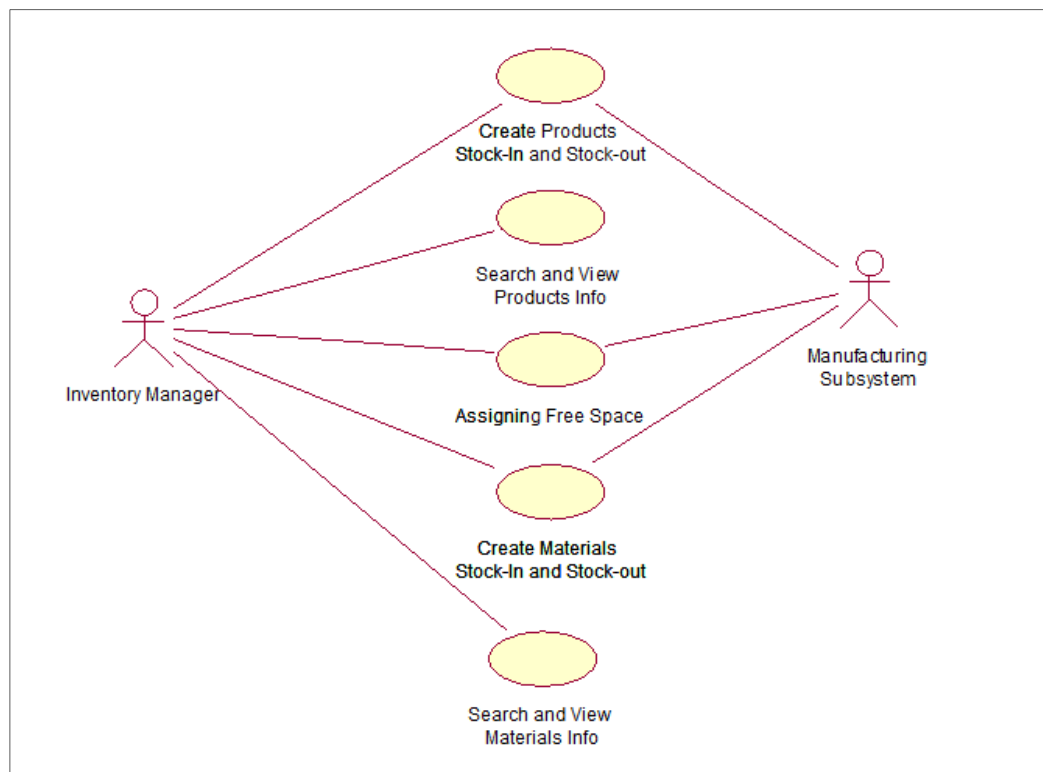


**Fig. 3 Use case diagram of manufacturing subsystem**

The proposed ERP subsystems (modules) in this study have been modelled using expanded use case diagram. Fig. 3 as above, has described the use case diagram for manufacturing subsystem, the manufacturing modules consists of eight main functions such as: “Manage Bill of Materials”, “Manage Products”, “Manage Purchasing”, “Manage Product Plan”, “Manage Equipments”, “Manage Production”, “Manage Quality”, and “Manage Maintenance”.

“Mange Quality”, and “Manage Maintenance”.

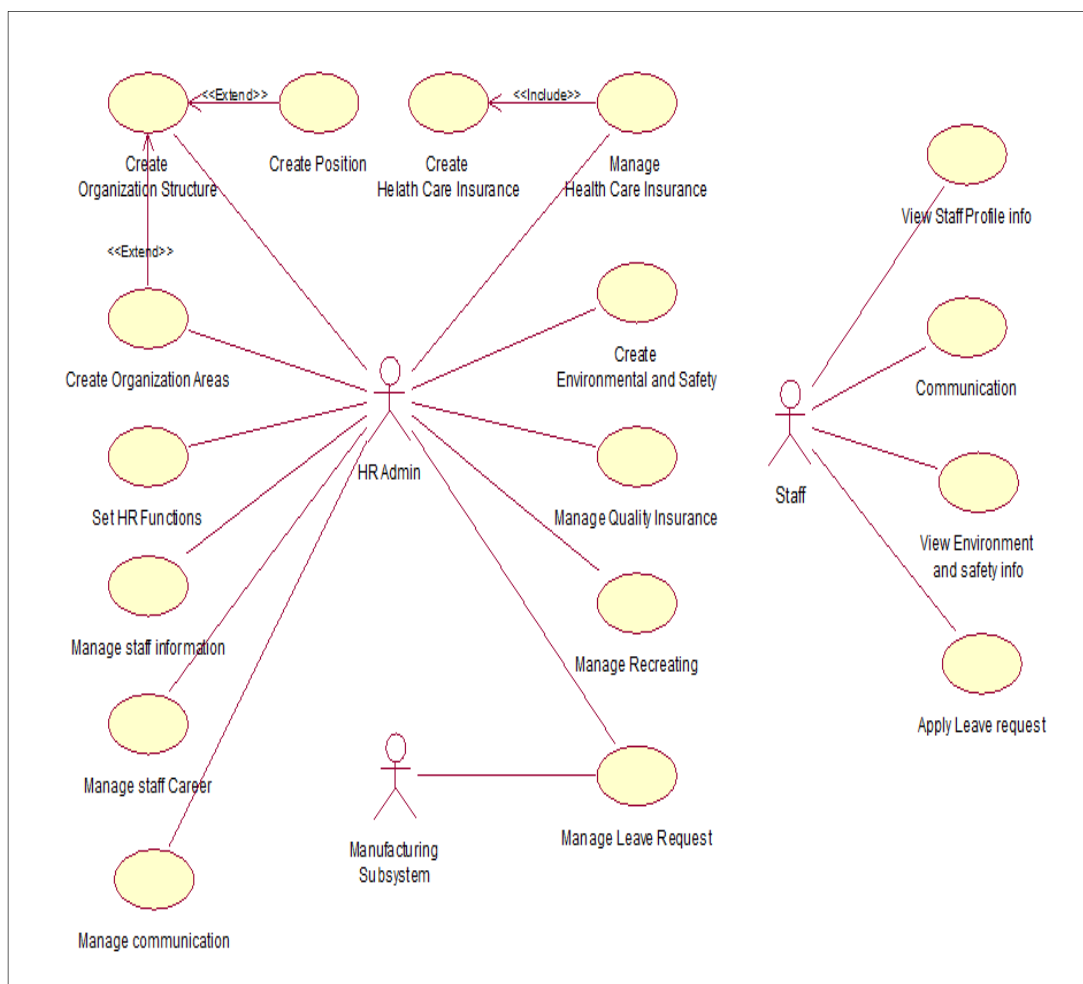
The Simple normal use-case dependency with the stereotype of <<include>> and <<extend>> have been used to describe the relationships between use cases. In the manufacturing use case diagram, the manage quality use case shares the manage production use case functions, in addition the manage quality use case share functions and include in manage production, and manage maintenance share functionality of the manage quality, finally manage bill of material is included in manage item. Each of the “Sales Subsystem”, “Financial Subsystem”, and “Human Resources Subsystem” are ERP modules (subsystems) related with manufacturing module, which the subsystem actor can be related with other subsystems.



**Fig.4 Use case diagram of inventory control subsystem**

In the Fig. 4, the use case diagram of inventory control subsystem is illustrated. The inventory control modules are composed of five main functions: create product stock-in and stock-out, search and view product info, assigning free space, create material stock-in and stock-out, search and view material info. The inventory manager is the only person who interacts with these functions.

Manufacturing subsystem actor is external subsystem considered as actors related with inventory control functions. As shown in the above Fig.4, the manufacturing subsystem interact with create product stock-in and stock-out, assigning free space, and create material stock-in and stock-out use cases.



**Fig. 5 Use case diagram of human resources management subsystem**

Fig. 5 describes the use case diagram of human resources module, the human resources subsystem consist of seventeen functionalities, thirteen of these functions interact with HR administrator and only four functions interact with enterprise's staff as follows:

- Use Cases Accessed by HR Admin:
  1. Setting HR functions
  2. Manage health care insurance
  3. Create organization structure
  4. Manage environmental and safety



- |                                 |                             |
|---------------------------------|-----------------------------|
| 5. Create position              | 6. Manage quality insurance |
| 7. Create organization areas    | 8. Manage recreating        |
| 9. Create health care Insurance | 10. Manage leave request    |
| 11. Manage staff information    | 12. Manage communication    |
| 13. Manage staff career         |                             |
- Use cases accessed by Staff
 

1. View staff profile info	2. View environment and safety info
3. Communication	4. Apply leave request

Manufacturing subsystem actor is external subsystem, which interact with the manage leave request use case. In terms of the relationship between the use cases in human resources use case diagram, the create health care insurance use case is included in manage health care insurance use case, in addition the create organization structure use case can be extended to the create position use case, which means that the create position use case is a special case behaviour of the create organization structure use case.

## 4.2 Logical View

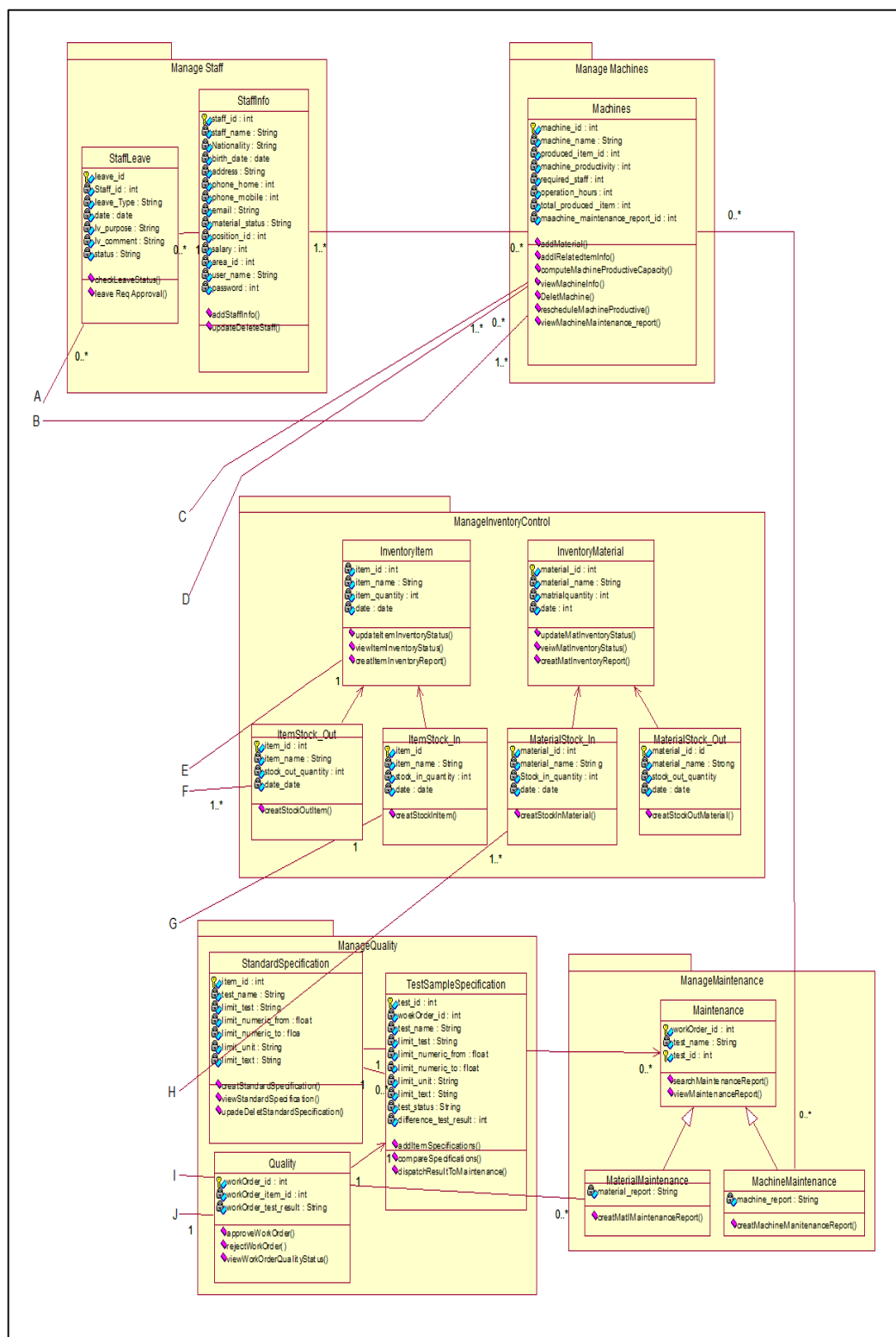
The logical view is concerned with the functionality that the ERP system provided to end-users and collaborations from the vocabulary of the problem and its solution. It supports the functional requirements of the system. UML Diagrams have been used to represent the logical view include Class diagram.

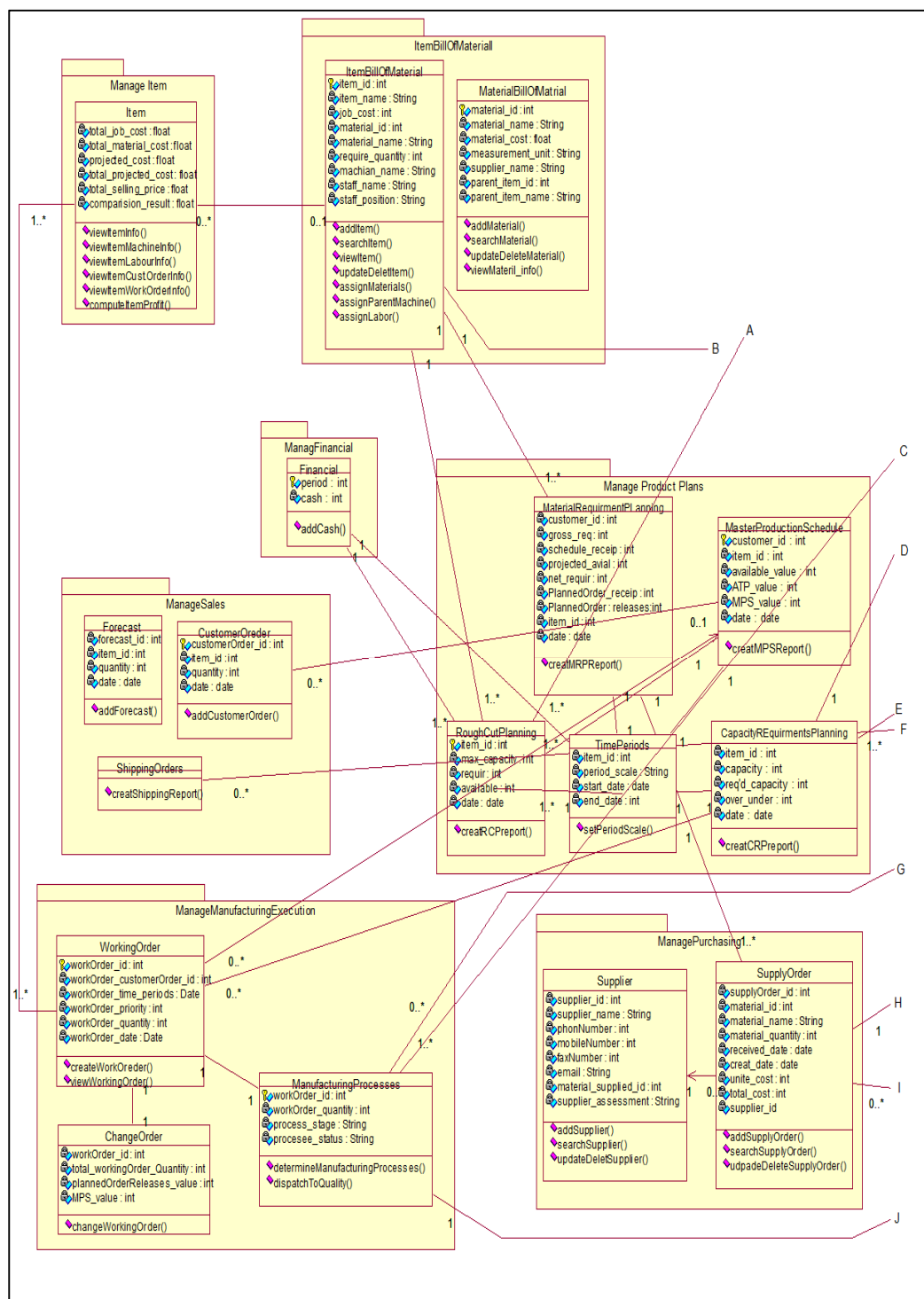
### 4.2.1 Class Diagram

A class diagram describes ERP system in terms of classes and relationships among the classes (Warmer and Kleppe, 1998). The class diagram of the three proposed ERP modules have been described as follow: The class diagram of “Manufacturing” subsystem and “Inventory” subsystem described in one class diagram, while the “Human Resources Management” subsystem are described in a separate class diagram.

The manufacturing and inventory subsystems’ class diagrams, consists of 32 classes grouped into

12 class packages shown in Fig 6 and Fig 7. Each class package matches to manufacturing use case as illustrated in Fig 3, while each class in manage inventory control class package corresponds to inventory control use case as in Fig 4.

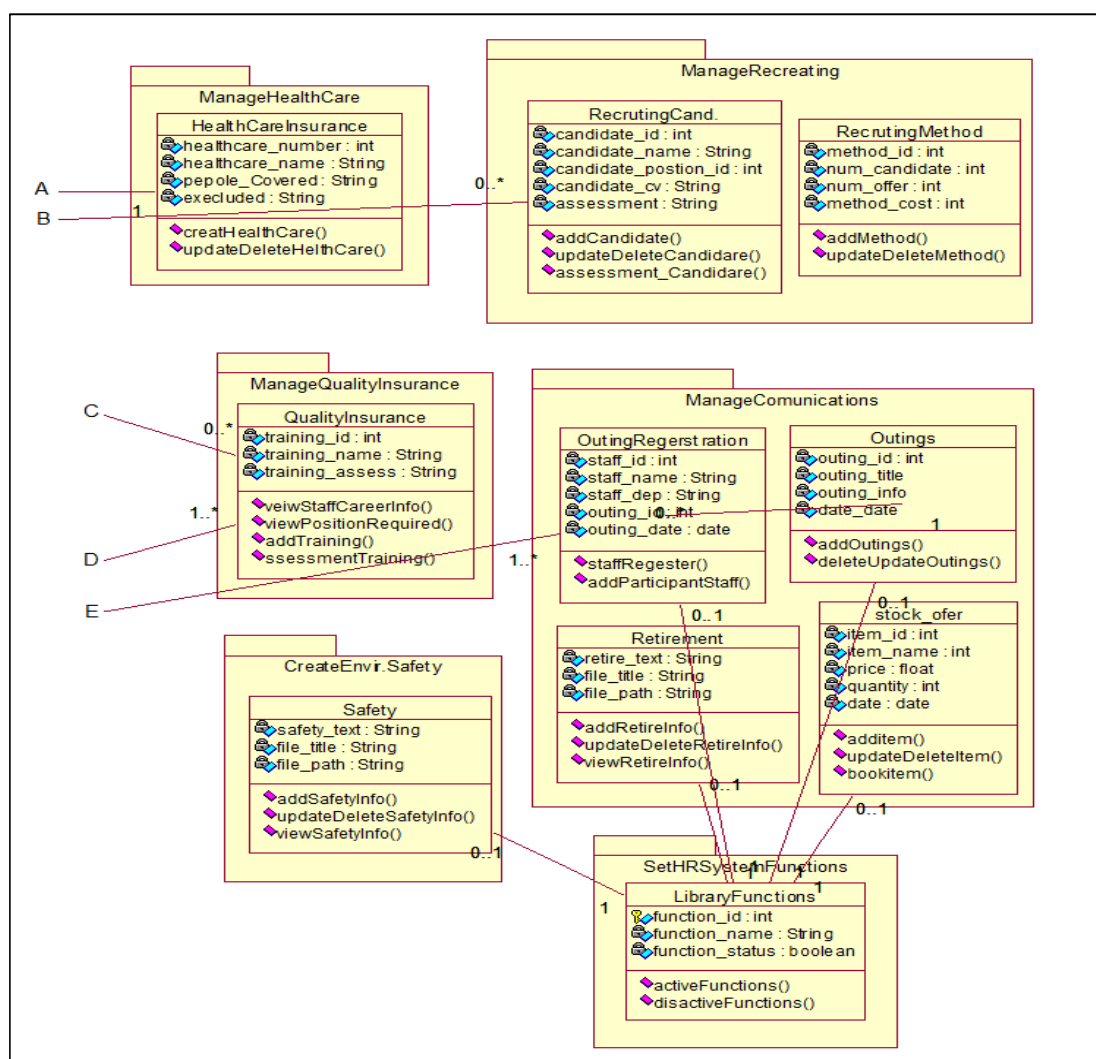


**Fig 6. Class diagram of manufacturing and inventory control subsystem (1)**

**Fig. 7 Class diagram of manufacturing and inventory control subsystem (2)**

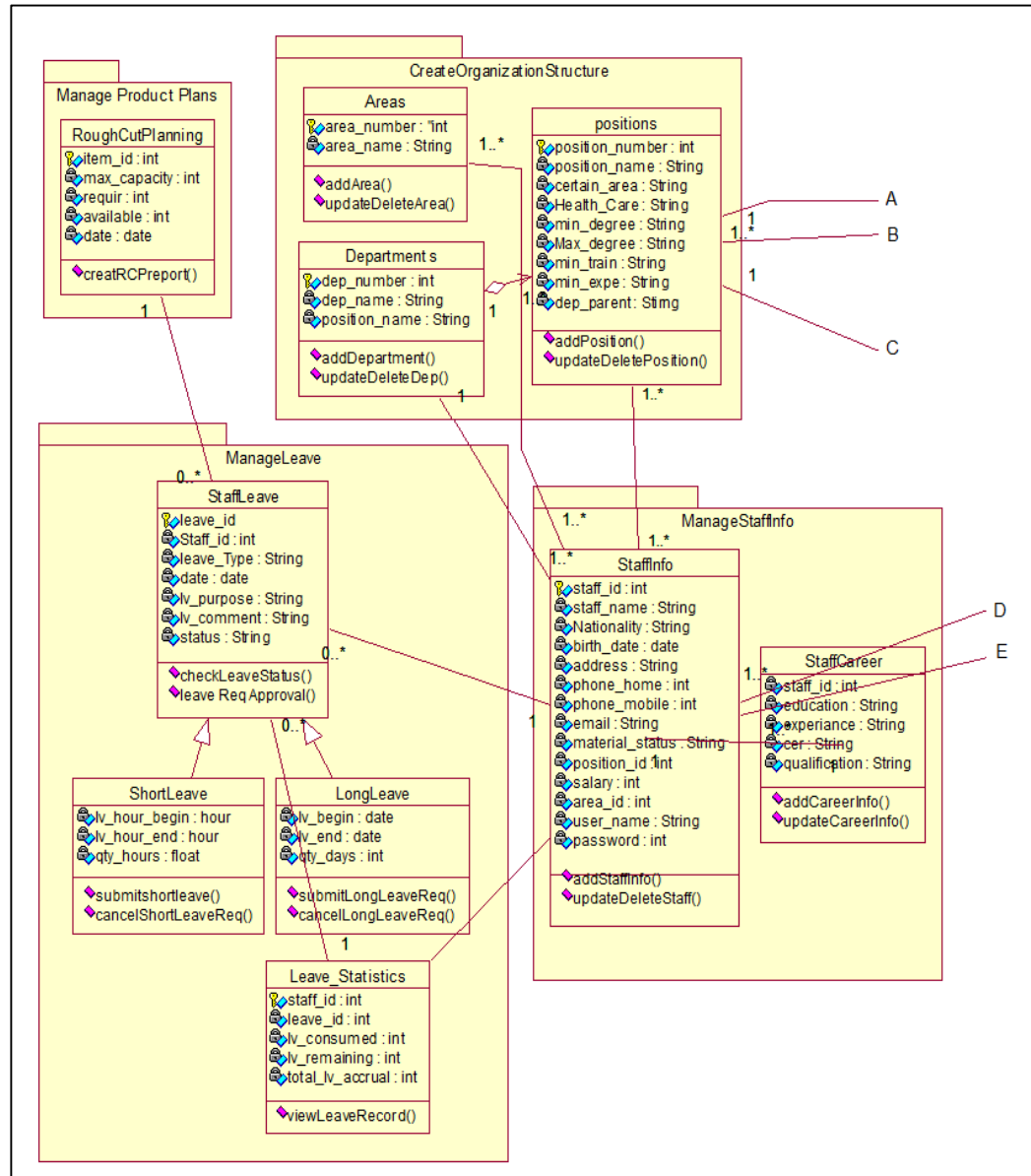
Figs. 6 and 7 describe the structure of a “Manufacturing” and “Inventory Control” subsystems by

showing the system's classes, their attributes, operations (or methods), and the relationships among the classes. The class diagram of “Manufacturing” and “Inventory Control” subsystems describes the relationships among the classes with <<usage>> dependency relationship, association relationship, and inheritance relationship.

As shown in Figs 6 and 7, the “Inventory Control” subsystem is integrated with “Manufacturing” subsystem via association between the interior classes of manage inventory control class package and the interior classes of manage purchasing, manage manufacturing execution, and manage product plan class packages. The class diagram of “Human Resources” subsystem is shown in Figs 8 and 9. Nineteen classes that have been grouped into nine class packages constitute the “Human Resources Management” class diagram; each class package corresponds to human resources management use case in Fig. 5.



**Fig. 8 Class diagram of human resources management subsystem (1)**



**Fig. 9 Class diagram of human resources management subsystem (2)**

“Human Resources Management” subsystem describes the relationships among the classes with association, aggregation, and inheritance relationships. In addition, the “Human Resources Management” subsystem integrated with “Manufacturing” subsystem through association relationship between manage leave class package and manage product plans class package.

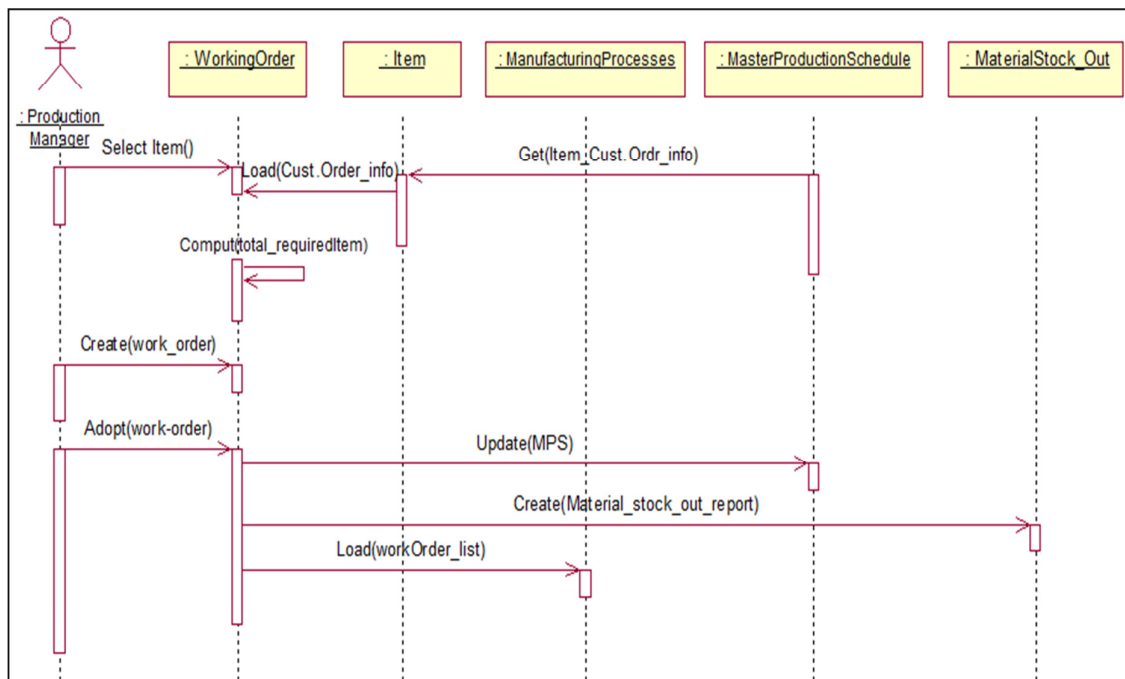
### 4.3Processes View

The process view deals with the dynamic aspects of the system, explains the system processes and

how they communicate, and focuses on the runtime behaviour of the system. The process view addresses the concurrency, distribution, integrators, performance. The UML Diagrams are used to represent process view including the sequence diagram.

### 4.3.1 Sequence Diagram

According to Kobryn (2000), the sequence diagram (interaction diagram) describes the sequence of actions between related objects that is triggered by a cut operation. The sequence diagram captures the behaviour of single use case by showing the messages passed between those object of the case and describe the sequence of operation in that use case (Booch et al, 2005). Manufacturing modules includes eight main use cases; the objects interact with each among these use cases described using sequence diagrams for each use case separately. To represent the example of sequence diagram, the “Working Order” has been chosen among use cases of manufacturing subsystem to be shown.



**Fig.10 Sequence diagram of working order use case**

Fig. 10 illustrates the sequence of create working order. The production manager is the actor who deals with the working order function. The production manager begins creating working order by selecting the targeted item, the system will load all of the customer orders classified under the selected item from “MasterProductionSchedule” class, the production planner can view the customer orders, total

required item, and related info, finally the production planner will select the customer order to be created as working order and press on creates button, when production planner create working order, three functions will be activated as follow:

1. Update the “MasterProductionSchedule” entity in term of the converted customer orders to working orders.
2. Create stock out report includes the created working order info and send it to “MaterialStock\_Out” entity.
3. Send the created working orders to Manufacturing Process to start the manufacturing process of the created working orders.

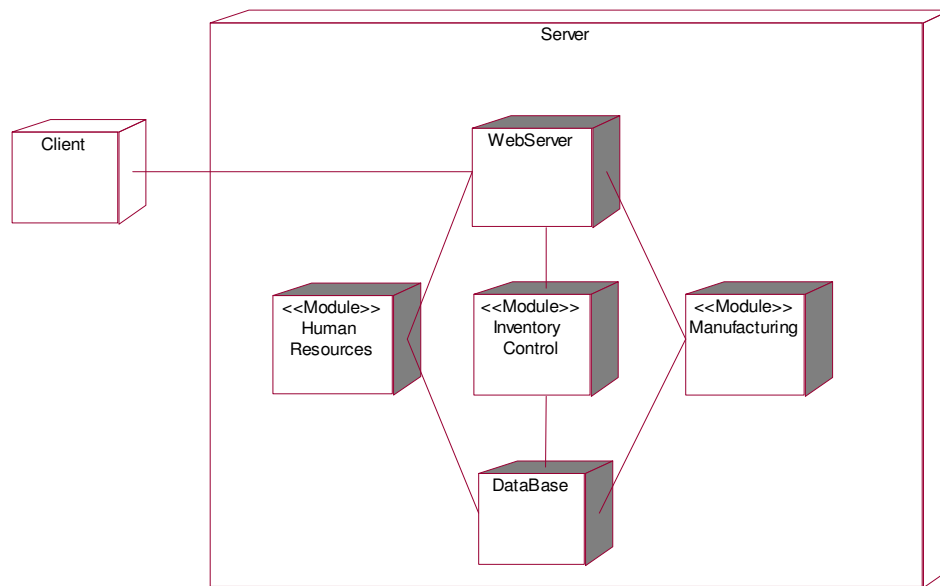
#### **4.4Physical View**

The physical view of a system encompasses the nodes that form the system’s hardware topology on which the system executes. It is concerned with the topology of software components on the physical layer, as well as the physical connections between these components. This view is also known as the deployment view. UML diagrams used to represent physical view include the deployment diagram.

##### **4.4.1 Deployment Diagram**

The deployment diagram illustrated a static view of the run-time constitution of processing nodes and the components that run on those nodes. Nevertheless, the deployment diagrams illustrate the hardware of the system, the software and the middleware used to connect the different machines with each other (Booch et al, 2005). This corresponds with the weak budget of small and medium enterprises (Ahmad et al, 2010), and they are looking to adopt cheap ERP system.

To describe the physical view of the system we have used cube to describe the device nodes and used the shaded cube to describe the process, to describe the relationship between the subsystems, pipe and filter architectural has been adopted as shown in Fig. 11.



**Fig. 11 Deployment diagram of the ERP system**

As illustrated in the Fig. 11, the deployment diagram of the ERP system contains two nodes client and server. The server node consists of web, database and three subsystems. The database manages the incorporated data associated with all subsystems and web assist, to link the client and subsystems. It is crucial to adopt the web technology to ERP as internet business is related with the information technology and business area (Park and Lee, 2006).

The high cost of In-house ERP system (customized ERP system) is considered as one of the issues that prevent these enterprises from adopting the ERP system. Besides this, the SMEs do not allocate adequate budget for information technology development (Hashim, 2015; and Khaleel et al, 2011). To address the above mentioned issues, the proposed ERP system in this study has been built on the foundation of web.

As the SMEs do not allocate the adequate budget to develop and update the information technology system and therefore they tend towards a reduction of the cost of the hardware required for adopting ERP systems (Malhotra and Temponi, 2010). Thus, the server consists of one hardware piece including web, application, and database server is suited.



## **4.5 Development View**

This is a view of an ERP system, which constitutes the components and files that are used to accumulate and release the physical system. This view is also known as the implementation view. It employs the UML component diagram to depict the system components.

### **4.5.1 Component Diagram**

The main purpose of the component diagram is to illustrate the structural relationships between the components of a system, and describe the structure of the code (Booch et al, 2005). The component is not analysis or design diagram. The component diagram can be depicted after implementation phase. Hence, the component diagram will not be captured in this research work.

## **5. Conclusion**

ERP framework consolidates most of the business processes and permits access to the information progressively. Moreover, ERP enhances the execution level of a supply chain by helping to lessen the process durations (Esteves, 2009; Gardiner et al, 2002). There are likewise some advantages that an enterprise may appreciate by adopting an ERP framework including, better consumer fulfilment, enhanced seller execution, expanded adaptability, lessened quality costs, enhanced asset utility, enhanced data precision and enhanced basic leadership ability. In order to tap the above mentioned advantages within manufacturing SMEs, this research work represent conceptual ERP model by using “4+1” views, based on UML.

The proposed conceptual ERP model has customized to fit manufacturing SMEs business processes rather than re-designing these unmatched processes. In addition, it is provide a suitable ERP modules and functions for manufacturing SMEs, able to overcome the issues that impede the ERP system adoption, such as of-the-shelf system complexity and high cost of in-house system.

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# **CHALLENGES FACED BY SMALL & MEDIUM ENTERPRISES (SMES) INCLUDING INDIAN SMALL SCALE INDUSTRIES AND WTO**

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## **Abstract:**

In most of the developing countries like India, Small Scale Industries (SSI) constitutes of overall industrial sector of the country. The small scale sector contributes a significant proportion of production, exports and employment. Therefore, the present study attempt to analyse the problems faced by small scale industries of India in increasingly globalised scenario. Furthermore findings suggest that the scarcity of capital, inadequate availability of credit facilities, competition with their counterparts and overseas market, International Quality Standards and removal of quantitative barriers are spreading the problems. If these problems are solved or efforts are taken to foster these challenges this sector can prove its real potential.

## **Keywords:**

Small & Medium Enterprises (SMEs), WTO, Small Scale Industries (SSIs), Indian Economy

Small & Medium Enterprises (SMEs) form lifeblood of any vibrant economy. SMEs all over the world have been recognized as the silent drivers of a nation's economy. In the emerging economic order SMEs are the leading edge when it comes to innovation and entering new global markets. The SME story in India is not different. With over 50% of industrial output through 95% industrial units, SMEs form the backbone of the Indian economy. Their contribution to Indian economy is huge and hence they are entitled to their rightful share of attention from Financial Institutions.

The development of small scale industrial sector has been one of the major planks of India's economic development strategy since independence. India accorded high priority to this sector from the very beginning and pursued support policies to make these enterprises viable and vibrant. Despite numerous protection and policy measures from many of past years Indian small scale units have remained lacked, technologically backward and uncompetitive. In the year of 1991, in the opening of Indian economy, the

sector of micro, small and medium size industries started to face problems including financials, skilled manpower, transportation, potential markets and production facilities. And at present, the sector is at cross roads and intense debate is centered around questions like what would be the future of the sector? How can these enterprises survive in the international trade arena? What roles can government play in making the sector more competitive? In this context, it is important to re-examine the opportunities and challenges confronting the sector in the globalised regime. In order to this WTO has facilitated the businesses in varied manner but also created some problems in the field. Thus, this study aimed to examine the problems faced by Indian SMEs, how WTO's presence affecting their functions and performance, what are the limitations arose due to WTO faced by SMEs.

### **Literature Review**

SMEs including SSIs characterized as an instrument to transform the society, creating employment and spreading entrepreneurship; it occupies a place of importance in the economy of all labour surplus countries. It has widely accepted that the huge expansion of small scale industries largely depends on number of factors like the provision of raw materials, cheap labour, technical advice, systematic marketing of their product and where necessary safeguards against intensive competition by large scale manufacture as well as training of the workers in the use of best available technique (Ackah & Vuvor, 2011).

According to Ward (2005), there is no universal definition for SMEs, since the definition depends on who is defining it and where it is being defined. Such as America, the precise definition of small-scale, medium-scale and large-scale industry varies depending upon numerous factors. American government specifies SMEs in two ways which are – the number of employees and the amount of revenues. On the basis of number of employees, a small business having less than 500 employees considered as an SME. Country wise the criteria to deciding a business as an SME or SSI are varies. Particularly in India, Small Scale Industrial Units are those who engaged in the manufacturing, processing or preservation of goods and the total investment in plant and machinery (original cost) does not exceed by Rupees One Crore<sup>1</sup>. The investment limit of Rupees 1 crore for classification as SSI has been enhanced to Rupees 5 crore in respect of certain specified items under hosiery, hand tools, drugs, pharmaceuticals, stationery items and sports goods (Ministry of MSME, Govt. of India, 2015).

It has been observed that small scale industrial sector in India has been facing competitive environment due to the formation of the World Trade Organization (WTO), forcing its member-countries (including India) to drastically scale down quantitative and non-quantitative restrictions on imports and domestic economic reforms. The overall impact of all these developments is a remarkable transformation of the economic environment in which small industries operates. While the effect of WTO would be more pronounced on the small scale sector due to unorganized nature of his sector, lack of data/information, obsolete technology, poor infrastructure, weak capital base and inadequate access to economies of scale. The provisions/ agreements which are likely to affect the Indian small scale industrial sector under the

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<sup>1</sup>. Approximately US Dollor 1574679.00

WTO regime are Quantitative Restrictions (QRs), tariff reductions, anti-dumping practices and subsidies, Technical Barriers to Trade (TBT), Trade Related Investment Measures (TRIMs) and Trade Related Intellectual Property Rights (TRIPs)(Bala, 2013).

Small Scale Industries (SSIs) are major part of Indian industries. World Trade Organization (WTO) plays an important role and great promise for the entire economy. This Organization will manage the new global trade rules for international trade. The impact of WTO is the same as its impact on Indian industry as a whole. More than 45%-50% of our total exports are the contribution of SSIs. (MSME, 2015). The most positive factor of WTO is that it allows the SSI sector to avail of "most favored nation" (MFN) and National Treatment for its exportable items the world over. These are great benefits, which India enjoys as a founder member of GATT and the WTO.

The WTO is bound to brunt every economic activity-the SSI sector is not untouched.WTO agreement possesses variety of threats and challenges like uncompetitive price, poor quality, costly credit, weaken infrastructure, lake of information, lake of international exposure, and lake of standard conforming international standard. In the sight of WTO Agreement SSIs lost the shield of protective policy of the government and have been showing to the onslaught of multinational organization and international competition.

The development of small-scale industries is hampered by a diversity of problems such as Market Structure Problems, Logistic Problems, Managerial Problems, Economic Problem, Communication Problems, and Socio-psychological Problems etc. Small scale sector is also facing problem of sickness which in inevitable for the growth of the sector (Vijiyanti). Sickness in industrial sector results in locking up resources, wastage of capital assets, loss of production and increasing unemployment and also the sick units affect in reduction of loanable funds by financial institutions by reducing the velocity of their circulation. The reason behind the sickness of SSI sector is Inadequacy of working capital delay in sanction of working capital and time gap between sanction of term loan and working capital, obsolete technology, inadequate demand and other marketing problems, Shortage of power; Infrastructure constraints; and Managerial deficiencies. The slow growth industries in India have been due to lack of entrepreneurship, which performs the function of initiating, establishing and organizing industries (Jha & Agarwal, 2010).

The biggest challenge before SSI is to globally transform itself. It is very difficult to survive due to high tariff barriers or non tariff barriers like import licensing. It cannot hope to get subsidies from the government indefinitely. Indian SSI can sustain for long term in the Indian economy by raising their level of efficiency and competitiveness because this time they are facing taught competition domestically and internationally both. Imported goods coming into the domestic market at lower import duties are offering stiff competition. Therefore, we may have to redefine the SSI unit in tune with international SME (Taunk & Kumar, 2013).

### **Objective of Study**

This paper aimed to determine the challenges and threats faced by Indian SSI sector, to evaluate the performance of SSI's in economic development of India, and then make suggestions for improving the supportive facilities for SSIs.

### **Methodology**

Exploratory design has been created to identify the factors explained by distinct SMEs/SSIs responsible for development of SMEs on arrival of WTO. Employing the purpose, it was decided to collect independent opinions of professionals from different SMEs and SSIs. So, convenience sampling technique used to collect the data. Due to the exploratory nature of research, secondary data also reviewed. A combination of independent factors concerning the different aspects of SMEs and their performance are identified and arranged in a form of structured questionnaire. These factors consisting tools, techniques and some cognitive items were develop in a way that covers probable influencers for SSIs, either directly or indirectly. Before collecting data, questionnaire validated through employed over 5% of sample. Sample size of 200 was decided. Through descriptive statistical analysis frequency of preferences for each item has been calculated to find out the problems of SMEs after arrival of WTO.

### **Analysis**

The analysis shown 35 % (which were higher out of total) and 24 % of respondents responded strongly agree and agree respectively that WTO is an important agreement for the business between different countries in the world. Thus, 59% of responses collectively could consider that WTO is an important agreement. WTO is an important agreement for doing business worldwide which also notified by the world trade report (2014). The report reveals how developing economies successfully leveraging trade and notice the four recent trade trends – the rise of new global players, the spread of production chains, increasing commodity prices, and growing economic interdependence (World Trade Report, 2014). The rules, flexibilities, technical assistance and institutional infrastructure of the WTO have been helpful for developing economies to take advantage of, adapt to and mitigate risks arising from these four trends (World Trade Report, 2014) made WTO an important agreement.

More than 70% respondents shown disagreement (Strongly Disagree 23% and Disagree 53%) on having information on WTO is essential for SSI. Since the information about WTO in not known to SSI units and they believe that information on the WTO agreement is not essential for SSI in modern and traditional sectors. The study indicated, SSI operators believe that having information on WTO agreement promote their thinking to growing their businesses regional to national and then national to global.

The WTO's undemocratic decision-making mechanisms are weighted in favor of the industrialized nations and against developing countries (Costatini, 2011). WTO has failed in developing countries (The Guardian, 2011) because of its biased character. This study has also reflected that WTO is a biased

organization which facilitating only privileged countries. According to Charlene Barshefsky, former U. S. Trade Representative – "The process, including even at Singapore [the first WTO ministerial meeting] as recently as three years ago, was a rather exclusionary one. All meetings were held between 20 and 30 key countries. ... And that meant 100 countries, 100, were never in the room. ... [T]his led to an extraordinarily bad feeling that they were left out of the process and that the results even at Singapore had been dictated to them by the 25 or 30 privileged countries who were in the room." Barshefsky's statement clearly indicated the biasness of WTO. Transnational business groups exert heavy influence on policies and negotiations, while citizen groups are marginalized and excluded (Costatini, 2011). The WTO incapable of agreeing even a minimal package for the least developed countries. (Bergan, 2011)

Out of the total responses, 56% respondents agreed that the WTO is a self serving organization that operates outside of our control (also notified by Taunk et. al., 2013). There are certain areas where there is no control upon WTO agreement. The rich countries dominate the small one in international trade which leads to restrict their business in domestic markets only. Apart from these high tariff barriers or non-tariff barriers like import licensing, poor infrastructure, technical and financial weakness and unable to look at their right destination are some of factors to consider (Taunk et. al., 2013).

The scarcity of capital and inadequate availability of credit facilities are spreading the problems of financial imbalance. Organizations are unable to survive and sustain in competitive business environment without the financial resources. In this study 75% (37% strongly agreed and 38% agreed) of respondents has shown lack of finance has been one of the major cause of SSI's sickness. Entrepreneurs are forced to borrow money from money lenders at exorbitant rate of interests and generally this upsets all their calculations. The Reserve Bank of India (RBI) also pinpointed some causes behind sickness of SSI units including continued cash losses, imbalances in the financial structure, and deterioration in liquidity (Chowdhary, 2012). Ineffective working capital management, lack of cost and price auditing, deficiency of financial planning, Budgeting and budgetary control, improper utilization or diversion of funds and weak equity base are some financial causes of sickness for small scale industries (Yetoo, 2014).

Particularly, the credit is an important element for smooth functioning of any business and without sufficient access on timely and enough credit, development of SSI sector is not possible. In this study more than 80% respondents found agreed with the lack of access to timely and adequate credit is the biggest problem for the SSI units. Tarapore (2014) reveals SSI units facing problems relating bank credits as banks are reluctant to lend to small units as this segment has high non-performing assets (NPAs); but the reality is that NPAs are prevalent between larger and smaller industrial units also identified in this study. The only difference is the "glamour" in lending to larger units. Another important element is the creditworthiness of small borrowers is generally weak and therefore they face reluctant creditors who may be induced to lend only at a very high rate of interest (Patil & Chaudhary 2014).

Stating SSI sector has been facing more competitive environment due to WTO is nondeterministic in this



study. Commonly competitive environment for SSI units includes Finance (Parwani & kachhela, 2012), Infrastructure (Dhore, 2015, Garg, 2013; Bala Subrahmanyam, 2005), government facilitation and technology. Statistically, 66% respondents have responded 'undecided' which clearly showed that the role of WTO in or developing competitive environment is still unclear to SSI units.

The substantial reduction of tariff levels over the year will make SSI to suffer from high cost of inefficiency and low support facilities which results competitive strength of SSI units (Soundarapandian, 2009). Import/export standards are still unclear to most of Indian SSI units; almost 77% respondents have shown their dissatisfaction on tariffs, policy barriers, quality restrictions, infrastructure and the like. And this is one of potential reasons for facing difficulties in meeting import/export standards.

Lowering tariffs will affect the import and export based upon the import capacity of exportable goods along with demand of goods imported. Further dumping policy is a matter of serious concern while import and export of goods. Indian SSI units are not able to protect in the absence of sufficient information and due to their ignorance. (Soundarapandian, 2009).

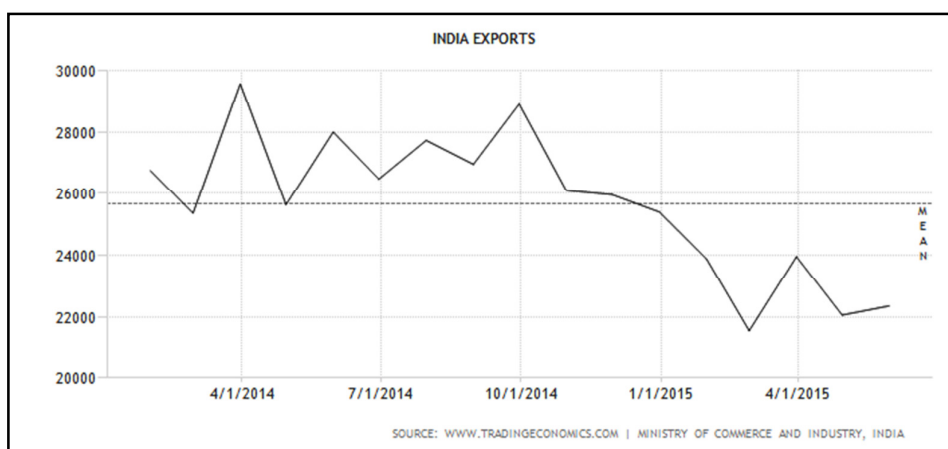
Stable and reliable infrastructure such as power, water, transport, communications and other are a basic requirement for the efficient functioning of any industry including SSI (Bala Subrahmanyam, 2005). The majority of SSI units (57 % strongly agreed and 20 % Agreed) confirmed that government has provided better infrastructural facilities after arrival of WTO. The need of infrastructure SSIs can be tagged into economic, technological and promotional infrastructure.

World Bank database shows export markets are dominated by big firms (World Bank, 2012) which also confirmed in this study. Out of total 67 % responses have expressed how their exports dominated by large companies. The potential reason identified during data collection and analysis is that they are large exporters/importers before they become multinationals; multinational firms with large FDI expand exports after they become multinationals (Rieti & Rieti, 2005). Dominant export markets in developing and developed countries, with more than 50 % and sometimes nearly 80 % of total exports occupy these few large companies (World Bank, 2012). The data indicated that exporting is difficult to manage for small companies and new entrants, on an average 56-58 % of companies quitting within year of entering in exports' arena (World Bank, 2012).

For controlling quality of products manufactured by small units, some Indian Standards like Methods of statistical Quality Control during the production period, Manual on Basic Principles of lot Sampling, and Sampling Inspection Table have been published so far; but the application of quality control is difficult to all kind of business organization (Pandey, 2013). Small Scale Industry is also deficient in keeping international quality certification which can bind to enter in international markets (R.K. & Sing, 2012). This is the biggest reason behind failure of product of Small Scale Industries in comparison with foreign competitor where ISO certification is mandatory (Samal, Tripathy & Aich, 2014). In the present study

78% respondents collectively agreed that international quality control is the major challenge for Indian Small Scale Industries and they are facing trouble to matching those quality parameters.

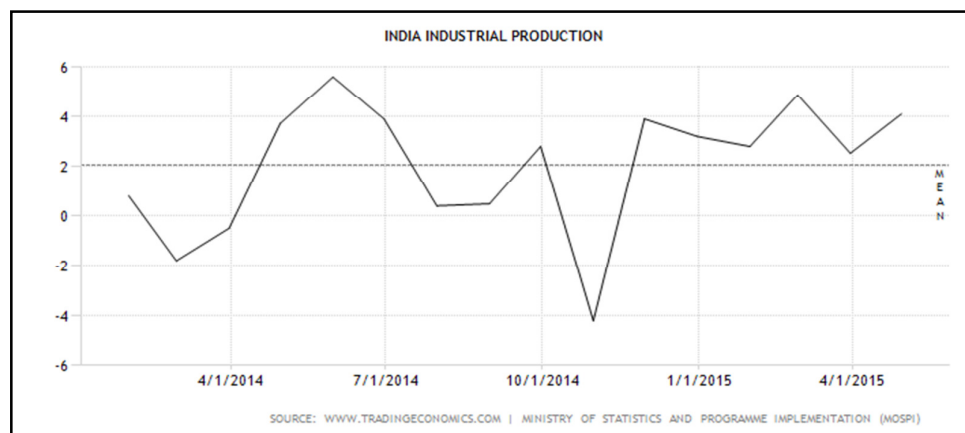
Global financial crises and subsequent slowdowns of economies around the world have reasonable impact on import and export. India's import and export also affected by different ups and downs. Instead of these, trade statistics of Trading Economics (2015), shown Indian exports has witnessed a slowdown below the mean in period of January, 2014-2015 as shown in figure below. In this study 78 % respondents expressed that they are thinking to do export but after facing concerned difficulties they pulled back from exports.



**Figure 1: India's Export Performance during 2014-2015**

Increasing global competition does affect the growth of Indian SSI negatively. The growth rates of SSI in terms of employment and output in the transitional period has come down. (Bala Subrahmanya, 2005). From the start of globalization, the growth of Indian SSI is still problematic and ascertained by many studies (Kansal, 2009). 77% (47% agreed and 30% strongly agreed) of respondents positively responded, the growth rate of Indian SSI in terms of output and investment has been lower than what has been anticipated.

The yearly growth rate of production in the initial years was decreased and after that it was fluctuated (Kansal R, 2009) variedly. Further, Industrial Production in India increased 4.10% in April, 2015 from the same month of previous year. Industrial Production in India averaged 6.52 percent from 1994 until 2015 (MOSPI, 2015). In present time with different ups and downs, Indian industrial production has performing above the mean (average) production as shown in figure 2. Instead of these, 80 % respondents have accepted that WTO had a negative impact on the growth of SSI sector in terms of Production which is one of major causes for facing consistent fluctuations in production by Indian SSIs.



**Figure 2: India's Industrial Production during 2014-2015**

Labor is an active and essential factor of production. The small-scale sector is predominantly labor-intensive. The role of labor is multiple and wide-ranging in the small industrial sector. The small scale units are facing some labor problems like absenteeism, high wage rates, work stoppages, training cost, Poor working conditions, low piece rate system of payment and unionization. Further, it has been observed that the absence of abundant safety measures is also a major cause for non availability of labor (Garg). It is found that 85% respondents believe a major consequence WTO is declining growth rate of labor force.

Small-scale units find it very difficult to compete with the product of large-scale units and imported articles which are comparatively very cheap and of better quality than small unit product (Nagarjun, 2015). SSIs are facing the problem of competition from their other counterparts (medium and large scale industries). A large number of items reserved for small industries are now freely importable. The Government has also announced that it is considering a phased removal of quantity restrictions on consumer goods imports over a period of five years. Medium and large-scale industries are also producing goods, which are competing with the goods being produced by the SSIs. So in practice, SSIs are unable to complete with large-scale units as their size is small and products are not cost effective (Garg). 80% responses have shown that the SSI sector is competing with large units and cheap imported goods as well.

Small business units are affected in the liberalized era and troubling to run their businesses because of dumping of cheaper goods by other countries (Gautam & Singh, 2012). In the WTO regime , reservation may have to be withdrawn and other support measure may not be available and thus small scale enterprise have to compete not only with the large units within the country, but also with cheap imported products. Therefore, SSI is facing problems with cheap imported products (Allan et al., 2004). The study reveals out of total respondents 93% respondents are agree and strongly agree that SSI had suffered due to the policy of dumping practiced by developed countries.

Removal of the quantitative restrictions means dismantling the reservation policy on SSI products. Due to removal of QRs, de-licensing and de-reservations, opening up the industrial sector to internal external

competition, lowering of tariffs etc. are major cause of deregulation of industrial sector. It has an adverse effect on the small scale sector (Agarwal & Goel, 2014). The study has notified 79% SMEs responses as removal of quantitative restrictions will adversely affect all segments of SSI sectors.

## Findings

The main findings of the study are:

1. WTO is an important agreement for doing business worldwide. The rules, flexibilities, technical assistance and institutional infrastructure of the WTO have been helpful for developing economies to take advantage of, adapt to and mitigate risks arising from these four trends i.e. the rise of new global players, the spread of production chains, increasing commodity prices, and growing economic interdependence, made WTO an important agreement.
2. The information on WTO agreement is mandatory for SSI units because SSI operators believe that having information on WTO agreement promote their thinking to growing their businesses regional to national and then national to global.
3. WTO is considered as undemocratic decision-making mechanisms due to high tariff barriers or non-tariff barriers like import licensing, poor infrastructure, technical and financial weakness and unable to look at their right destination,
4. There are certain areas there is no control upon WTO agreement. The rich countries dominate the small one in international trade which leads to restrict their business in domestic markets only.
5. The scarcity of capital and inadequate availability of credit facilities are spreading the problems of financial imbalance. Ineffective working capital management, lack of cost and price auditing, deficiency of financial planning, Budgeting and budgetary control, improper utilization or diversion of funds and weak equity base are some financial causes of sickness for small scale industries.
6. Without sufficient access on timely and enough credit, development of SSI sector is not possible. Bank credits is one of the reason as banks are reluctant to lend to small units as this segment has high non-performing assets (NPAs) Another important cause is creditworthiness of small borrowers is generally weak and therefore they face reluctant creditors who may be induced to lend only at a very high rate of interest
7. SSI sector has been facing more competitive environment which includes Finance, Infrastructure, government facilitation and technology. Dissatisfaction on tariffs, policy barriers, quality restrictions, and infrastructure are potential reasons for facing difficulties in meeting import/export standards.
8. Difficulties in meeting Import/Export standards have been grown up. Lowering tariffs and dumping policy are some major reason for the same.
9. Government has provided better infrastructure facilities after arrival of WTO. Stable and reliable infrastructure such as power, water, transport, communications and other are a basic requirement for the efficient functioning of any industry including SSI.

10. Exports are dominated by a few large multinational. The potential reason behind this is that they are large exporters/importers before they become multinationals; multinational firms with large FDI expand exports after they become multinationals
11. International quality standards are major challenge for Indian SSI sector. The application of quality control is difficult to all kind of business organization and this is the biggest reason behind failure of product of Small Scale Industries in comparison with foreign competitor.
12. India's import and export also affected by different ups and downs. Indian exports has witnessed a slowdown below the mean in period of January, 2014-2015
13. Industrial Production in India increased 4.10% in April, 2015 from the same month of previous year. Industrial Production in India averaged 6.52 percent from 1994 until 2015
14. Growth (in terms of units, output and employment) of Indian SSI sector has been lower than what has been anticipated after WTO.
15. WTO had a negative impact on the growth of SSI sector in terms of production. Industrial Production in India increased 4.10% in April, 2015 from the same month of previous year. Industrial Production in India averaged 6.52 percent from 1994 until 2015.
16. The small scale units are facing some labor problems like absenteeism, high wage rates, work stoppages, training cost, Poor working conditions, low piece rate system of payment and unionization.
17. SSIs are facing the problem of competition from their other counterparts because a large number of items reserved for small industries are now freely importable. Medium and large-scale industries are also producing goods, which are competing with the goods being produced by the SSIs.
18. In the WTO regime , reservation may have to be withdrawn and other support measure may not be available and thus small scale enterprise have to compete not only with the large units within the country, but also with cheap imported products. The removal of quantitative restrictions will adversely affect all segment of SSI sector.
19. Due to removal of QRs, de-licensing and de-reservations, opening up the industrial sector to internal external competition, lowering of tariffs etc. are major cause of deregulation of industrial sector.

## Conclusion

As already stated SMEs form life blood of any vibrant economy. India accorded high priority to this sector from the very beginning and pursued support policies to make this enterprise competent. After coming of WTO, it has facilitated the business in varied manner. WTO is an important agreement for doing business among the different countries in the world. On the other hand WTO also created some problems in the field such as it is an undemocratic decision making mechanism, self serving organization that operates outside of our control, financial imbalances, inadequacy of credit facilities, reduction of tariff levels, domination of export market, quality control, labor problems, competition from their counterparts, removal of quantitative restrictions and the like To counter competition in the long run and

to be economically viable, the small scale sector needs to improve its productivity and quality, stable and reliable infrastructure, and financial crises.

Government policies should promote the small scale sector by helping them increase their efficiency and competitiveness within national and international market. Indian economy will become competent to fulfil needs of the vast population as well as to provide sound base for industrial progress only with the help of strong small scale sector. The some requisites having importance and should required to be given core advantages of small scale sector; a strong and supportive financial system is required for development, innovation and strengthen local associations of small units as collectively they can counter many of their problems. The SMEs should explore new ways of finance like Joint Ventures and equity participation in this globalization era.

SSIs needs to be well-informed about latest developments taking place globally and helped to acquire skills necessary to keep rapidity with the worldwide developments. Undoubtedly the small sector has enormous potential, the huge potentiality of the Small and Medium industries with an enabling environment created through different policy measures will benefit this sector in archiving a higher growth. However for the sector to fully realise its potential, it is required that it firstly wakes up to the new reality of liberalising India and secondly that the Government realises the urgent need for a shift in the policy regarding the sector.

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# THE BENEFIT OF ELECTRONICS BANKING SYSTEM IN NIGERIAN BANKS

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**Abstract:** The research work critically investigates the benefits of electronics banking in Nigerian banks. To achieve this, the necessary data were obtained to investigate the data which involves the use of questionnaires. The hypotheses were tested and validated using percentages, goodness of fit test and chi square ( $X^2$ ) statistical analytical tools. The results of the analysis show that the use of electronic banking system in the banking industry is more efficient, more beneficiary and cost less when compared with the manual paper banking system. However, having weighed the merits and demerits of the introduction of the use of electronic banking, the commercial banks should embrace and invest in the new technologies in other to meet the needs of their today's banking system.

**Key words:** Electronic Banking, Chi-square, Goodness of fit, Percentage Benefits and statistics

## 1. Introduction

The financial institutions are the bed rock of any economy. No economy can develop without an effective means of financial based operational system. The banking system is one aspect of the financial institution but its importance cannot be over emphasized because it is this system that store and controls the flow of the nation's treasures in the form of money. Since money has been known to be the driver of all other aspects of a nation's economy, there is a need to safeguard and modernized the operational system, so as to meet up with the emerging economies of the world, prior to the electronic banking of the banking

system in Nigeria. The system was with unnecessary bureaucratic bottlenecks fraud and high levels of inefficiency. The inefficiency brought about the near total collapse of the banking sector. Majority of the customers began to look for other ways of storing their treasures. The banks on the other hand, developed large quantities of files and documents in storing their data and other information. The manual approaches no doubt; a daunting task and it waste a lot of man-hour. The introduction of the electronic banking into the system brought about a kind of revolution in the banking system.

According to maker (2000) “the advent of electronic banking has greatly improved sourcing, handling and spreading of information.

The electronic banking process information and performs such routine tasks as printing of journals, posting of ledger accounts, determining account balance and printing financial statements and other reports like assets and liability statement (Wither, 1977). This is why the electronic banking has been universally employed in the banking institutions and it has made possible the transformation of banks form paper shuffling, recording keeping operation to manufacturing of financial and progressive services.

**Objectives of the study:** The main objective of the study is to ascertain the benefits of electronics banking of some selected commercial banks in South East Nigeria

The break-through of the century in the field of information technology is the development of the electronic banking. By the development of this machine data processing technology has been revolutionized in the financial world among others. For instance, identification of customer’s verification of customer account balance and authorization of case withdrawals were done by cashier (s) using their hands. Due to the use of manual system, the growth of bank’s making use of manual system was hampered. Therefore, most banks acquired electronic banking and trained the personnel effectively to use electronic banking for case of work and quick delivery of customer service.

The introduction of electronic banking into banking operations has no doubt made banking service easier to both the management and customer of banking services, in order to properly place themselves in favorable positions for competitions and to be one of the co-operations to be reckoned with in the new century, banking industries are making use of information technology. This access to necessary

information to attend to their customers since such information is contained in their electronic banking data bank. The customers of banking services on the other hand, need not be physically present at the bank before they can affect any transaction, also they can issue cheques, which can be cashed at any branch of the said bank because of on-line system of banking, which most banks are adopting presently.

The contribution of information technology to banking operations in Nigeria, banking industry is endless and the same can be said for global banking.

Examples of products designed to make banking easier for banks and customers are magnetic Ink character recognition (Micro Cheese) Automated Teller Machines (ATM), Electronic Fund Transfer (EFT) and Debit and credit cards etc.

**Micro Cheese:** Chapman (1990) said that magnetic Ink character recognition was developed in response to the felt need to handle processing of large numbers or volumes of paper work, specifically chase. It was introduced by central bank of Nigeria (CBN) to aid the sorting of cheque in branches and clearing houses.

Automated teller machine: Akinola (1990) defined ATM as cash dispensing machine that tends to eliminate contact with the bank teller. User must identify themselves through personal identification numbers before access can be gained. These identification numbers are made known by the customers only.

**Electronic Fund Transfer (EFT):** This technique makes possible for customer's account to be credited or debited automatically. A very good example of EFT is the popular western transfer operated by (UBA, zenith bank and other banks. It allows for money to be sent for many part of the world to Nigeria in a matter of minutes, which would be given to the recipient at the prevailing exchange rates.

According to Adewuyi, (2011) the work study's the Nigerian banking system which has witnessed tremendous changes linked with the development in information system over the years. The quest for survival, global relevance, maintenance of existing market share and sustainable development have make the exploitation of many advantages of information technology through the use of automated devices imperative in the industry. The development of e-banking as a result advancement in information system

poses a lot of challenges to regulatory authorities in the system. This paper examines the concept of information technology, the meaning of electronic banking, origin of e-banking in Nigeria, areas of information and communication technology deployment by banks, guidelines on e-banking in Nigeria, reasons for automation of banking operation, challenges of regulatory on e-banking in Nigeria and recommends the way forward by the use of Electronics banking in the Nigerian Banking System.

Dabwor (2011) examine the Nigerian Banking System and the challenges of financial intermediation in the twenty first century. The work specifically looks at the role and impacts of information technology on the banking sector. It reveals that information technology has facilitated financial intermediation, through cost reduction and timely delivery of financial services. However, the work observes that most banks in Nigeria were facing keen competition both within and outside the shores of Nigeria such as mass movement of high-asset based banks towards efficiency thereby combining their advantages of big assets with efficiency which further expands their market and narrows those of the banks with relatively lower assets. Besides, there is the problem of financial fraud aided by information technology. Therefore, the paper recommends that Nigerians banks should invest in both information technology and human capital to brace up to the challenges of the New World Order. Finally, there should be legislation on financial crime which has assumed a sophisticated dimension in the wake of information technology.

Oluwatolani et al (2011) research shows that today's information technology (IT) has become a key element in economic development and a backbone of knowledge based economies in terms of operations, quality delivery of services and productivity of services. Therefore, taking advantage of information technologies (IT) is an increasing challenge for developing countries. There is now growing evidence that Knowledge driven innovation was a decisive factor in the competitiveness of nations, industries, organizations and firms. Organizations like the banking system have benefited substantially from e-banking, which was one among the IT applications for strengthening the competitiveness. The work presents the current trend in the application of IT in the banking industries in Nigeria and gives an insight into how quality banking has been enhanced via IT. The research further reveals that the deployment of IT facilities in the Nigerian Banking industry has brought about fundamental changes in the content and

quality of banking business in the country. This analysis and clarification of how Nigerian Banks have used IT to reengineer their operations is detailed through literature review and observation. Three categories of variables that relate to the use and implementation of information technology devices were considered in this paper. These include the nature and degree of adoption of innovative technologies; degree of utilization of the identified technologies; and the impact of the adoption of IT devices on the bank operations. In conclusion, the researcher also recommended the use of IT in the Nigerian Banking sector.

Ilishan et al (2013) studied the effect of cashless banking on Nigerian economy, discussed the various aspects of cashless banking channels, where the real e-banking should be, the problems facing cashless banking, its advantages and disadvantages to Nigerians. Non-parametric tool of chi square was employed to analyze the data. The following hypotheses were tested and analyzed:

- There exists a significant relationship between cashless banking and Nigerian economy;
- Cashless banking has a positive effect on Nigerian economy;
- Cashless banking negatively affects employment level in Nigeria;
- Cashless banking has a best means of usage

Based on the findings, it was recommended that increased government support, uninterrupted power supply and communication link, creation of awareness, provision of skilled manpower and electronic banking wizard in operation of payment system, collaboration among banks, provision of adequate security and fight against corruption would assist and improve the growth and development of cashless banking in Nigeria, the work recommends the use of e-banking to fight against corruption and to assist the economy of the country.

**Research Methodology:** The research method was the application of statistical tools that aids in revealing the true nature and results in the questionnaires and its data.

**Research Design:** According to Machiminas (1976), research design can be seen as a frame work of plan that is used as a guide in collecting and analyzing the data. It is a model of proof that allows the researcher to draw inferences concerning casual relations among the variables under investigation. The

two main research designs are experimental and survey design. In this study, survey research design is widely used in administrative and social science because of its complex relationship that exists between variables.

**Sampling Size:** The study made use of both primary and secondary data which were sourced with the aid of the questionnaires issued and some text books. The sample size the study was determined thus;

$$n = \frac{N}{4N(e)^2}$$

Where  $n$  = sample size

$N$  = population size

$e$  = Error Term

Thus;

$$N = 150$$

$$E = 10\%$$

$$\therefore n = \frac{N}{1 + N(e)^2} = \frac{150}{1 + 150(0.1)^2} = \frac{150}{2.5}$$

$$\underline{n = 60}$$

**Method of Data Analysis:** Information collected from the respondents through administered and returned questionnaires were presented in a frequency distribution analysis and interpreted using percentage (%) and the chi-square ( $\chi^2$ ) statistical tool which is considered adequate for the analysis. The chi-square ( $\chi^2$ ) is used to test whether the discrepancies between the observed frequencies (of) and expected frequencies ( $\in F$ ) are significant or could have occurred by chance.

**Description of Analytical:** The nature of the study requires the formulation of many hypotheses that are subject to proof. As a result, research hypotheses are to be tested. The statistical technique for testing the hypotheses is the chi-square ( $\chi^2$ ) distribution. The formula was advocated by Freud and Williams (1975), and it is given as follow

$$X^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

### Specification of Variables

$X^2$	=	Chi-square
$\Sigma$	=	Summation sign
$H_0$	=	Null hypotheses
$H_1$	=	Alternative hypotheses
$O_i$	=	Observed frequency
$r$	=	Number of Rows
$c$	=	Number of Columns
$>$	=	Greater than
$<$	=	Less than

**Decision Rule:** Accept the null hypothesis ( $H_0$ ), if the table chi-square ( $\chi^2$ ) value is  $>$  the calculated chi-square ( $\chi^2$ ) and reject the alternative hypothesis ( $H_1$ ). Conversely, if the calculated chi-square ( $\chi^2$ ) is  $>$  the table chi-square ( $\chi^2$ ) accept the alternative hypothesis ( $H_1$ ) and reject the null hypotheses ( $H_0$ ).

This chapter highlights the systematic approaches used to collect data and procedure used for the retrieval and analysis of the data collected. The chapter dealt with specifically data analysis techniques, sampling procedures, methods of data analysis and research design.

**Presentation and Analysis of Data:** This is concerned with the presentation of data collected during the field work. It further conducts a detailed analysis with the aid of suitable statistical technique of the data collected.

## 2. Analysis of Questionnaires Returned as against Number Distributed

**Table 1: Analysis of Questionnaires**

BANKS	NUMBER DISTRIBUTED	NUMBER DULY COMPLETED AND RETURNED	PERCENTAGE RETURNED	PERCENTAGE NOT RETURNED
ACCESS BANK	15	12	21	4

<b>ECO BANK</b>	15	15	25	-
<b>UBA BANK</b>	15	11	19	6
<b>FIRST BANK</b>	15	12	20	5
<b>TOTAL</b>	<b>60</b>	<b>50</b>	<b>85</b>	<b>15</b>

Source: Survey 2015

A total number of sixty (60) questionnaires were administered to the employees of the select bank that is, an average of 15 questionnaire distributed, fifty (50) were returned and completed of which ten (10) not returned at all.

The returned questionnaire represented 85% of the total number distributed for the study. On the other hand, the questionnaires that were not returned at all represent 15% of the total questionnaires distributed.

### 3. Presentation of Data

**Table 2:** Is the manual banking more efficient than the electronics banking system

Questions	Options	Response	Percentage
<b>Did you prefer manual banking system</b>	No	39	11
	Yes	11	39
<b>Did you prefer electronic banking system</b>	No	6	6
	Yes	44	44
	<b>Total</b>	<b>100</b>	<b>100</b>

Source: Field Survey (2015)

From the table above, it was observed that a total of 11 respondents gave a negative answer which reflects that manual banking system is preferable while 39 respondents says that manual banking system is not preferable. However, a total of 6 respondents gave a negative answer which reflects that electronics banking system is not preferable while 44 respondents say that electronics banking system is preferable.

**Table 3:** Is the use of manual banking more beneficial than the electronics banking

Options	Response	Percentage
<b>No</b>	47	94
<b>Yes</b>	3	6
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Field Survey (2015)



From the table above, a total of 47 respondents gave a negative answer which reflects that the use of manual banking is more beneficial than the electronic banking while 3 respondents says that the use of manual banking is more beneficial than the electronic banking.

**Table 4:** Is the cost of electronics banking higher when compared with the manual banking

	Options	Response	Percentage
<b>the cost of electronic banking is high</b>	No	4	4
	Yes	46	46
<b>Do you use electronic bankings in your banks</b>	No	0	0
	Yes	50	50
	<b>Total</b>	<b>100</b>	<b>100</b>

Source: **Field Survey (2015)**

From the table above, 4 respondents says that the cost of electronics banking is high while 46 respondents say that the cost of electronics banking is not high. Furthermore, 0 (zero) respondent(s) says that their banks did not make use of electronic banking in their banking system while 50 respondents say that their banks make use of electronic banking in their banking system.

#### 4. Testing the Hypotheses

##### Hypotheses 1

**H<sub>0</sub>:** The manual banking is more efficient than the electronic banking system

**H<sub>1</sub>:** The electronic banking system is more efficient than the manual banking system

**Question:** is the use of manual banking more efficient than the electronic banking system?

**Table 5: Observed Frequency**

	Options	Response	Percentage
Did you prefer manual banking system	No	11	11
	Yes	39	39
Did you prefer electronic banking system	No	6	6
	Yes	44	44
	<b>Total</b>	<b>100</b>	<b>100</b>

Source: **Field Survey (2015)**

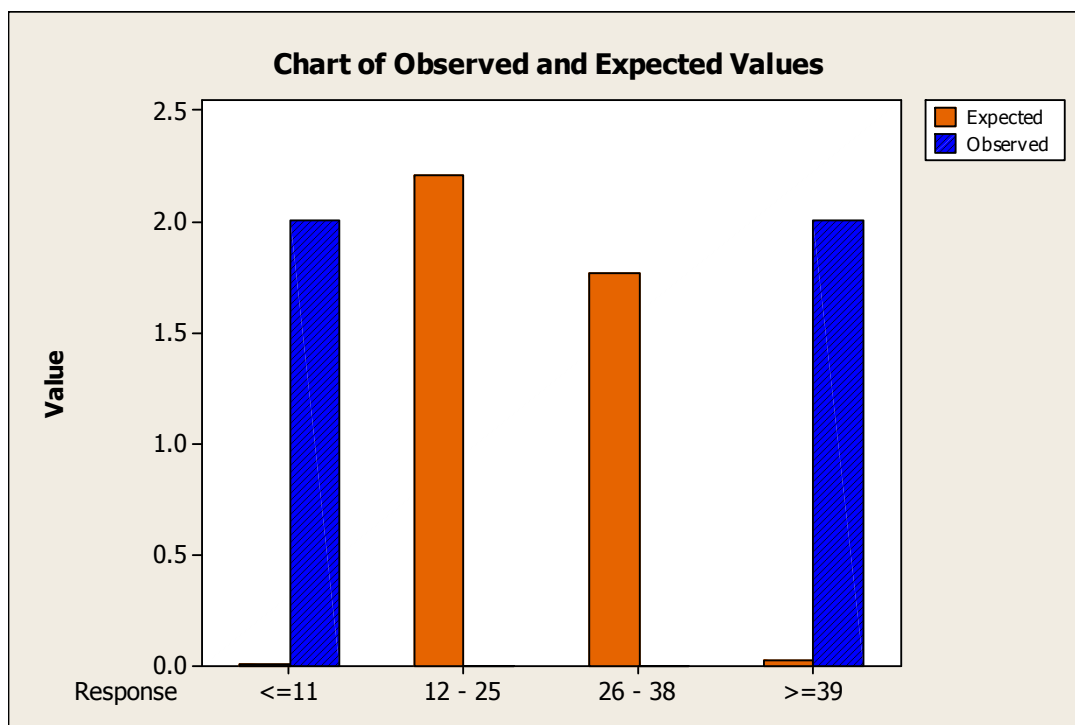
## 5. Goodness-of-Fit Test for Poisson Distribution

Data column: Response

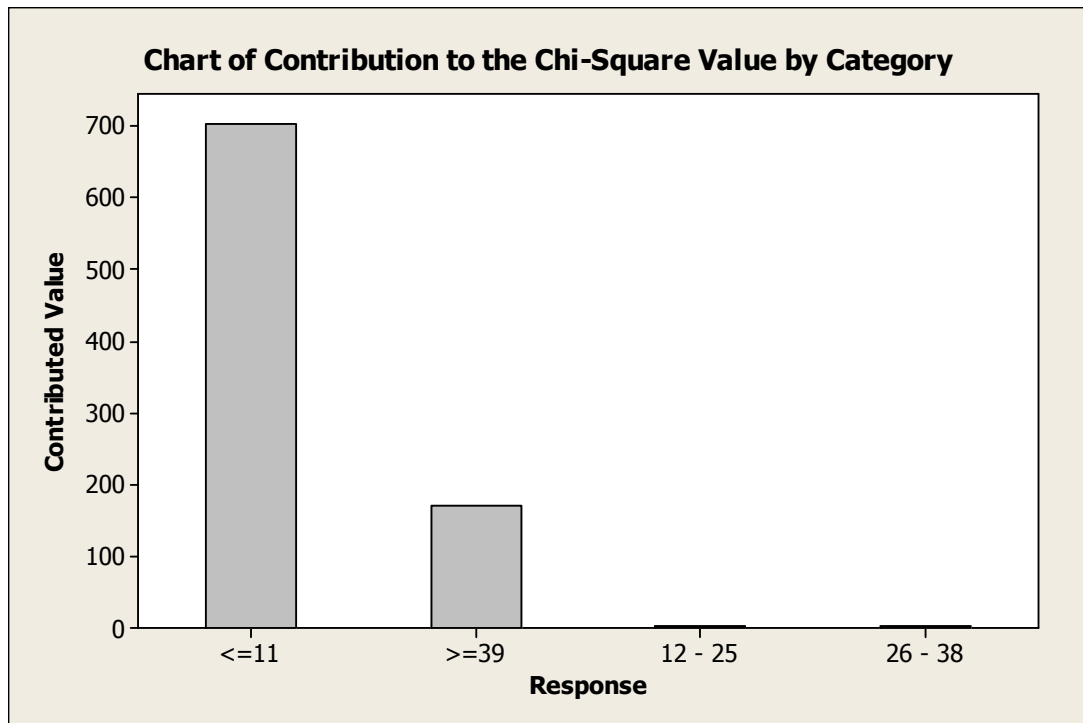
Poisson mean for Response = 25

Response	Observed	Poisson		Contribution to Chi-Sq
		Probability	Expected	
<=11	2	0.001416	0.00566	702.234
12 - 25	0	0.551505	2.20602	2.206
26 - 38	0	0.441382	1.76553	1.766
>=39	2	0.005696	0.02279	171.575

N	N*	DF	Chi-Sq	P-Value
4	0	2	877.780	0.000



**Fig 1:** Chart of Observed and Expected Values



**Fig 2:** Chart of Contribution to the Chi-Square Value by Category

**Decision:** from the analysis using the goodness of fit test and the chi-square test, it was observed that the chi square is 877.780 and the p- value is 0.000. However, the chart of chi-square contribution was developed and the chart of the expected and the observed were also developed. The results shows that the null ( $H_0$ ) hypotheses will be rejected and the alternative hypotheses ( $H_i$ ) will be accepted which states that the use of electronic banking system is better than the manual banking system.

### **.Hypotheses 2**

**$H_0$ :** The cost of electronic banking is high when compared with the manual banking

**$H_2$ :** The cost of electronic banking is not high when compared with the manual banking

**Question 2:** is the use of manual banking more beneficial than the electronic banking

**Table 6: Observed Frequency**

Options	Response	Percentage
No	47	94
Yes	3	6
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Field Survey (2015)

The expected frequency is given by:

$$E_{ij} = \frac{RC_i}{n}$$

$$E_f = \frac{50}{2} = 25$$

Degree of freedom = (R - 1)

$$= (2 - 1) = 1$$

**Table 7: Contingency Table ( $X^2$  Value)**

OF	EF	OF-EF	(OF-EF) <sup>2</sup>	(OF-EF) <sup>2</sup> /EF
47	25	22	484	19.36
3	25	-22	484	19.36

$$X^2 = 38.72$$

Thus, the  $X^2C = 38.72$

The table  $X^2$  at I degree of freedom and 5% level of significance = 3.841

**Decision:** since the  $X^2C$  (38.72) is  $X^2$  tab (3.841), the results show that the null ( $H_0$ ) hypotheses will be rejected and the alternative hypotheses ( $H_i$ ) will be accepted which states that the use of electronic banking is more beneficial than the manual banking.

### Hypotheses 3

**$H_0$ :** The cost of electronic banking is high when compared with the manual banking

**$H_3$ :** The cost of electronic banking is not high when compared with the manual banking

**Question 3:** is the cost of electronic banking high when compared with the manual banking

**Table 8: Observed Frequency**

Questions	Options	Response	Percentage
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the cost of electronic banking is high	No	4	4
	Yes	46	46
Do you use electronic banking in your banks	No	0	0
	Yes	50	50
	<b>Total</b>	<b>100</b>	<b>100</b>

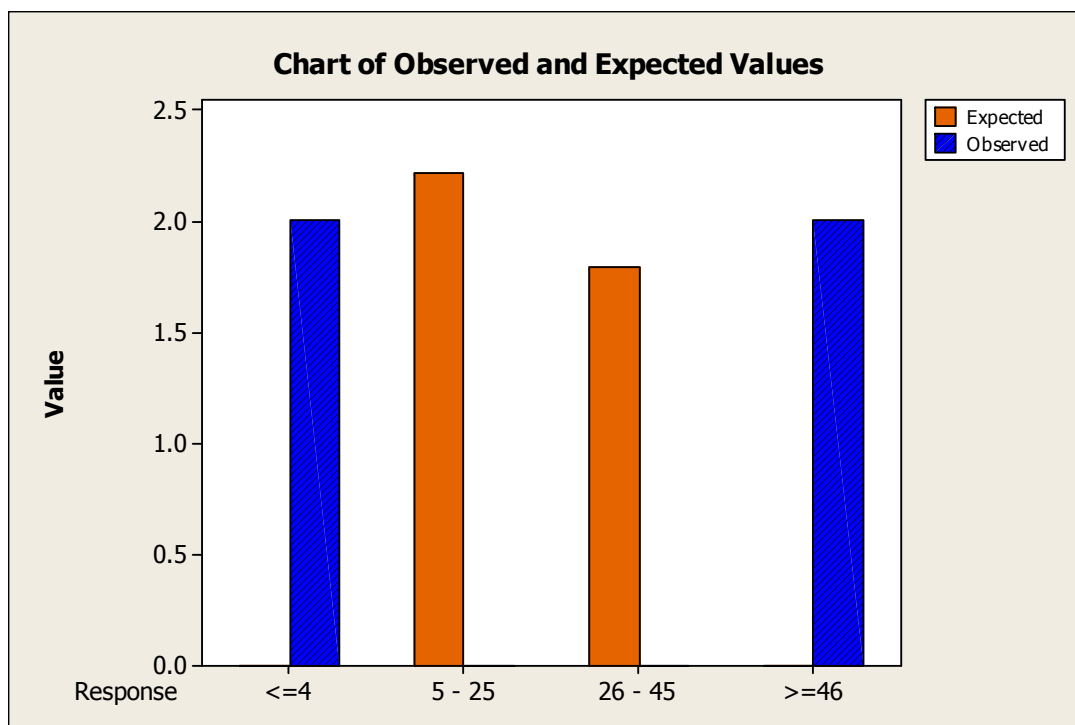
Source: **Field Survey (2015)**

## 6. Goodness-of-Fit Test for Poisson Distribution

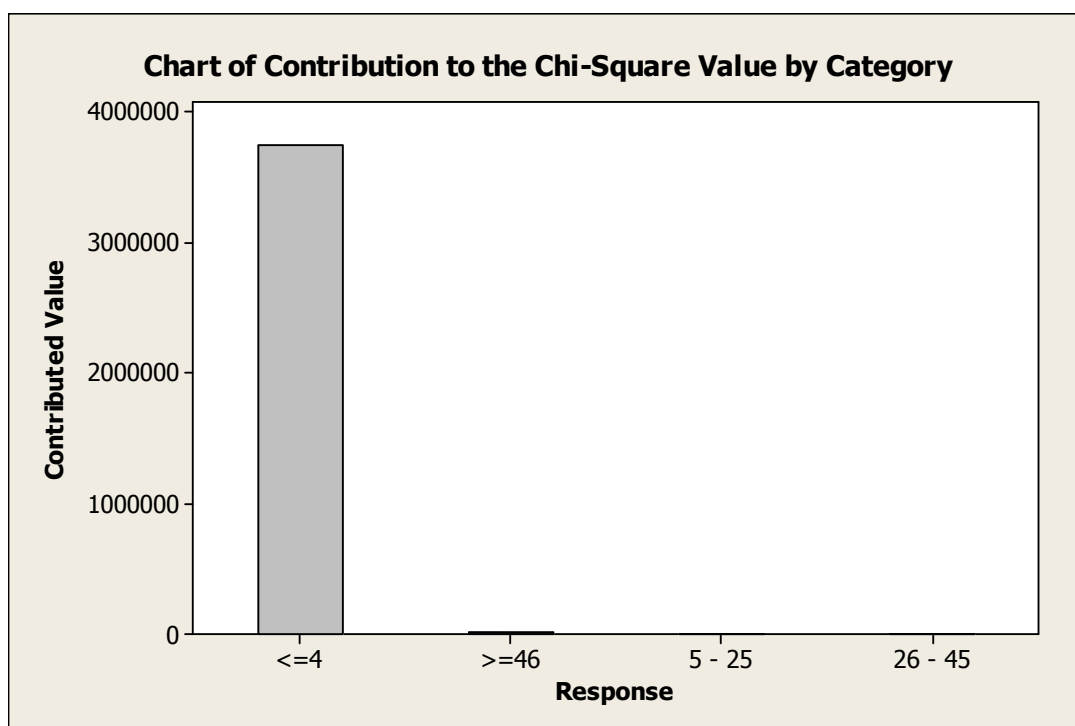
Data column: Response

Poisson mean for Response = 25

		Poisson		Contribution	
Response	Observed	Probability	Expected	to Chi-Sq	
<=4	2	0.000000	0.00000	3746601	
5 - 25	0	0.552921	2.21168	2	
26 - 45	0	0.446972	1.78789	2	
>=46	2	0.000106	0.00043	9398	
N	N*	DF	Chi-Sq	P-Value	
4	0	2	3756003	0.000	



**Fig 3:** Chart of Observed and Expected Values



**Fig 4:** Chart of Contribution to the Chi-Square Value by Category

**Decision:** From the analysis using the goodness of fit test and the chi-square test, it was observed that the p- value is 0.000. However, the chart of chi-square contribution was developed and the chart of the

expected and the observed were also developed. The results shows that the null ( $H_0$ ) hypotheses will be rejected and the alternative hypotheses ( $H_i$ ) will be accepted which states that the cost of electronic banking is not high when compared with the manual banking.

## **7. Summary of Research Findings**

From the results, analysis, findings and observations, the Nigerian banking system has benefited a lot in the development and innovation of electronic banking in the banking industry. From the start, it was observed that the operations and services of the banking industries were electronic banking.

From the findings in hypothesis one, the use of electronic banking system is better than the manual banking system. This was proved by the goodness of fit and chi square statistical tools used in the analysis which shows that the chi square is 877.780 and the p-value is 0.000. However, the chart of chi-square contribution was developed and the chart of the expected and the observed were also developed. The result shows that the null ( $H_0$ ) hypothesis will be rejected and the alternative hypothesis ( $H_i$ ) will be accepted which states that

From the findings in hypothesis two, the use of electronic banking is more beneficial than the manual banking system. This was proved by the chi square statistical tool used in the analysis which shows that the  $X^2C$  (38.72) is  $X^2$  tab (3.841). The results shows that the null ( $H_0$ ) hypotheses will be rejected and the alternative hypotheses ( $H_i$ ) will be accepted

From the findings in hypothesis three, the cost of electronic banking is not high when compared with the manual banking. This was proved by the goodness of fit and chi square statistical tools used in the analysis which shows that the p-value is 0.000. However, the chart of chi-square contribution was developed and the chart of the expected and the observed were also developed. The result shows that the null ( $H_0$ ) hypotheses will be rejected and the alternative hypotheses ( $H_i$ ) will be accepted.

Therefore, the electronic banking of the banking system has increased the level of the financial institutions and the economy in general. It has increased the profitability, improve the banking system and

it has reduced the rate of manual banking system to almost zero.

Finally, the banking system has no option than to embrace the benefits of electronic banking because it is the back bone of achieving a greater height easily and faster and it is the only means of achieving the jet age customer's needs and wants in the banking system.

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# ASSESSING THE PERFORMANCES OF COFFEE MARKETING COOPERATIVES IN YIRGACHEFFE WOREDA, GEDEO ZONE, SNNPRS, ETHIOPIA

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**Abstract:** In the coffee industry, coffee marketing cooperatives are anticipated to play an innermost role in the efforts to develop the sector. Meanwhile, the contributions of these cooperatives in the developing countries are limited to the smallest margin. Besides to that, the performance of coffee cooperatives in these countries is not yet well studied. Therefore, this study is aimed at assessing the performance of coffee marketing cooperatives in Ethiopia with a special focus on Yirgacheffe woreda. To meet the objective of the study, descriptive types of research techniques were utilized. The results of the study revealed that coffee cooperatives in the study area are moderately progressing so far as strengthening their financial positions and serving their members is concerned. However, they are still challenged by different impinging factors.

**Keywords:** Cooperatives, Coffee, Performance, Yirgacheffe, Ethiopia

## 1. Introduction

### *1.1. Background of the Study*

The cooperative movement brings together over 1 billion people around the world. The United Nations estimated in 1994 that the livelihood of nearly 3 billion people, or half of the world's population, was made secure by cooperative enterprises. These enterprises continue to play significant economic and social roles in their communities (Edward, (nd) available at [www.mtti.go.ug](http://www.mtti.go.ug)).

Today, in an era when many people feel powerless to change their lives, cooperatives represent the strong, vibrant, and viable economic alternatives. Regardless of the type, size, geographical location, or purpose, Coffee Marketing Cooperatives (CMCs) in Ethiopia provides a unique tool for achieving one or more economic goals in an increasingly competitive global economy. These goals include achieving economy of size, improving the bargaining power of smallholder farmers, purchasing in bulk to achieve lower prices, providing products or services otherwise unavailable, facilitating market access or broadening market opportunities, improving product or service quality, opening ways to access credit from financial institutions and increasing income.

### *1.2. Statement of the Problem*

Coffee Marketing Cooperatives are playing an important role in supporting coffee farmers by providing the price information, and transporting their coffee produces. However, many members do not know much about their cooperatives, their objectives and the role that they played in the economic development as a third sector of the economy. Cooperatives are an alternative and countervailing power to both private business and public sector undertakings. They can help to overcome some of the barriers to poor people's access to markets by generating economies of scale; opening up and access to information through better market networks; pooling resources and improving individual bargaining power through collective action. Nevertheless, cooperatives are still facing some serious challenges, which include over-control and regulation by government; limited access to credit; limited capacity to scale up their activities and competing in the free market economy (<http://www.gsdr.org/docs/open/HD565.pdf>).

In addition, cooperatives on behalf of their farmer-members are strong negotiators than individual farmers in the international market (Kodama, 2007). But some members of cooperatives have an experience of selling their produce to other marketing channels. This might be caused by the dissatisfaction of members with the services rendered by their cooperatives. Coffee cooperatives are effective in providing marketing services while reducing transaction costs that can bear by their members

(Bernard et al., 2007). Besides, the actual volume of purchase by coffee cooperatives, however, is limited due to financial constraints.

When one goes through the available literatures, none of them reveals exactly where the performance of CMC in Ethiopia is found. Hence, this research was conducted for assessing the performance of Coffee Marketing Cooperatives in Yirgacheffe woreda, SNNPRS, Ethiopia.

### 1.3. Objective of the Study

The objective of the study is to assess the performance of Coffee Marketing Cooperatives in Yirgacheffe woreda, Ethiopia.

### 1.4. Scope and Limitations of the Study

It would have been ideal to conduct the research throughout all coffee growing areas of Yirgacheffe. Moreover, due to time and funding constraints, the study has been confined to five Coffee Marketing Cooperatives in Yirgacheffe woreda, Gedeo Zone, Southern Ethiopia. These CMCs were selected due to the fact that they have the potential base for growing a large amount of coffee than the rest of cooperatives. Besides, the location convenience of the cooperatives to the researcher has taken in to consideration. Thematically, the scope of the study is also delimited to analyzing the performance of selected CMCs in the study area.

## 2. Research Methodology

For conducting the study, secondary data were collected from the cooperative's offices and woreda promotion Offices. After collecting the necessary data, by using the appropriate financial ratios and descriptive statistical analysis methods such as percentages, frequencies, means and standard deviations, the data analysis, discussion and interpretation has been conducted. The financial performances of the cooperatives were assessed using current ratios, debt to equity ratios, accounts payable to sales and profitability ratios based on the cooperatives' audited financial statements. In addition, simple descriptive approaches were employed to measure the operational performances of the societies.

As to selection of the study units, among seven coffee cooperative societies (Aramo, Edido, Haru, Koke, Dumerso, Hafursa and Konga), which are found in the study area, only five societies i.e. Konga, Hafursa, Koke, Dumerso and Haru were selected for the purpose of the study by taking into account the time and financial shortages and the wide geographical disparity of the cooperatives.

## 3. Results and Discussions

The performances of coffee cooperatives were assessed using both quantitative and qualitative techniques.

*Table 3.1. The Results of Financial Ratios of CMCs.*

Name of Cooperatives	$CR = \frac{\text{Current Asset}}{\text{Current Liability}}$		$DER = \frac{\text{Total debt}}{\text{Total shareholders' equity}}$		$APSR = \left[ \frac{\text{Accounts Payables}}{\text{Net Sales}} \right] \times 100$		$NPM = \left[ \frac{\text{Net Income}}{\text{Net Sales}} \right] \times 100$	
	CR <sub>2009</sub>	CR <sub>2010</sub>	DER <sub>2009</sub>	DER <sub>2010</sub>	APSR <sub>2009</sub>	APSR <sub>2010</sub>	NPM <sub>2009</sub>	NPM <sub>2010</sub>
Konga	2.86	3.53	1.89	1.87	86%	79%	34%	37%
Hafursa	1.74	2.01	1.96	1.98	91%	87%	28%	25.6%
Koke	1.37	1.19	1.93	1.89	89%	85%	22.7%	23.4%
Dumerso	1.26	1.40	1.97	1.94	98%	98%	18%	21%
Haru	0.83	1.16	1.99	1.95	96%	93%	16.3%	19%
Average	1.61	1.86	1.95	1.93	92%	88.4%	23.8%	25.2%

Source: Yirgacheffe Marketing and Cooperative Office, 2011.

### 3.1. Financial Performance

The financial performances of CMCs were assessed using financial ratio analysis methods which help to evaluate the efficiency of operations, the managerial performance and credit policies, potential investments and the credit worthiness of borrowers. The results of the financial ratios are disclosed as follows (see table 3.1).

#### 3.1.1. Liquidity Ratios

The ability of cooperatives to meet their obligations was measured using Current Ratio. Generally, the larger the current ratio, the better will be the ability of the cooperatives to satisfy their obligations. Is there a magic number that defines good or bad? Not really. However, the satisfactory rate of current ratio that is accepted by most financial institutions as a requirement for granting loan is 2.00. Accordingly, the above table shows that the average current ratios of CMCs were below the minimum requirement (2.00) though there were average progresses from 2009 to 2010 with respective mean ratios of 1.61 to 1.86. Except Konga (in 2009 & 10) and Hafursa (in 2010), the remaining societies were performing below the industry standard. More specifically, to

meet Birr 1.00 of their current liabilities; Konga, Hafursa, Koke, Dumerso and Haru cooperatives had Birr 2.86, 1.74, 1.37, 1.26 and 0.83 of current assets in 2009 and Birr 3.53, 2.01, 1.19, 1.40 and 1.16 in 2010, respectively.

### 3.1.2. Financial Leverage Management Ratio

Using Debt to Equity ratio, the debt that the CMCs are using to finance their assets in relative to the amount of value represented in shareholders' equity was measured. A higher DER generally means that the cooperatives have been aggressive in financing their growth with debt. On average, sample cooperatives had Birr 1.95 and 1.93 of Debt to Birr 1.00 of Equity to meet their obligations in 2009 and 2010 respectively. Relatively, Konga followed by Koke have taken little debt and thus have low risk. In a nutshell, the results of this ratio revealed that much of the finances of all CMCs came from creditors than their own accounts. However, their year to year improvements have to be appreciated.

### 3.1.3. Efficiency Ratio

To measure how well the cooperatives are employing their resources, Accounts Payables to Sales Ratios has been used among other efficiency ratios. As it has been shown in the above table, the average result of APSR depicts that 92% (in 2009) and 88.4% (in 2010) of cooperatives' sales is going to be paid for their members who supplied their coffee on credit basis. This implies that at the time of buying coffee, cooperatives have faced a severe shortage of finance.

Most often, members of cooperatives supply their coffee on account basis with a hope to obtain incentives provided by cooperatives. These incentives include: the additional price margin than the actual price of coffee and dividends. Comparatively, the amount of accounts payables of Dumerso against its sales (98% of APSR in both years) was higher than the remaining CMCs. This signifies that it was the least efficient of all cooperatives that are considered in this research. To the opposite, Konga (APSR<sub>2009</sub>= 86% and APSR<sub>2010</sub>=79%) and Koke (APSR<sub>2009</sub>=89% and APSR<sub>2010</sub>=85%) were the most efficient societies during the study period.

### 3.1.4. Profitability Ratios

For measuring the profitability of the cooperatives, the simplest and widely used profitability ratio otherwise called Net Profit Margin was utilized. The result of the computation (see table 6.1) exhibits that, on average, cooperatives earn Birr 0.238 and 0.252 net profit on every Birr 1.00 of their Sales in 2009 and 2010 respectively. In generating net profit, Konga and Hafursa took the leading positions with their respective NPM values of 34% and 28% in 2009 and 37% and 25.6% in 2010. Conversely, Haru was the least profitable society (NPM<sub>2009</sub>= 16.3% and NPM<sub>2010</sub>=19%) during the study periods. Moreover, except Hafursa, all selected coffee marketing cooperative societies have shown improvements in their profitability from 2009 to 2010.

## 3.2. Membership and Capital Growth

Most of the CMCs in Yirgacheffe Woreda were established in 1975 during the Dergue regime as multipurpose cooperatives to accomplish the governmental agendas in one hand and to improve the livelihoods of poor farmers' on the other. In view of the fact that cooperatives were organized and operated in undemocratic manners (political interference and misuse of cooperatives' resources), members were not much interested to join cooperatives. However, after the downfall of the repressive Dergue regime, members had shown an enthusiastic zeal to be part of the cooperatives. What is disclosed in the table below confirms this idea. The percentage change in the number of members from the date of establishment of cooperatives to the reorganization of cooperatives under the Proc. No. 147/98 was much significant. It accounts a 679.5% change on average excluding Dumerso society since the base year data was not properly known. In other words, it is to mean that in between the establishment and re-organization of cooperatives, the number of members of cooperatives has grown by 28.31% per annum.

In general, the number of members who joined the cooperatives, except Hafursa, has increased in an increasing rate. The reason for this can be the sensitization or awareness creation campaigns and the pricing strategy adopted by the cooperatives were among others. During the study periods, the cooperatives has had set a moderately high prices of sun-dry cherry coffee than the private traders around them. To the minimum, a 0.5/1 Birr per kilogram difference has been recognized. Moreover, other benefits provided by cooperatives such as dividends and infrastructural developments which otherwise not offered by other traders were additional reasons for the increase in the number of members in these cooperatives.

During the last twenty four years of business operations, cooperatives have showed a substantial increase in capital formation. As the following table indicates that the percentage change in the capital formation of cooperatives in between their organization and re-organization period was: Konga (868.07%), Hafursa (2677.58%), Koke (644.06%), and Haru (38971.07%). Relatively, Haru has shown a substantial achievement. From 1998/99 to 2011 the same trend (increasing in an increasing rate) was repeated among cooperatives as far as their pattern of capital formation was concerned. The percentage change from 1998/99 to 2011 was recognized that Konga (2958.93%), Hafursa (1513.64%), and Koke (4346.69%). Nevertheless, due to the problem of availability of data, the Dumerso's and Haru's capital position has not been analyzed.

Table 3.2. Membership and Capital Composition of Cooperatives.

S. No	Name of CMCs	Particulars	Number of Members				Capital	
			Male	Female	Total	% change	Amount	% change
1	Konga	Establishment (1975)	202	5	207	0	120,200.20	0

2	Hafursa	Re- Organization (1998)	2,015	160	2,175	467.63	1,163,625.00	868.07
		Current Status (14/07/10)	2,166	174	2,340	79.71	4,720,262.58	2958.93
		Establishment (1975)	266	12	278	0	75,318.71	0
3	Koke	Re- Organization (1998)	1003	76	1079	288.13	2,092,034.72	2677.58
		Current Status (24/11/11)	773	108	881	-71.22	3,232,093.02	1513.64
		Establishment (1975)	172	2	174	0	58,980.00	0
4	Dumerso	Re- Organization (1999)	1000	43	1043	499.43	438,846.87	644.06
		Current Status (24/11/11)	966	97	1093	28.74	3,002,527	4346.69
		Establishment (1975)	NA	NA	NA		NA	
5	Haru	Re- Organization (2003)	127	9	136		NA	
		Current Status (24/11/11)	301	16	317		30,318	
		Establishment	50	0	50	0	79,500	0
		Re- Organization	740	42	782	1464	3,106,1499.47	38971.07
		Current Status	762	63	825	86	NA	NA

Source: Coffee Cooperatives Coordination Office, 2011.

### 3.3. Share Capital and Registration Fees of Cooperatives

Interviewees and secondary data of the societies demonstrate that until now all societies did not issued additional shares than the initial one. Besides, it was remarked that there was a problem of mobilizing members to pay the initial share value of their cooperatives properly. If the cooperatives follow the right procedure postulated in the by-laws, the already issued shares at the time of establishment would not be sufficient for the last thirty five years (1975 to 2011). This implies that there is a problem of handling the cooperatives' shares. Except Konga, the price of shares of other cooperatives was similar during their establishment (Birr 10/share) and at present (Birr 100/share). However, Konga sold each share for br 12 and br 107 during establishment and the present time respectively as it was financially better society. The price of share was determined randomly not by applying the appropriate formula of computing the share value. In every cooperative society, the maximum and minimum numbers of shares to be purchased by an individual member were 10 and 1 respectively. In this case, the societies wrongly interpreted the by-laws statement that says maximum shareholding capacity by each member is limited to 10% of paid up share. They interpreted 10% as 10 shares. The registration fees that are expected to be paid by an individual member were less than 10 Birr.

Table 3.3. Share Capital and Registration Fees of the Cooperatives.

Name of CCSs	Amount of authorized shares	Sold	Unsold	Price of one share		Number of shares to be purchased by a member		Registration Fees	
				At time of establish.	Current Status	Max	Min	At the time of establish.	Current Status
Konga	15,000	11,040	3,960	12	107	10	1	2	6
Hafursa	2,000	1,068	932	10	100	10	1	2	5
Koke	4,000	3,096	904	10	100	10	1	2	6
Dumerso	N/A	N/A	N/A	10	100	10	1	2	10
Haru	6,000	1,081	4,919	10	100	10	1	1	2

Source: Yirgacheffe Marketing and Cooperative Office, 2011.

### 3.4. Borrowings

Cooperatives in the study area had faced a problem of shortage of finance since their foundations were weak and formed by the poor peoples. Therefore, at the time of conducting their business, they had faced a problem of money whether to run their operations or to pay their employees. In the end, their only option could be to go to the lending financial institutions and its partnering organizations like Banks, Cooperative Unions, and Microfinance Institutions even though these institutions did not release the required amount in time. This was mainly due to three important reasons; (1) lack of collaterals, which is supposed to be provided by cooperatives, (2) incapability to pay the previous liabilities and (3) most of the cooperatives in that woreda were not audited by external auditors. The reports of the societies show that only one-fourth of the required amount was delivered by the aforementioned financing institutions. Mainly, the objectives of borrowings were either to purchase fresh cherry (coffee) or to develop new projects which would help CMCs to expand their services.

Particularly, the cooperatives had owed finance from Commercial Bank of Ethiopia, Development Bank of Ethiopia, Yirgacheffe Coffee Farmers Cooperative Union (YCFCU), Leta Micro Finance, and the Rural Finance. In addition, Abyssinia, Awash, and Dashen banks have cooperated in transacting the fair trade premiums. As clearly indicated in the following table, huge amount of money has been transacted between lenders (financial intermediaries) and cooperatives.

Table 3.4. Borrowings of Cooperatives.

Year	Name of Cooperative Society				
	Konga	Hafursa	Koke	Dumerso	Haru

	Creditors/Amount		Creditors/Amount		Creditors/Amount		Creditors/Amount		Creditors/Amount			
	CBE	YCFCU	DBE	YCFCU	CBE	YCFCU	CBE	YCFCU	Leta Micro Finance	CBE	YCFCU	Rural Finance
2005	2,416,330	NA	NA	NA	1,400,000	150,000	840,000	100,000	-	597,200	100,000	-
2006	NA	NA	NA	NA	-	1,241,600	1,054,500	1,054,500	-	-	625,000	-
2007	NA	NA	NA	NA	-	754,865.80	981,920	981,920	-	-	675,000	-
2008	NA	NA	3,000,000	NA	2,605,367	38,022	618,000	618,000	-	-	529,000	500,000
2009	2,482,320	-	3,000,000	NA	1,991,592	259,750	-	-	-	-	505,091	-
2010	3,215,837	1,951,497.10	3,000,000	NA	2,630,000	2,630,000	1,876,526.02	1,820,526.02	56,000	-	-	-
2011	3,704,288	2,900,000	3,985,000	1,817,229.75	3,288,845	969,919.78	1,738,000	1,738,000	-	-	2,194,872.95	-

Source: Coffee Cooperatives Coordination Office, 2011.

### 3.5. Plan Versus Achievement of Coffee Collection and Income Generation of Cooperatives

The coffee cultivation practices of Yirgacheffe farmers are dominantly traditional. Coffee trees are managed by hand and fertilized with organic matter. Despite the long history of coffee production in the area, growers follow traditional cultivation practices rather than utilizing chemical fertilizers, pesticides and herbicides. In the present days, in Yirgacheffe woreda, except Dumerso and Aramo coffee cooperatives, the remaining five societies are organic certified coffee cooperatives which involves in marketing both washed and sundry coffees to the Ethiopian, Japanese and American markets. Among the seven CMCs, only two cooperative societies (Hafursa and Konga) are beneficiaries of FLO/Fair trade. Meanwhile, the others are registered but not benefited from it.

YCFCU has obtained special privilege from the Ethiopian coffee and Tea Authority to bypass the central coffee auction and export directly to the customers abroad. As primary societies provide fair price and dividend to the farmers, the unions also do the same for their subsidiary cooperatives. In the first place, if the primary societies offer their coffee to the union until December 30 of every Ethiopian year, 25% additional payment of the market price will be paid by the union as YCFCU exports the coffee to the foreign markets. In addition, if the union becomes profitable, it is expected to pay 70% of the profit as dividends. But if it faces losses, primaries will not be liable to share the loss. Secondly, if the primary cooperatives supplied in between January 1-30, only an additional 10 % of the actual price will be paid for them. Lastly, if their delivery is after January 30, the union will take the coffee by the market price.

In Ethiopia in general and in Yirgacheffe in particular, coffee grading and quality control occur at the local (producer), regional and central levels. This integrated approach help to grade the coffee before auction and export to the abroad markets. That is important for all those involved in the production, collection, export, and consumption chains. Coffee grading and quality control is not only encourage good quality coffee production but also create lasting business relationships with overseas buyers. Before exporting, coffee is brought to the quality control center in order to: verify the original character of the coffee, and check if the green and cup qualities have met the export standard. In these days, ECX provides coffee grade for cooperatives' coffee. The grade that was given throughout the last seven years found to be in the intervals of 2-4 for Konga, Hafursa, Koke and Dumerso, whereas, it was 2-3 grades for Haru cooperative society. ECX also provides coffee quality inspection test result certificate. Moreover, it was mentioned that the increments of the prices of coffee and dividend payments were the major motivating factors to supply more coffee for cooperative societies. On the other hand, limited capacity of the coffee processing site becomes a serious challenge for cooperatives.

The percentage achievement of CCSs in terms of coffee collection and income generation varies from society to society and year to year (Table 3.5). In general, the income and coffee collection achievement levels of the societies were found in between Dumerso (13.69% coffee collection and 19.12% income generation) and Haru (103.86% coffee collection and 100% income generation), societies.

Table 3.5. Plans versus Achievements of Cooperatives in Collecting Coffee and Generating Income.

S. No	Name of the Society	Descriptions	Years						
			2005	2006	2007	2008	2009	2010	2011
1	Konga	Coffee collection	Plan	NA	NA	NA	1,395,582	1,395,582	1,395,582
			Achievement	826,232	NA	NA	448,269.99	802,884.14	976,829.56
			% Achieved	NA	NA	NA	32.12	57.53	69.99
		Income generation	Plan	NA	NA	NA	NA	13,331,845.75	13,628,618.69
			Achievement	2,345,322.63	NA	NA	2,689,619.94	5,620,188.94	8,791,466.06
			% Achieved	NA	NA	NA	NA	42.16	64.51
2	Hafursa	Coffee collection	Plan	NA	NA	NA	NA	1,000,000	800,000
			Achievement	617,917.5	714,463	492,285	527,480.5	498,982.5	631,522
			% Achieved	NA	NA	NA	NA	63.15	57.37
		Income generation	Plan	NA	NA	NA	NA	7,150,000	7,868,207.16
			Achievement	1,875,564.71	2,698,565.75	2,474,199.89	3,165,768.69	2,918,788.84	3,404,523.59
									6,506,279.69

S. No	Name of the Society	Descriptions	Years							
			2005	2006	2007	2008	2009	2010	2011	
3	Koke	Coffee collection	% Achieved	NA	NA	NA	NA	NA	47.62	82.69
			Plan	900,000	1,000,000	505,337	738,481	650,000	650,000	750,000
			Achievement	522,215	340,333	215,228	459,287	295,130	545,315	372,167
		Income generation	% Achieved	58.02	34.03	42.59	62.19	45.41	83.90	49.62
			Plan	2,117,642.20	3,741,454	2,208,191.50	3,689,567.50	4,761,184	4,752,214.80	6,144,456
			Achievement	1,672,941.75	1,367,619.9	967,637.32	2,989,910.25	3,658,244.04	3,509,441.60	4,562,559.88
		Coffee collection	% Achieved	79	36.55	43.82	81.04	76.83	73.85	74.26
			Plan	NA	NA	NA	600,000	500,000	500,000	700,000
			Achievement	64,716	60,934	49,697	82,134.04	-	184,416	197,656.38
4	Dumerso	Income generation	% Achieved	NA	NA	NA	13.69	NA	36.88	28.24
			Plan	NA	NA	NA	3,437,552.60	2,853,352.92	3,237,506.75	5,939,825.24
			Achievement	1,006,343.81	1,145,906.43	1,101,351.71	657,072.31	-	2,028,576.04	2,371,876.54
		Coffee collection	% Achieved	NA	NA	NA	19.12	NA	62.66	39.93
			Plan	220,151	261,348	304,705	500,000	700,000	-	700,000
			Achievement	228,648	269,480	315,191	172,240	185,538	-	227,879
		Income generation	% Achieved	103.86	103.11	103.44	34.45	26.51	NA	32.55
			Plan	779,533	1,148,051	1,378,531	2,655,000	2,800,000	-	6,505,904.75
			Achievement	734978.75	1,024,669.25	1,378,561.52	1,340,721	1,289,443.01	-	3,501,625.88
5	Haru	% Achieved	94.28	89.25	100	50.5	46.05	-	53.82	

Source: Coffee Cooperatives Coordination Office, 2011.

### 3.6. Patronage Dividend

Despite the better prices, fair-trade premiums and additional payments (at the time of on account purchase of coffee), cooperative members preferred to sell their coffee to cooperatives due to patronage dividends provided by cooperatives. Even though dividends varied from year to year, farmers often get 0.1–0.75 birr/kg if he/she sells from April to September. Cooperatives are unique business organizations that distributed dividend for their members based on participation or the amount of coffee produce supplied by individual members. Nonetheless, a maximum limit of the coffee produce considered for dividend was 4000kg per individual. This has been revealed in table 3.6. For example, in 2005, only 757,746 kg out of the total 826,232 kg was considered for dividend. The Dividend per kilogram varies in between 5cents/kg (Dumerso) to 75 cents/kg (Koke). As Konga was the strong cooperative society, it took the lions' share in dividend payments (448,083.10). Dumerso and Haru cooperatives did not distributed patronage dividend since a long time. It was partly because of the loss that these cooperatives had faced. Furthermore, the embezzlements that have been repeatedly done by the union managers were one of the basic reasons for the financial shock of these cooperatives.

Table 3.6. Dividends Allocated By Cooperatives.

Year	Cooperatives/ Dividend														
	Konga			Hafursa			Koke			Dumerso			Haru		
	Total amount of coffee considered for dividend (kg)	Dividend /Kg	Total Amount of Dividend	Total amount of coffee considered for dividend (kg)	Dividend /Kg	Total Amount of Dividend	Total amount of coffee considered for dividend (kg)	Dividend /Kg	Total Amount of Dividend	Total amount of coffee considered for dividend (kg)	Dividend /Kg	Total Amount of Dividend	Total amount of coffee considered for dividend (kg)	Dividend /Kg	Total Amount of Dividend
2005	757,746	0.30	227,263.80	1,111,785	0.10	111,178.50	NA	NA	71,538.05	227,332.50	0.05	11,366.50	8,677	0.10	867.7
2006	NA	NA	NA	870,390.2	0.10	87,039.02	-	-	-	-	-	-	-	-	-
2007	NA	NA	127,036.07	221,889.50	0.10	22,188.95	NA	NA	240,776.31	-	-	-	-	-	-
2008	NA	NA	NA	188,731.5	0.20	37,746.30	-	-	-	-	-	-	-	-	-
2009	NA	NA	231,242.15	353,977	0.25	88,494.25	-	-	-	-	-	-	-	-	-
2010	NA	NA	361,767.80	234,366.75	0.5	117,183.375	NA	NA	69,489.65	-	-	-	-	-	-
2011	NA	NA	448,083.10	-	-	-	169,521.5	0.75	226,029.10	-	-	-	-	-	-

Source: Coffee Cooperatives Coordination Office, 2011.

### 3.7. The Fair-trade Premium Paid to Cooperatives

In Ethiopia, the fair trade premium paid to the farmer-members of cooperatives was at least \$1.26/pound (a living wage). Additionally, access to credit at fair prices to poor farmers who are the members of cooperatives is another contribution of fair trade in the woreda. These fair-trade payments are invested in food, shelter, health care, education, environmental stewardship, and economic aspects. Fair trade promotes socially and environmentally sustainable projects and win-win relationships between producers, traders and consumers. The value of the fair trade premium varies according to the international coffee price levels. When the international coffee price is above the guaranteed minimum price, it will follow the international price, and always it stays above 5 US cents.

Among the five sample cooperatives, only Hafursa and Konga had the leverage to enjoy the fair-trade premium. The rest were registered before few years ago but still the certification and the payment is in process. After their certifications, cooperatives will get benefits of marketing opportunity, fair-trade premiums, and a 60% pre-payment from coffee receivers. The money collected from fair-trade depends on the amount of coffee exported to foreign markets. The purpose of the premium was for infrastructural developments not for other societal projects. A separate account will be opened by a premium committee having a member of three to handle activities relating with fair-trade. The societies have to transparently administer the cash collected from the fair trade premium. To run the projects by using the money from fair-trade account, it should be at the knowledge of the general assembly and should have an approval from the supreme organ simultaneously. There are some problems related with fair-trade. These includes, non-certified cooperatives sold their coffee as they are certified, the premium is not allocated for the desired projects approved by the general assembly, the problem of management of the premium, and the criteria set for the fair-trade is not known by all the members.

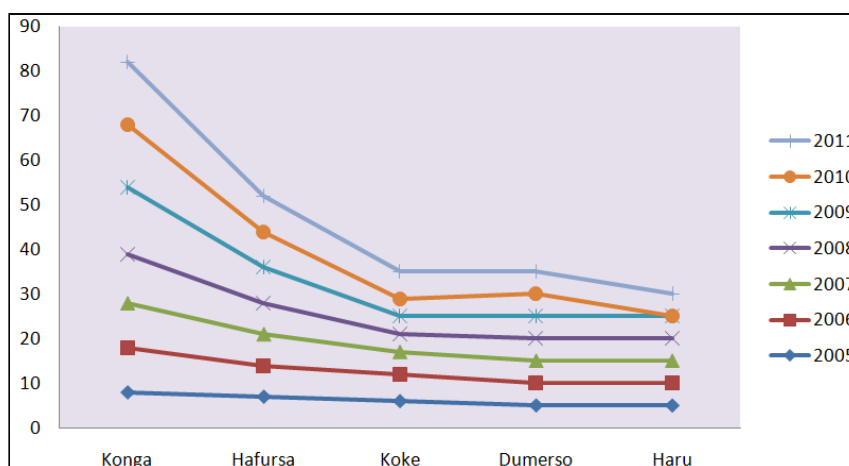
Table 3.7. Fair-trade premium.

Year	Cooperatives/fair-trade premium				
	Konga	Hafursa	Koke	Dumerso	Haru
2005	76,000	NA			
2006	216,000	NA			
2007	-	NA			
2008	223,089.37	NA	Not still paid	Not still paid	Not still paid
2009	81,312.12	NA			
2010	Not still received	284,555.89			
2011	Not still received	328,467.54			

Source: Coffee Cooperatives Coordination Office, 2011.

### 3.8. The Role of Cooperatives in Employment Creation

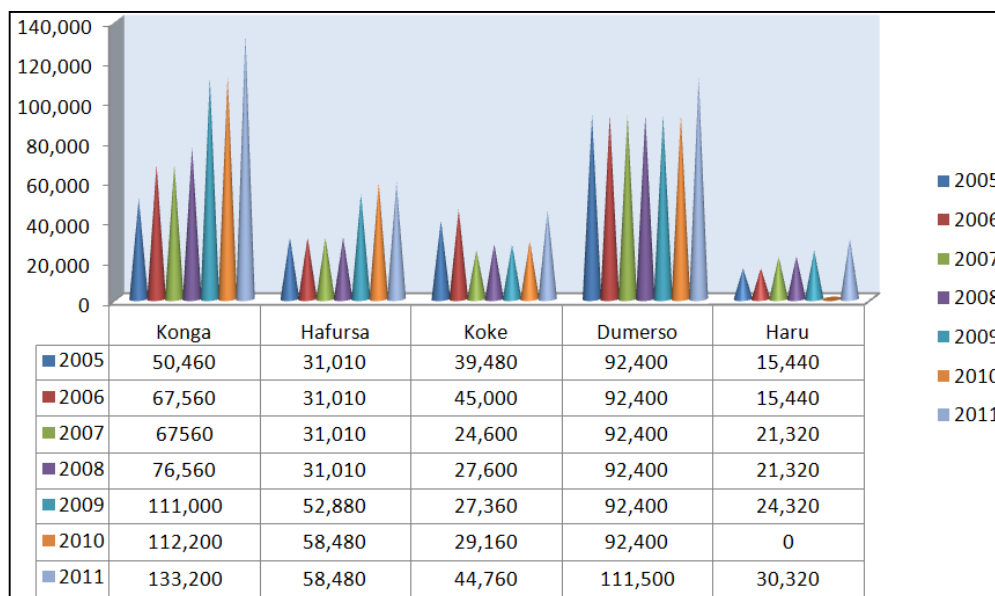
Different researches and reports on the field shows that Ethiopian cooperatives have created a sizeable number of salaried jobs for both members and non-members; yet, their biggest employment creation potential lies in the areas of direct and self-employments. Coffee cooperatives in Yirgacheffe woreda are relatively better than other enterprises so far as job creation is concerned. The research boldly signifies that how much they are labor intensive, cost-effective and creates an opportunity to have economies of scale. Moreover, these cooperatives offer their members with decent and permanent jobs through stabilizing existing self-employment in the rural areas; mobilize savings among the poorest and assisting them to accumulate capital for productive investments.



Source: CCCOs, 2011.

Figure 3.1. Permanent Jobs created by selected CMCs (2005-2011).

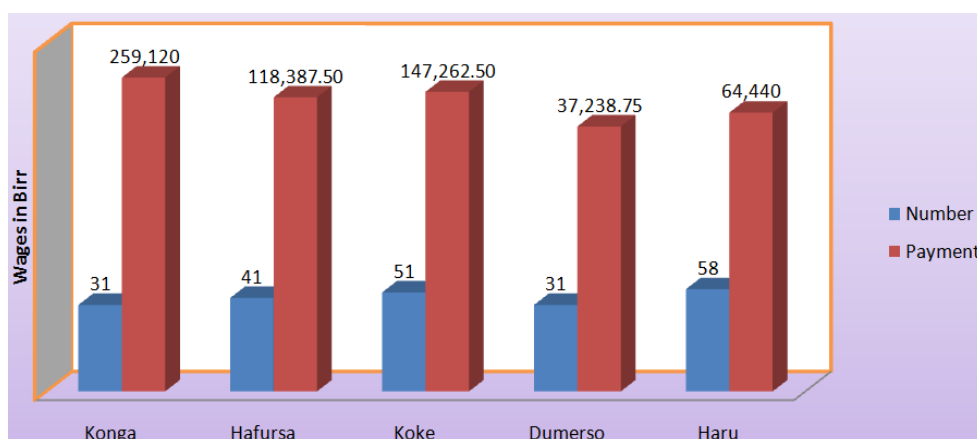
Sample coffee marketing cooperatives have created both wage, induced and self-employment employment opportunities. The wage employments created by CMCs can be classified in to two major categories i.e. permanent and temporary employment opportunities. The figure below exhibits that Konga employs the maximum number of employees permanently (8-15 permanent employees) by paying a maximum amount of salary that varies between Birr 50,460 to 133,200 annually. Dumerso (92,400 to 111,500 for 5 permanent employees annually) was the second in creating permanent employments. Conversely, Koke was the least in creating permanent wage employment opportunities (only for 4-6 persons). But in general, cooperatives have employed 5-8 peoples and paid an annual salary of br 24,600 to 58,480.



Source: CCSsCOs, 2011.

Figure 3.2. The Wage Payments for Permanent Employees of Sample CMCs.

On the other hand, cooperatives have also created job opportunities for temporary employees. In the year 2011, 31(Dumerso and Konga) to 58 (Haru) daily laborers per day for three to five months were employed by CMCs. The wage payment varies in between Birr 37,238.75 (Dumerso) to 259,120 (Konga). On average, in 2011 alone, sample cooperative societies employed 42 and 8 individuals temporarily and permanently respectively (see figure 3.1 and 3.3).



Source: CCCOs, 2011.

Figure 3.3. Temporary jobs and wage payment of sample CMCs in 2011.

The other employment outlets of CMCs in the study area were the induced employment opportunities for those who were



employed by the local government as well as the co-owned projects designed by the Ethiopian government and Non-governmental Organizations for the purpose of promoting and supporting cooperatives in the research area. In so doing, 32 cooperative professionals were employed by the cooperative promotion bureau of that particular woreda.

The last but not least job opportunities extended by the cooperatives were the self-employments created for their own patron-members. During the pre- and post production services, coffee marketing cooperatives had created jobs for their members. In this regard, the sample CMCs had employed 5,456 farmer members only in the year 2011 (see table 3.2). In general, this indicates that cooperatives are playing a most decisive role in creating wage, induced and self employments as the third development partners of the government of Ethiopia.

## 4. Conclusion and Recommendation

### 4.1. Conclusion

The contributions of coffee marketing cooperatives in Ethiopia are immense. They strive for improving the livelihood of their members while they are challenged by a number of factors. They absorb the large segment of the population whereby members and non-members earn income which enables them to accommodate the needs of their family to the maximum extent possible.

Despite the fact that CMCs in Yirgacheffee woreda have shown improvements from time to time, they are not still financially strong enough. To be more specific, much of the finances of all CMCs come from creditors than their own accounts and the average current ratios of societies were below the minimum requirement. As far as membership and capital composition of cooperatives is concerned, since 1998 (re-organization year), cooperatives in the woreda had shown a notable increments in mobilizing capital and attracting members.

Finally, the CMCs; in distributing dividends, integrating smallholder farmers in to a better market and the deployment of fair-trade premiums had recognized to be progressive and moderately successful as well.

### 4.2. Recommendation

On the basis of the above findings, the following recommendations are provided. Finance has been mentioned as the main stumbling block of cooperatives. Hence, cooperatives should find solutions that can get out them from their current financial predicaments. To do the same, the financial institutions which are the main stays of cooperatives source of finance should be cooperative enough in delivering credits at the right time and place. Moreover, the cooperative societies themselves should device ways which would have taken them away from the financial dependence on the lending institutions. In the long run, establishing cooperative banks could be one of the pertinent solutions for this problem. The role of the promotion office in facilitating access to credit, manpower training and conducting researches should not also be undermined.

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# EARLY MARRIAGE IN ETHIOPIA: SO LITTLE DONE BUT SO MUCH TO DO

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## **Abstract**

Early Marriage is one of the global problems that undermine the personal development and the rights of women very seriously. It is very delicate among the developing countries such as Ethiopia. Under-aged girls in Ethiopia are susceptible for child marriage since a long time ago. Irrespective of the efforts of the government, the society, and the international community; the problem is still persistent throughout the country. The traditional beliefs, religion, and the economic motives are recognized as the root causes of early marriage in Ethiopia. It exposes the pre-matured children into psychological and emotional traumas, severe violence, denial of social services, reproductive health problems and migration to the nearby poor towns and abroad. Thus, sensitizing the stakeholders, educating girls, and supporting the runaways and others who would otherwise be the victims of early marriage are the way forward to reduce the adverse consequences of child marriage in Ethiopia.

**Key Words:** Early Marriage, Human Right, Tradition, Violence, Psychological Traumas, Sensitization, Ethiopia.

## **Introduction**

Since a long time, women and girls are victims of diversified socio-economic and political violations and exclusions. They are severely affected by sexual violence, early marriage and harmful traditional practices such as female genital mutilation and tattooing. Due to these inhuman and discriminatory practices, women and girls are banned from access to education, health care services, employment and other opportunities and resources. Early Marriage is, therefore, one of the ways of violation of human and

women's rights.

It is universally accepted that they are those who are adults and matured can only choose their marriage partners. Contrary to this fact, all over the world, within a single day, almost 39,000 girls are getting into marriage before their maturity without their will and consent (VOA, 2015). Thus, a marriage can be said early when the person getting married is immature in age (below 18 years) and in physiological development.

In 2010 alone, more than 67 million women who were found in the age brackets of 20 and 24 had been exposed for early marriage in developing countries except China (UNFPA 2012). This is very worst in Africa in general and in Ethiopia in particular. In Ethiopia, from every 10 women who were getting into marriage in 2011, about 3 had married before maturity age (ibid). It is more prevalent especially in the rural communities of Christian dominated and agrarian society of the Central highlands and Northern part of Ethiopia. This part of the country accounts the 54.6% of the national incidence. In addition, the South and South-Western part of the country have the prevalence of 50-80% so far as child marriage is concerned (Mahdere Paulos, 2006).

Early Marriage has reproduced adverse effects on the socio-economic and health status of the persons involved. Girls who marry at early ages would lose the opportunity of formal education, have little or no opportunity for wage employment and hence mostly in the informal type of job or fully engages in housework and childcare. It may also lead into social power imbalances, such as unequal income generating opportunity, sexual violence, little money for attaining their daily needs and gender inequality in and out of their homes ( Mutgan, 2014). In addition, the children of early married girls also suffer from severe malnutrition, under-nutrition, and poor health. Therefore, this research is aimed at assessing the impact of early marriage on the lives of girls and women in Ethiopia.

## **1. Whys Does Early Marriage in Ethiopia Persists?**

Most countries in the world have passed laws against early marriage. However, the laws are overwhelmed by socio-cultural and economic factors that significantly contribute for the perpetuation of this harmful and discriminatory practice. Most often; poverty, religious dogmas and practices, traditional norms and low levels of education are mentioned as the major factors for the continuation of child marriage in most developing countries (Alexandra Hervish and Charlotte Feldman 2011).

### **1.1. Economic Reasons**

Apart from long-lasting and deep-rooted cultural reasons, the vulnerable economic situation of a family is another cause of child marriage. That is why early marriage is more prevalent in developing countries than developed nations. In Ethiopia too, to get the dowry or the cattle as the bride's price from the groom or his family, many of our sisters and brothers are victims of this harmful practice. Moreover, to start earning family's future reciprocal assistance, to link with a financially better off or a better "social standing" family, and to reduce the financial dependence of children, early marriage among the peasant community of Ethiopia is highly supported (Mahdere Paulos, 2006).

It is known that poor families have no financial means to invest on their children's education, health care services, and even to feed them. As a result, they would practice early marriage as an alternative solution to relieve their economic problems though short-lived and limited in amount.

This is harsher in orphaned children that the caregivers may see marriage to a financially sound man as an opportunity to better provide for their custody or to lessen their pricey caretaking responsibility. Furthermore, during the time of economic crisis where the family is incapable to pay its debt, children would be provided as a currency for the relief. Unless and otherwise, abduction, which is an illegal taking away or kidnapping of girls into forceful marriage will be followed. This is common in rural areas especially among the poor men who are not capable of paying the bride price. Most of the time, this type of marriage is formalized through the mediation of elders. In the southern part of Ethiopia, nearly 80% of

marriages are the result of abductions.

Many pieces of research on the area had commonly revealed that poverty is the bottom line of early marriage in Ethiopia. However, contrary to these studies, Alemu in 2008 has come up with a new finding which stresses that poverty is not the fundamental reason for child marriage in Amhara regional state, where the region suffers a lot because of premature family formation.

### **1.2.Social Reasons**

A strong and deeply embedded cultural, traditional, religious and social norms and values, particularly among the Ethiopian Muslim community, is a favorable ground for child marriage in Ethiopia. Even if the degree differs, all over the country, child marriage is accepted as a usual incident. It is occasionally encouraged due to the belief that it is the way of protecting the child from loss of virginity, abduction, and unwanted pregnancy. Furthermore, fear for social exclusion and stigmatization by the surrounding community, apprehension of losing the dowry and for not to departing from the accustomed tradition whereby to bolster their kinship ties, prestige and social acceptance, the parents of the child would never regret to give their child for early marriage (ibid). This is also supported by the UNICEF's 2001 report, which states that such marriages are encouraged from the motive that her families thought it as a means to protect their child from any pre-marriage risks and whereby to submit herself to her husband who is an ultimate protector. Moreover, the children that she is going to bear would be legitimate as well.

The implementation of regulatory and legislative measures on child marriage at global, regional and national levels is solidly deterred by religious and traditional practices. For instance, the Muslim followers who practice child marriage argue that they are doing this because their religion or the Shariah allowed for doing it. They additionally pointed out that stopping such practice means ignoring their religious norms and dogmas. Thus, this segment of the population encourages early marriage from religious perspectives that goes against the legislative prohibition of such bigoted customary practices.

Like that of the above studies, a research undertaken by Alemu (2008) showed that the major causes for child marriage are traditional concerns. In line with that the parents, pressurized by community elders, are the forerunners to arrange such marriages (about 22%).

## **2. Prevalence of Early Marriage in Ethiopia**

The distribution of child marriage in Ethiopia is uneven. It significantly differs from region to region and in between urban and rural areas. But in general, Ethiopia is one of the nations that have the highest early marriage proportion. In 2010 in Ethiopia, the number of girls who were found in the age brackets of 10 to 19 had been exposed for forced marriage constitutes 49.2% of the target population (UNICEF 2007).

With regards to the prevalence of child marriage in Ethiopia, a number of researchers have been done till to date. Among these, Erulkar (2013) and Ezra (2003) are the notable ones. To start with Ezra, he has done his research in the Southern part of Ethiopia and he took religion, ethnicity and residence area as factors to explain the pattern of early marriage in the study area. In so doing, he found out that early marriage is more rampant in Gurage and Sidama ethnic groups (about 80%). In addition, he concluded that the extent of early marriage is more raging among the Muslim, Orthodox, and traditional religion followers than the Protestants (Ezra, 2003). Besides, the study made by Erulkar (2013) on ever married women ranging between 20 and 24 years of age showed that the probability of getting married in rural areas before the age of 15 were 4 times higher than urban areas. Additionally, the study discloses that Muslim women who were found in between the age brackets of 15 and 17 were more likely to get into marriage before the age of 15 as compared to Orthodox Christians and other religious followers. In the same vein, as compared to literates, those who were illiterates had 9 times higher probability of getting married before the age of 15. From here, one can understand that low level of education is the main cause for child marriage in Ethiopia.

### **3. The Impacts of Early Marriage in Ethiopia**

Early marriage is a human as well as women's rights violation (USAID 2012; Hervish A. and Feldman C. 2011; UNICEF 2001). It is against the efforts to promote socio-economic and cultural developments. In the last few decades, millions of girls were subjected to early marriage and their fundamental right to live, freedom of choice and access to education and other essential basic needs are strictly denied. Despite the fact that the previous decade was the last decade of the MDGs, it has been finalized with the rights of women and girls were substantially compromised and around 58 million girls were subject to child marriage (Hervish A. and Feldman C. 2011).

In Ethiopia, since a long period of time, early marriage has continued to be one of the cultures and traditions of the society. Irrespective of the various attempts and legislative establishments by the country's government, the negative impact on the lives of girls and women is still the same. Many of our sisters are dying, drop out from school and living and working as a slave-like condition in different parts of the country. Many talks about the issue and others take the training (not practicing ever). However, the change is very insignificant. Country-wise surveys carried out from 2000 to 2010 show a decline in the number of girls marrying before the age of 15 in Ethiopia. Meanwhile, millions of girls are still at risk or the practice still persists (ibid).

If one critical looks the consequences of early marriage, it is worst in its disgusted form. A research done by the USAID in 2012 depicted that child marriage is inversely correlated with education, maternal health, poverty reduction and other pro-women issues. Accordingly, the impacts of child marriage in Ethiopia have been discussed below.

#### **3.1. Psychological Impact**

If a child marries in the early ages of her adolescence, she would be exposed for emotional and



psychological messes. This becomes more relentless when they face forced sexual relations, hammer their adolescence and disclaimed from the rights of personal developments. More often than not those who are victims of child marriage are unhappy and isolated from the rest of the society. The childbearing and premature sex is also the major causes for emotional shocks and traumas. This all pains and unpleasant experiences either forced a girl to run to their parents home or feel distress which is expressed by extreme silence and deep crying in front of their mother-in-laws or alone. The saddest part of this trauma is brides are beaten from both sides - by their parents and in-laws or husbands while they run away from their homes as a way to escape from the upsettings.

### **3.2. Denial of Social Services**

In addition to the emotional and psychological impacts, early marriage has also an adverse impact on the social service opportunities of immature-married-children. They are most often drop-out from schools, have no access to adequate health care services and denied to move from place to place and limited or no social networks are the fates of these girls. Instead of their integration to social services and resources, they are used as reproductive and domestic household workers. Particularly in the rural part of Ethiopia, rearing children is the sole responsibility of these early married girls.

Child marriage inescapably denies girls from their right to education. As many scenarios portrayed that early married children in Ethiopia have not the right to prepare themselves for their future life and adulthood. They are not decision makers in their rights. It is always an imposition from the elderly, her parents, and the society. Some researchers show that the behavior and perception of educating girls seem to have a slight change. But it is still believed that investing on a girl means investment on another person's property, which at the end belongs to that particular person. Likewise, there are peoples who regret to educate their children because of the perception that she will leave the family in the near future and works for her new family (in-laws and husband) than theirs.

### **3.3. Reproductive Health Problems**

According to WHO (2012), thousands of adolescent girls have died because of early pregnancy and childbirth. This is also confirmed by the UNICEF's 2013 worldwide report that disclosed that around 70,000 early-married girls aged 15 to 19 die each year due to complications of pregnancy and childbirth. The report additionally exclaimed that early pregnancy and fertility had mostly been followed by negative consequences such as obstetric fistula, excessive hemorrhage, contamination in HIV/AIDS and other sexually transmitted diseases (International Centre for Missing & Exploited Children 2013).

Since the time of early marriage is the period when the girls are not yet ready to sexual intercourses, pregnancy, and fertility, very often it is concluded by a greater number of maternal mortality and child morbidities. That is why the number of married girls died under the age of 15 was 5 times greater than the number of married girls died under the age of 20s during childbirth (USAID 2012). So, in general, it is easy to understand that early marriage most often resulted with high prenatal and postnatal mortality and morbidity.

### **3.4. Risk of Violence**

The under-aged married girls are not seen as wives. They are not included in the planning, discussions and decisions making processes of a family. Her husband does not care for her; he regularly beats, insults and makes her uncomfortable. Furthermore, she undergoes with a prolonged domestic violence. Meanwhile, she cannot leave the marriage due to low economic and educational levels.

According to the report made by UNICEF, some husbands are also experienced with drinking alcohols such that they violently abuse their wives. This violence include; coercive sex, intimidation and beatings (UNICEF 2001). Because of this aggression she may sometimes decide to go away from that surrounding, nonetheless, she would get into acute poverty as she has the responsibility to nurture her children and low

capacity to generate income for herself and her children. Hence, child marriage is the main cause for the ‘feminization of poverty’ for under-aged married girls and their children as well.

### **3.5. Migration**

Another major consequence of early marriage is migration. When children cannot resist the pains and traumas, without the consent of their husband, in-laws and parents they flee to the nearby poor towns or to foreign countries such as Middle East through the help of brokers. Sadly enough, they may live the worst life than their homes in these places. They are inhumanly treated as domestic workers. For example; in Saudi Arabia, Yemen, and Qatar, they are forced to work for a long period of time without a social network. In their new destinations, girls are exposed for rape, prostitution, crime, beating, murder, and cheatings by brokers. There are also some occasions where these girls commit suicide as a means to escape from stress and strain. While these all happens; national and international stakeholders do not develop a strong and enforceable law on such malevolence practices (Nicola Jones, et. 2014).

## **4. Necessary Actions to End Early Marriage**

So far, Ethiopia has shown a good progress in drawing policy actions and adopting legislative fireworks to reduce the negative impact of early marriage. The current Ethiopian constitution condemns early marriage. According to the constitution, any marriage will be considered as legal if and only if it is concluded by the free and full knowledge and consent of the partners. Besides, the criminal code of the country inflicts a penalty on those who permit, convene, formalize and witness to an early marriage. Similarly, the family law of Ethiopia strictly imposes laws on early marriage. However, the enforceability of all the above-mentioned legislative and regulatory drawings is still in question. Some accuse the Ethiopian government of its lack of commitment to putting these laws and rules into practice. But others reason out that the problem is not only from the government side but also from the society who is reluctant to cooperate with the government because of its prior traditional sentiments. Thus, the possible

and necessary measures to relieve this cultural imposition on our sisters and brothers have been analyzed as follows.

#### **4.1. Awareness Creation**

More than ever before, awareness creation campaign should be the first strategy to reduce child marriage in Ethiopia. It is obvious that such campaigns are costly. So, a collaborative effort among the public sectors, NGOs, individuals and others is a paramount important. In this process, it is important to note that the composition of the group to be trained should be mixed and all-inclusive. Particularly; religious leaders, elders, local agents, polices and the main actors of the action (parents and children) should be involved.

#### **4.2. Educating Girls**

Education is a weapon for fighting any forms of societal problems. The Ethiopian government should be appreciated for its devoted works in educating girls in the last decade. For meeting the Millennium Development Goals in one hand and reaching educational accesses to girls on the other, Ethiopia had shown a substantial achievement. Especially, the slogan that is common everywhere in Ethiopia “Educating a girl or women is educating people” is one of the manifestations of the good works of the government as far as girls education is concerned. But still educating the community through non-formal education system or short-term training is lacking from the Ethiopian government side. The non-formal educational program can be also used for teaching girls who miss the formal schooling because early marriage. The parents should also promise to send their daughters in the nearby schools. Plus to that, constructing a school (at least elementary) closer to the community will increase the likelihood of girls to go to school and reduce the worries of their parents for not sending them because of farness from their surroundings. It is not only constructing a school, but also who teach who should be underlined. Female teachers should be involved in the teaching-learning process wherein female students will follow their footsteps and make them their role models. Finally, the runaways are very small children without the means to live and learn. Hence, supporting them by any means possible (legal protection, food, shelter,

cloth, learning materials, etc) is the only way to leverage them from their school dropouts and other early marriage consequences.

#### **4.3. A Strong Political Will and Commitment**

Though the will and devotion of the government are not denied but implementing laws laid in the constitution and other subsidiary regulations need more attention than before. After all, the government should always take a central position to mobilize the community and other stakeholders at the grass-root and higher levels. In extending social services such as education and health care services for runaways and other children, who would otherwise go to early marriage, the government is a major but not a sole responsible body. Donors and parents have also irreplaceable roles. The international community has also a moral and structural liability to lobby the government to enforce laws, to deliver social necessities, and to make marriage restriction compulsory.

#### **4.4. Economic Support**

Poverty is both a cause and consequence of early marriage. It makes the under-aged girls economically depressed. They have no any other option to overwhelm this adverse effect than staying as a housewife for the bread-winners (husbands). Therefore, integrating girls to different income-generating schemes is the way to liberate from their slave-like household reproductive responsibilities. Providing training, creating a conducive business environment and financial support in the labor market is a good outlet for empowering and saving children from such discriminatory activities. Resolving the economic problem of children will reduce the parents' strong motive for early marriage. This is why? Because, parents are doing this activity for earning money. So, employment opportunities should be extended to women in various occupations that are favorable for them.

#### **4.5. Birth and Marriage Registrations**

To easily identify the early marriages and under-aged childbirth and to enforce the law that prohibits early marriage, adopting a law that promotes the official registration of all forms of marriages and births should be mandatory. In many parts of Ethiopia, except urban dwellers, the birth date of a child is very rare to know since Ethiopians have no a culture of celebrating birthday of their child. As a result, the court trial is prolonged due to the difficulty of identifying the proper age of a child, who is litigating. Therefore, developing such regulations could facilitate the court and judiciary processes. Moreover, it is also a means to follow up who is marrying and bearing and at what age he is doing that. Through using this mechanism, laws adopted by the government can be implemented easily.

#### **Conclusion**

Child marriage is against women's and human rights. Talking about sustainable development without respecting the rights of women and girls is totally impossible. It is estimated that if things continue like this, by the year 2020 there will be 140 child spouses worldwide. Developing countries like Ethiopia are expected to take the lions' share.

Ethiopia is one of the countries, which have the highest proportion of early marriage throughout the world. The intact and deepening tradition, religion, and economic motives are the major reasons for the persistence of this discriminatory practice in the country. Because of underage family formation, girls are suffering from psychological and emotional traumas, various violence, denial of social services, reproductive health problems and migrations. Thus, sensitizing the stakeholders, educating girls, and supporting the runaways and others who would otherwise the victims of early marriage are the way forward to reduce the adverse consequences of child marriage in Ethiopia.

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# RELATIONSHIP BETWEEN HUMAN RESOURCE ACCOUNTING IN MANAGEMENT DECISION MAND BEHAVIOR OF EMPLOYEES IN COMPANY STOCK BASED ON STRUCTURAL EQUATION MODELING

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## Abstract

Nowadays, in many countries, human resources is being used as a source of property by many social and economical organizations in order to enhance the level of their operation. Investors and other related groups in order to make better decisions need to use some expressions related to the value of human resources. Using human resource accounting organizations seeking to improve the efficiency and effectiveness of human resource management and human resources. The main objective of this paper is to evaluate the effect of accounting, human resources managers in decision-making and behavior of employees in the company's stock. This cross-sectional study with a survey approach and applied research are considered. The population of the study in 1394 are some of the companies stock. The results showed accounting, human resources component of research and finally decided Miran is also significant effect.

**Keywords:** Human resource accounting, Human resource Management, Decision making

## 1. Introduction

Professional human resources is counted as one of the properties of an organization and it is also considered as a competitive factor and a rare source in today's economy and what that distinguishes organizations from each other except from their machinery and materials, is efficient human resources which is considered as a strategic we open for them.

Presenting goods and different services with high quality, decreasing the expenses, creativity and

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innovation and increasing the level of competence, are one of the advantages of human resources, so organizations have focused on (HR) to develop their business so people play an important role in development of organizations [1].

So the importance of HRA is because that every year a big amount of expenses in every organization is formed due to operating expenses which an incredible amount if it is related to human resources [2].

Due to need of management to information for decision making, human resource accounting (HRA) provides information that managers work better and more efficiently use their human resources under provided as much as possible could make use of their holding human resources bitterly and usefully. Since up till now many definitions of human resource accounting has been presented that some of them are given below [3].

Flamholtz (1971) who defined HRA as “the measurement and reporting of the economic value of

People in organizational resource . “Overall, the HRA can be defined as the process of identifying and measuring data related to human resource for the development and enhancement of economic value of interested parties associated with corresponding organization [4].

American Accounting Association defined "human resources accounting" as: "the process of recognition and measurement of information on human resources and reporting this information to interested individuals and beneficiaries." [5] .

1-Human resource accounting is" the process of diagnosis and provide information about human resources to facilitate the in an organization' management.

2-Human Resources accounting with information providing needed by managers can help them to make use of their human resources more effectively.

3-Human Resources, Accounting are a theoretical perception of the nature and value of individuals in organizations and economic units that , with the development of valid and reliable methods for measuring the cost and the value of individuals in organizations trying to design and develop operational systems to implement these methods and obtained information report to the users.

As it can be considered various definitions of experts in this field is present, but they all are common in three basic principles.

The Individuals a valuable resource of every organization Usefulness of manpower as a source of organization can be determined through management practices For decision making in organizations, information on investment and value of human resources, is useful [3].

**2.1 Human resource accounting goals include:**

- 1) Registration of economic value of human in financial reports
- 2) Consideration of an organization's investment in its human resources
- 3) Increasing human resources management efficiency and facilitation of personnel policy evaluation like education and training plans.
- 4) Evaluation of human resources in terms of maintenance, weakening and development.
- 5) Identification of nonoperational profit and productivity resulted from investment in human resources [6].
- 6) Calculation of value which is created by human resources in other financial and physical

**Human resource accounting has two functions:**

- 1) It is a method for judging about human resources issues.
- 2) It is a collection of measurement criteria for quantification of costs and benefits resulted from human resource decision-making. Human resource accounting helps quantify and clarify the costs and benefits concerning such decision – makings [5, 7-8].

The aim of this study is to investigate the effect of human resources in the process of management decision making using accounting information users of financial statements evaluate correctly.

**2. Problem statement**

In the process of evaluation of human resources, financial information users often face the problem of not being understood properly human resource assessment methods. Previous research has shown that the researchers were able to model free of inherent limitations as a means to identify labor organizations are not. The main limitation offered more models for the evaluation of human resources as assets, was that the researchers were able to identify the impact of environment on growth and genius are not employees. In today's world the development of human resources in the huge contribution to development organizations and the community's darned rash human resources as one of the main assets of the organization is seen today. Since unlike the past, the dominant role of knowledge in the production of wealth to the development of knowledge and human resources capabilities is formed. Accounting, human resources, promote resource efficiency with a bit of the value of human resource management and create opportunities for staff evaluation policy provides, However, for reasons such as lack of common criteria for measuring the value of human resources and lack of reporting practices of using this system is not

acceptable But according Breathy Some organizations use them is necessary and required more knowledge-based organization should be applied.

### **3. History of literature:**

#### **3.1. Concept of Human Resources Accounting**

Woodruff (1973) defined Human Resources Accounting as the identification, accumulation and dissemination of information about Human Resources in dollar or Naira term. He further explained that Human Resources Accounting is the systematic accumulation of information about changes in investments made in human resources and reporting back that information to operating managers in order to assist them to make better decisions than they would have been able to make without such additional information.

Raghu (2011), states that Human Resources Accounting is a method of measuring the effectiveness of personnel management activities and the use of people in an organization. Parameswaran and Jodi (2011) referred to the American Accounting Association's definition of human resources accounting as the measuring of data of human resources and communicating the information to the, interested parties. Going by the various definitions above human resource accounting in simple term is accounting for the value of people in organization to enhance information for decision making by the users of financial information. Parameswaran and Jodi (2005), identified and categorized the objectives of human resources accounting into three considering the needs of the various users of financial information as Internal, Internal and External and External. The internal objectives relate to the improvement of the internal management of human resources in an organization, while the Internal and External objectives of human resources accounting are designed to meet specific information requirements of both the internal and external users of financial statements. The external objectives on the other hand are specific objectives that are designed to meet financial information requirements that are peculiar to the external users of financial statements[9].

#### **3.2. Definitions of HRM**

In 1937 Ronald Coase, a Noble Prize winning economist, explained how some economic activities are most efficiently coordinated within firms, while others are most efficiently coordinated by markets.

'Management can therefore be defined as the art and science of coordinating activities within a firm, via a process of managerial decision-making, including areas such as finance, operations, sales and marketing, and human resources.

HR management can in turn be defined as:

The process of analysing and managing an organisation's human resource needs to ensure satisfaction of

its strategic objectives.

And

Or the policies and practices involved in carrying out the “people” or human resources aspects of a management position, including recruitment, screening, training and appraising.[10]

### **3.3. Concept of Decision Making**

Koontz and Weihrich (2010) defined decision making as the selection of a course of action from among alternatives. They further stated that, decision making is at the core of planning. This means a plan cannot be said to exist unless a decision – a commitment of resources, direction, or reputation has been made. Most of the times managers see decision – making as their central job because they must constantly choose what is to be done, who is to do it, when, where, and occasionally how to do it. Thus decision making is a step in planning, even when such decisions are taken so quickly with little thought or when it influences actions only a few minutes, it is still part of planning. Decision making is a daily phenomenon in the life of either the individual or corporate organization, a course of action can seldom be judged alone because virtually every decision must be geared to other plans. According to Simon, Danzig, Hogarth, Plot, Howard, Schelling, Shipley, Thales, Tversky, and Winter (1987) the work of managers, scientists, engineers, lawyers and the work that steers the course of society, and its governmental organization is largely work of making decisions and solving problems. Mosley, Pietri & Megginson (1996) explained that decision making is an exercise that individual and managers undertake in their daily activities to take advantage of opportunities and solve problems as they arise. However they broadly classified decision making into programmed and non-programmed decisions.

According to Koontz and Weihrich (2010) decision making is a process involving the following the steps of premising, identifying alternatives, evaluating alternatives in terms of the goal sought and choosing an alternative that will best achieve the goal [9].

During the two last decades, several advocates of HRA, including Herman & Mitchell (2008),Flamholtz et al. (2003), Pekin Ogan (1988), Flamholtz(2004), Hendricks (1976) and others have suggested that H RA could benefit external users of financial statements. External decision makers must know the changes in human assets in order to evaluate properly assets and income. The conventional accounting profit may be misstated and the asset base distorted, if the condition of human assets changes during the period Herman The eke, John B. Mitchell (2008) discussed how reporting under a human resource liability paradigm fits into the traditional accounting framework of contingent liabilities; examine the financial effects of such reporting on market valuation and internal planning; and explore measurement of human resource liabilities. From reviews of financial effects of human resource liability reporting the research

logically extends those results to support the proposed paradigm. The paper provides support for the feasibility and need to adopt a human resource liability paradigm for valuing, reporting and managing human resources [11].

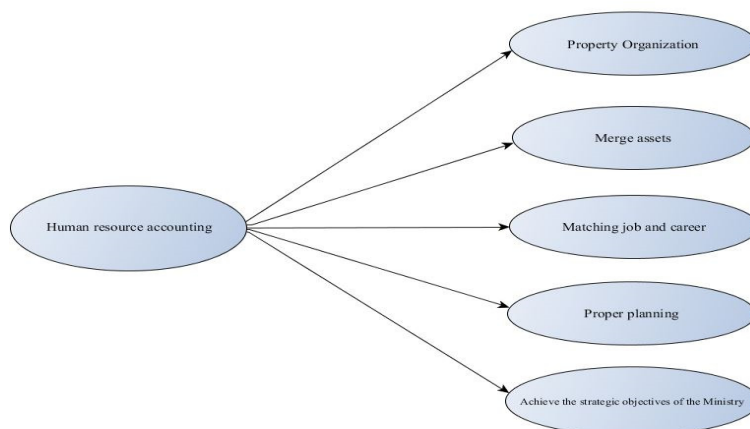
**Table 1: Summary of past research**

Author	result
Flamholtz et al. (2003)	Utilized the HRA measure of expect realizable value, and found that employees' participation in a management development program increased the value of the individuals to the firm. In addition the authors noted that the HRA measures provided upper level management with an alternate accounting system to measure the cost and value of people to an organization. Thus HRA represented both a paradigm and way of viewing human resource decisions, and the set of measures for quantifying the effects of human resource management strategies upon the cost and value of people as organizational resources.
Pekin Ogan (1988)	Reported the results of a field experiment designed to assess the impact of HRA information on layoff decisions made by managers. The findings of this study indicates that HRA information does make a difference in personnel layoff decisions and enables managers to increase their level of confidence regarding decisions of this sort.
Tomassini (1977)	Provided to a sample comprising of accounting students, traditional Financial information and information containing human resources accounting. HRA information led to remarkable differences in decision-making.
Hendricks (1976)	Performed a study using accounting and finance students as subjects. His Simulated investors made two stock investment/capital allocation decisions, one with and one without human resource cost data. In this research, HRA had a meaningful impact on adopted decisions statistically.

Nabil Elias (1972)	<p>provided 2 groups of financial reports (one, traditional report and another Reports containing HRA information) in his research to the sample including accounting students, financial analysts and accountants. Research results showed that Information had meaningful impact on decisions statistically, although the relationship between HRA information and the Adopted decisions were not strong [11].</p>
Mohammad Abbasi Foroud and Arjan karimi (2010)	<p>Conducted a research titled "investigation of implementation of human resources accounting system in managers' decision-making and employees' behavior case study: Iranian Petroleum Industry)" in 2010. He showed that human resources accounting has significant influence on advancement of organizational strategic goals and there is relationship between human resources accounting and organizational managers' decisions. Results of statistical tests showed that human resources accounting has significant influence on managers' decisions in 95% certainty level [5].</p>

The Relationship between human resource accounting in management decision making and behavior of employees in company stock based on structural equation modeling.

According to literature and theory in this study, five hypotheses we have discussed. According to the conceptual model of background research and experts in the field, is presented in Figure 1. The software provided with yard Graph Editor drawn.



**Figure 1: Conceptual Model Research**

#### 4. Research Objectives:

One of the primary purposes of accounting systems help manages human resources for effective planning and efficient management of human resources. Accounting and human resources as a tool for human resource professionals and senior executives of the company. The purpose of this study was to evaluate the effects of human resource accounting to improve the decisions made by the managers of the stock of capital and human resources, as well as the identification of participation in the performance of the company are. While it is expected that the implementation of the system in these companies increased staff job satisfaction, improve efficiency and effectiveness of the organization.

Ultimately, reducing costs is leading personnel.

Thus can be explained the objectives of this study are as follows:

- create a framework to facilitate decision making about human resource managers of Iran's stock.
- The relationship between accounting, human resources and research components.
- spur line to adopt the perspective of human resource managers in the decision-making of employees in these companies.
- improve the decisions made by the managers of different levels.

- increased participation of employees and their understanding of the organization that it had been more.
- The effect of demographic variables on the results.

## 5. Research Methodology

This cross-sectional study with a survey approach and applied research are considered. Overall Structural equation modeling methodology in determining the sample size can be found between 5 and 15 per measured variable to be determined. The population of the study is 1394, some of the company's stock. Therefore, in this study, according to 20 Gvvh used in the questionnaire, the survey sample size should be equal to  $(100 = 5 \times 20)$  is. Content validity was confirmed by professors and experts, as well as confirmatory factor analysis was used to assess validity. In this study, Cornbrash's alpha coefficient of reliability using spss software was used, the amount of which is derived from 830/0. Amos structural equation modeling software was used to analyze the data.

In this study, the following assumptions will be explored.

The main hypothesis

Accounting, human resource management decisions have a significant impact

Sub hypothesis

1-Human Resource Accounting significant impact on the organization's assets

2-Human resource accounting to merge long-term investment carried out in different stages of the supply and maintenance of human resources (invitation, selection, recruitment, appointment, training, evaluation, promotion or transfer, etc.), the impact is significant.

3-Human resources in the implementation of the accounting profession who have significant influence.

4-human resource accounting, human resources to provide correct and proper maintenance of planning of human resources required significant impact.

5-Accounting and human resources to achieve the strategic goals of the organization are significant

## 6. Data analysis and depletion

The results of the descriptive statistics, demographics, and the highest percentage lot of gender, work experience, education and age were determined in accordance with Table 1.



**Table 1: The most frequency in demographics**

Gender	Service	Education Level	Age
73/5%	30%	56/9%	48/5%
Man	5 years or less	License	35 years

In order to assess the suitability of exploratory data analysis, sampling and test the adequacy of Tlt time calculated to ensure the ability to perform exploratory analysis, done. In Table 2, the KMO for the study 0/775 (greater than 0/6), the test is also a significant amount of time Tilt 0.000 (less than 0/05), respectively[12]. The factor analysis to identify the structure (operating model) is appropriate, because the assumption of unit correlation matrix is rejected.

**Table 2: index of KMO and Bartlett test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.(kMO)		0/775
Bartlett's Test of Sphericity	Approx. Chi-Square	5669/604
Df		1128

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 Sig. 0/000
 

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The purpose of factor analysis to summarize a number of variables, so for extraction factor and factor analysis to determine the criteria specified. Questions about the extractive share of less than 0/5 can be removed. The subscription amount is greater extractive mining operating variables better show. The value extraction (Extraction) represents some of the variance of each variable is a set of factors that could explain it. The value of this variable varies from 0 to 1 or whatever the number is closer to a (higher than 0/5) is more suitable for factor analysis[13]. In this study, construct validity, CFA general model using AMOS software was designed to determine to what extent the proposed model fit the data of the present study. Shared values and the values in Table 3 Exploration Barely provided. Values greater than 5.0 are load factor for all questions. But to question a value of 5.0 is lower, so the question should be removed from the measurement model research.

**Table 3: shared values extracted and again questions**

Load factor	Subscribe quantities of extractive	Notation software	Number Question	Variables
0/485	0/671	HR11	1	HRA
0/760	0/715	HR12	2	
0/678	0/663	HR13	3	
0/676	0/688	HR14	4	
0/694	0/674	HR15	5	
0/644	0/686	HR21	6	Assets
0/608	0/667	HR22	7	

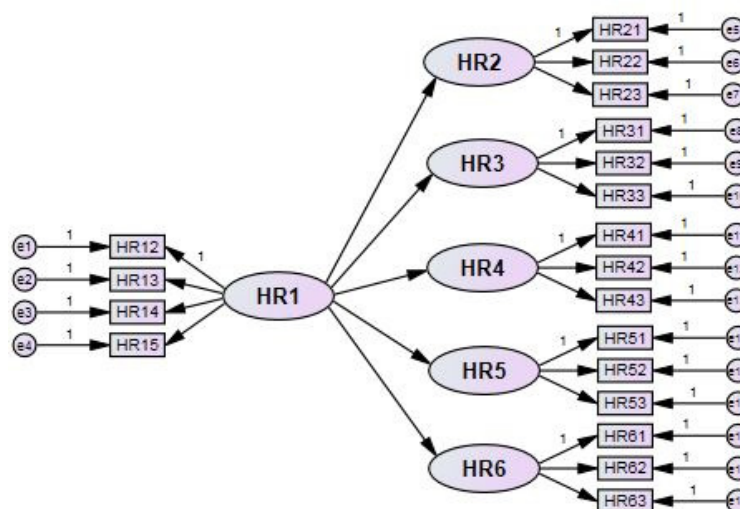
0/680	0/651	HR23	8	Organization
0/590	0/733	HR31	9	depreciate assets
0/640	0/772	HR32	10	
0/691	0/671	HR33	11	
0/725	0/683	HR41	12	Matching job and Practitioner
0/621	0/657	HR42	13	
0/673	0/674	HR43	14	
0/553	0/618	HR51	15	Planning correct
0/683	0/684	HR52	16	
0/752	0/687	HR53	17	
0/910	0/756	HR61	18	Advance strategic objectives organization
0/654	0/683	HR62	19	
0/496	0/684	HR633	20	

After ensuring acceptable measurement model in this study to estimate the parameters and test our wholesale and retail model. Hidden variables in the model, the independent variable accounting, human resources and other components that make up the dependent variable models. Table 4 model parameters are presented. The Model can be considered when appropriate, of each of the indicators (absolute, comparative and frugal) at least one of the acceptable range[14]. The logical data model is proven.

**Table 4: Overall index model**

Indicators Fitness			Indicators Fitness			Indicators Fitness			Index
Thrifty			Comparative			Absolute			
PCFI	RMSEA	CMIN/DF	CFI	NFI	IFI	AGFI	RMR	GFI	
%675	%070	2/285	%747	%630	%752	%711	%071	%750	Template values
<0/5	0/08<	5< <1	<0/9	<0/9	<0/9	<0/8	0/08<	<0/9	Acceptable range

Figure 2 shows the structural equation model is fitted and the (standardized regression coefficient) between variables makes clear.



**Figure 2: Structural Equation Modeling**

After review and approval patterns, to test the hypothesis of a significant part of the critical values and P is used. Some critical value, which is a breakdown product of "regression to estimate "the" standard error, is obtained. The relationships that much more critical of 96/1 to 05/0 have significantly lower levels of approval. O Applications Amos stated in Table 5. \*\*\* Note that the symbol values are  $P < 0.001$ .

**Table 5: results of hypothesis tests**

Result	P	Critical value	The total impact	Hypothesis		
				The dependent variable		Independent variable
Confirmation	006	2/751	672	Assets Organization	<--	HRA
Confirmation	003	3/023	542	Perception And recognition	<--	HRA
Confirmation	***	4/884	857	Organizational support	<--	HRA
Confirmation	***	4/147	656	Matching job and Practitioner	<--	HRA
Confirmation	002	3/023	538	depreciate assets	<--	HRA

For comparison of two or more of (the impact of the independent variables grouped a bit dependent variable) comparison of the test (ANOVA) was used. Table 6 Comparison of test results according to age, education and work experience to show.

**Table 6: Comparison of test results**

Sig.	F	Total square	Factor	Changing demographics
%118	1/977	33/763	HRA	Age
%116	1/988	33/763	HRA	Education Level
%230	1/447	33/763	HRA	Work experience

The results in Table 6 according to a significance level demographic information, all over 0/05 are indicating that demographic information such as age, education level and work experience staff in results unaffected.

## 7. Conclusion

Research findings show that in the corporate accounting, human resource management decisions have a significant impact , As well as the review and hypothesis testing results showed that the "finance and accounting organization of human resources" significant relationship exists. In other words, accounting, human resources, has a significant impact on the organization's assets. Also, "the merge long-term investment carried out in different stages of the supply and maintenance of human resources (invitation, selection, recruitment, appointment, training, evaluation, promotion or transfer, etc.) and human resource accounting" significant relationship. The "matching jobs and employment, accounting and human resources" There is a significant relationship. Between "right and proper maintenance of planning, human resources in providing human resources and human resource accounting" There is a significant relationship. The "meet and advance the strategic objectives of the organization and human resource accounting" There is a significant relationship.

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# A REGRESSION ANALYSIS OF PERCEIVED ORGANIZATIONAL SUPPORT, INTERPERSONAL RELATIONSHIP AND EMPLOYEE TURNOVER INTENTION IN SOUTHWEST NIGERIA

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## Abstract

This study examined an investigation on the perceived organizational support and interpersonal relationship as correlates of employee turnover intention in southwest Nigeria. The study adopted correlational research design. A sample of 248 was randomly selected from airtel Company. To undertake these three hypotheses were raised. Reliable scales were used in collecting data. The data were analysed using Pearson product moment correlation and multiple regression. The result shows that interpersonal relationship and perceived organisational support negatively correlated with employee turnover intention. There was also a combined effect of the independent variables (interpersonal relationship and perceived organisational support) to the prediction of company workers turnover intention. This suggests that the two factors combined accounted for 66.4% ( $\text{Adj.R}^2 = .104$ ) variation in the prediction of company workers' turnover intention. The most potent factor was perceived organisational support; followed by interpersonal relationship. Among others it was recommended that organisations are enjoined to include in their policies organizational provisions for the support of workers such as health provision for themselves and family, end of their package, leave bonus, car loan, e.tc, it was also recommended that the management of the organizations should build friendship among staff irrespective of the cadre. More so, workers should be frequently changed from one section to the order so as to promote interpersonal relationship. However, inference was drawn that an increase in perceived organisational support and interpersonal relationships will reduce the tendency for company workers' turnover intention.

**Keyword:** interpersonal relationship, perceived organisational support, turnover intention.

## Introduction



Organizational change initiatives such as downsizing, represents some of the most profound (Gandolfi, 2008) and problematic issues facing modern-day corporations, nonprofit organizations, governmental agencies, and global workforces (Carbery & Garavan, 2005). Corporate restructuring, or simply 'restructuring', is a relatively broad concept. Black and Edwards (2000), for instance, define restructuring as a major change in the composition of a firm's assets combined with a major change in its organizational direction and strategy (Suppayah, 2010). The goal of every organisation is to make high productivity, profit (especially if it is a profit-oriented organisation), and render good quality of services. These goals can only be realised with employees' efforts, supports and contributions. This is because employees are partly responsible for the achievement of organization's goals and strategy. But when these employees are thinking of quitting or leaving (i.e., turnover intention) the jobs and the organization, the aims and objectives of the organisation might not be achieved. This is because turnover intention is a negative job attitude that could results to employees' turnover (i.e., loss of employee). Loss of employees may have a detrimental effect on the organisational performance, productivity, and effectiveness. It may also increase the recruitment, selection, and training cost and increase the workload of the remaining employees in the organisation.

Turnover intention has become a term mostly associated with the service providers and manufacturing companies in Nigeria. Most of this companies assumed that the best way to make profit is by reducing their work force, some of them feels unskilled labour will do better than skill labour since there is no employment agreement between the company and the unskilled labour force, which is quite unsystematic.

The negotiations reported by THISDAY on the meeting between the management of Spanco and Techmahindra (Customer service agents of Airtel Telecommunication) and the national leaders of NUPTE (National Union of Postal and Telecommunication Employees) which was on the intention of Airtel management to lay off 50 per cent of its workforce. The management is also considering a reduction of salaries by 60 per cent under a renegotiated agreement in the contract of the affected workers (THISDAY NEWSPAPER, 2011). The report affirmed that the meeting ended up in a stalemate as the

union leaders out rightly rejected the management proposal which consequently led to the declaration of an indefinite industrial action. Similar act is found among manufacturing companies who daily layoff skilled labour for unskilled labour to reduce cost, yet many of this companies have no friendly atmosphere at all. Many of their staff has no time for their family and other social engagement there just meant to serve the company alone which is quite inhuman.

Employee Turnover is the ratio of the number of workers that had to be replaced in a given time period to the average number of workers (Agnes, 1999). In simpler terms, employee turnover is the series of actions that it takes from the employee leaving to his or her being replaced. It is often utilized as an indicator of company performance and can easily be observed negatively towards the organization's efficiency and effectiveness (Glebbeeck & Bax, 2004). It is defined (Price, 1977) as: the ratio of the number of organizational members who have left during the period being considered divided by the average number of people in that organization during the period. Frequently, managers refer to turnover as the entire process associated with filling a vacancy: each time a position is vacated, either voluntarily or involuntarily, a new employee must be hired and trained. This replacement cycle is known as turnover (Woods, 1995).

Perceived organizational support has been observed to be associated with turn-over intention among workers. Employees willingness to quits job can be due to the fact of too much of workload and lack of Perceived Organizational Support (POS) that ultimately can start a progression of job dissatisfaction, turnover intention (TI) and in conclusion turnover (Price *et al*, 1981; Tett *et al*, 1993; Hussain & Asif, 2012). According to organizational support theory, if employees perceive more support from the organization, they are likely to develop more positive outlook towards the organization (Eiesnberger *et al*, 1986). Correspondingly, it is explored by Allen *et al*. (2003) that POS is negatively correlated with turnover intention and actual turnover. Since employees often respond to their organizations in kind (Sherony and Green, 2002), it is rational to anticipate that, POS will influence a strong desire to stay with the organization.

Employees feel obliged to repay organization with extra effort and loyalty when such favorable

supportive treatments are discretionary-based (Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). POS can be defined as “employees’ global beliefs concerning the extent to which organization values their contributions and cares about their well-being”, it is termed perceived organizational support (POS). To date, POS literature has been widely examined in relation to human resource (HR) policies with the aim of understanding employees’ behavior and attitudes. Yet the mechanisms of how POS exerts influence on important HR policies and the mechanism to explain turnover intentions in knowledge-intensive organizations require further investigation.

Meta analysis of over 70 studies by Rhoades and Eisenberger (2002) reported consistent antecedents and consequences of POS. However, the burgeoning research into POS did not adequately examine the influence of POS between organizational actions and employees turnover. One study reported POS as mediator for human resource management practices (HRMP) (Meyer & Smith, 2000) with organizational commitment, the other two reported POS mediates supportive HR practices (Allen, Shore, & Griffeth, 2003), and job conditions (Stinglhamber & Vandenberghe, 2003) on turnover via organizational commitment and job satisfaction. Two studies associated POS with actual turnover, using rewards, procedural justice, and supervisory support (Rhoades, Eisenberger, & Armeli, 2001; Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

It has also been observed that workplace interpersonal relationship influences workers turn-over intention. As employees spend a large portion of their lives at work, interpersonal relationships and friendships between/among employees at work are often formed. According to a Gallup survey, about 30% of employees in the U.S. responded that they had a best friend in their workplace (Rath, 2006). Further, the survey reported that slightly over half (51%) of those who responded that they have a best friend at work reported that they work with passion and feel a profound connection to the company, compared with only 10% of those who have no best friend. Also, 75% of respondents who had a best friend at work planned to be with the company for at least another year, compared with 51% who didn't have a best friend. Similarly, researchers have consistently reported that workplace friendship (WF)

positively affects employees' work-related attitudes and behaviors which, in turn, enhance organizational outcomes. People may gain help, assistance, guidance, advice, feedback, recommendations, or information from workplace friends on a variety of work-related matters such as completing jobs, performing tasks, and handling issues with co-workers, subordinates, supervisors, and/or clients (Hamilton, 2007).

Interpersonal relationship has been considered valuable for both individuals and organizations. According to Fine (1986), interpersonal relationship increases support and resources that help individuals to accomplish their job, reduce work stress, and provide increased communication, cooperation, and energy. Hamilton (2007) also suggested that when in a friendship at work, people might feel comfortable with their workplace friends and reduce feelings of insecurity and uncertainty. They also share more information and empathies with workplace friends about work-related problems and concerns. Jehn and Shah (1997) further argued that employees in a friendship exchange words of encouragement, confidence, trust, respect, and critical feedback, which may increase enthusiasm and a positive attitude. Based on these functional values of interpersonal relationship, previous empirical research in psychology, sociology, and management commonly revealed that interpersonal relationship can influence employees' work-related attitudes, intentions, and behaviors such as job satisfaction, organizational citizenship behaviour, job performance, turnover intention, and absenteeism (Riordan & Griffeth, 1995; Ross, 1997). Dotan (2007) suggested that when employees have trustful friends at work, they can get help or advice from their friend coworkers and, therefore, gain feelings of security, comfort, and satisfaction with their job at work. Also, employees in friendship tend to engage in altruistic behaviors by providing co-workers with help, guide, advice, feedback, recommendation, or information on various work-related matters (Hamilton, 2007). This aspect of interpersonal relationship as a source of work assistance is linked to the altruism dimension of organizational citizenship behaviour. Research further suggested that interpersonal relationship may enhance organizational performance because employees in friendships like to help each other with tasks, communicate with morale-building behaviors, have few communication difficulties and thus can increase their effort and rate of production (Bandura, 1982). Additionally, research has shown

that individuals who have a close friend at work are less likely to be absent or leave the organization than individuals who do not because they gain a sense of belongingness and obligation to the workplace friends who have accepted, understood, and helped them at work (Morrison, 2004; Sias & Cahill, 1998).

Turnover intention or intention to quit or leave (as used interchangeably in literature) is an individual desire or willingness to quit or leave employer organisation (Tett & Mayer, 1993; Elangovan, 2001). According to Price (2001), it is not just intending to quit the location, but the work role, the job, and also the organisation. Turnover intention has been found to be one of the major determinants of turnover behaviour (i.e., quitting behaviour) (e.g., Price, 2001; Brigham, Castro, & Shepherd, 2007). Therefore, when employees' nurtures turnover intention and this is not checked, it might result to high loss of employees (i.e., employees' turnover). Loss of employees or employees' turnover can cause psychological distress, reduce productivity, quality of service, and increase recruitment cost (Powell & York, 1992; Mourad & Mustapha, 2007). It can also lead to work overload, mistrust, disruption in workflow, and further turnover (Wagner, 2010; Miller, 2010).

Although, considerable amount of researches has been carried out on service providers' employees in Nigeria, most of these studies paid more research attention to productivity (Oloyede, 2006), organisational commitment (Oluwafemi & Balogun, 2008), occupational burnout (Ogunbamila, 2010), and fraudulent intent (Owolabi & Babalola, 2011). Meanwhile, less research attention has been devoted to employees' turnover intention. Specifically, there is paucity of empirical studies on the influence of perceived organizational support and interpersonal relationship on turnover intention of service provider (Airtel) employees in Nigeria which is the focus of this study.

### **Purpose of the Study**

This study intends to investigate perceived organizational support and interpersonal relationship as correlates of employee turnover intention. Specifically, it intends to

Investigate the relationship that exists between perceived organizational support and turnover

intention among Airtel workers.

Investigate the relationship that exists between interpersonal relationship and turnover intention among Airtel workers.

Determine if perceived organizational support and interpersonal relationship will jointly and independently influence turnover intention among Airtel workers.

### **Research Design**

This study will adopt correlational research design. This design will be appropriate because the researcher will not manipulate any variable in the study. The opinions of the bank workers differ across sex, age and years of experience. The independent variables in the study are perceived organizational support and interpersonal relationship. The dependent variable in the study is Airtel worker turnover intention.

### **Population**

The population of the study comprises of all workers of Airtel in Lagos State and Ogun State.

### **Sampling Procedure**

Random sampling technique was used to select 248 (two hundred and forty eight) participants for the study involving all department in Airtel. In doing this, 124 respondents were involved from each state. Random sampling was used so as to give all members of the company equal chance to be chosen.

### **Instrument**

The instrument the researchers used for the data collection was a self reported structured questionnaire. The questionnaire has the following sections:

#### **Section A: Demographic Factors**

This section consists of demographic characteristics such as sex, age, marital status and rank.

#### **Section B: Perceived Organisational Support Scale**

This section measures perceived organizational support using 19-item scale developed by Eisenberger, Fasolo, and Davis-LaMastro (1990). The authors reported reliability estimates range from .81 to .89. The

response format consisted of a 5-point likert type ranging from (1 = Strongly Disagree to 5= Strongly agree). Reliability coefficient for the present study was 0.84.

### **Section C- Interpersonal Relationship Scale**

This section measures interpersonal relationship using 25-item scale developed by Kratzke (1976) with internal reliability of .74. The 25 item scale had a response format of a 5–point format with (1- strongly disagree to 5= strongly agree). Reliability coefficient for the present study was 0.75.

### **Section D- Turnover Intention Scale**

This section measures turnover intention using 6-item scale developed by Camman, Fichman, Jenkins and Klesh (2000) Intention Turnover Scale with internal reliability of .83. The six item scale had a response format of a seven–point format with (1- strongly disagree to 7= strongly agree). Reliability coefficient for the present study was 0.81.

### **Procedure for Data Collection**

Copies of the questionnaires were administered to the participants in their various branches of Airtel Company at Lagos and Ibadan. This was made possible with the help the managing co-coordinator/directors of Airtel Company (at every branch) whose permissions were first sought. The participants were adequately briefed on the need to cooperate with the researcher. They were also assured of confidentiality of their responses. The data collection spread over two weeks, during which about 250 questionnaires was administered, but only 248 was suitable for the study; these were scored and the data obtained were subjected to data analysis.

### **Method of Data Analysis**

The data was collected and analysed with the aid of T-test, Pearson's' product moment correlation and multiple linear regression to test the four research hypothesis at 0.05 significant level which was used for the interpretation.

## Demographic Information of Respondents

The personal characteristics of the respondents such as sex, age-range and years in services are presented in the table below.

**Table 1: Summary of descriptive statistics table showing participants turnover intention level based on their sex, age, rank, marital status, years in service and qualification.**

Sex	N	Mean	Std. Deviation	Ranking
Male	162	70.5123	10.54552	1 <sup>st</sup>
Female	86	58.4302	9.74443	2 <sup>nd</sup>
<b>Age group</b>				
Young	131	48.0902	7.58034	1 <sup>st</sup>
Old	117	45.8810	7.82469	2 <sup>nd</sup>
<b>Rank</b>				
Senior staff	34	46.9722	9.34570	2 <sup>nd</sup>
Junior staff	214	47.0224	7.50282	1 <sup>st</sup>
<b>Marital Status</b>				
Married	174	47.2678	7.23008	1 <sup>st</sup>
Single	65	46.59	8.934	2 <sup>nd</sup>
Separated	9	45.00	9.434	3 <sup>rd</sup>
<b>Years in Service</b>				
Short years	159	47.16	8.433	1 <sup>st</sup>
Long years	89	46.74	6.357	2 <sup>nd</sup>
<b>Qualification</b>				
ND	41	47.49	9.333	2 <sup>nd</sup>
HND	79	45.44	6.876	4 <sup>th</sup>
BSC	119	47.42	7.382	3 <sup>rd</sup>
MSC	9	51.56	7.859	1 <sup>st</sup>

Source: Field Survey

Table 1 above shows that female (mean=58.43) workers exhibit a fairly low turnover intention than male workers (mean=70.51). The table also reveals that workers who are young in age (mean=48.09) display a higher turnover intention than the older ones (mean=45.88). The table further shows that workers with



shorter years in service (mean=47.16) displayed a higher turnover intention than those with longer years in service (mean=46.74). Workers who are junior (mean=47.02) displayed a moderately high turnover intention than those who are senior (mean=46.97). Workers who are married (mean=47.27) displayed a higher turnover intention than those who are singles (mean=46.59) and separated (mean=45.00). The table also shows that workers with MSC qualification (mean=51.56) displayed the highest form of turnover intention. Followed by those with ND (mean=47.49), BSC (mean=47.42) and HND (mean=45.44).

### Research hypothesis 1:

**There will be a positive relationship between perceived organisational support and turnover intention of company workers in southwest.**

Table 2: Pearson correlation summary table showing relationship between perceived organisational support and turnover intention.

Variable	N	Mean	St.Dev	Df	R	P
Turnover intention	248	68.0887	13.22555	246	.784**	<.001
Perceived organisational support	248	66.3226	11.76287			

Source: Field Survey

Table 2 reveals that there is a significant relationship between perceived organisational support and turnover intention;  $r(246) = .784$ ,  $P < .001$ . This implies that the hypothesis is confirmed. The table further reveals that perceived organisational support had positive correlation with turnover intention. This implies that a unit increase in healthy perceived organisational support will increase the tendency for workers to display high performance. Coefficient of determination ( $r^2$ ) = 0.615. This denotes that perceived organisational support for workers had very large effect on their turnover intention. That is, perceived organisational support accounts for 61.5% variation in workers turnover intention.

### Research hypothesis 2:

**There will be a positive relationship between interpersonal relationship and turnover intention of**

### company workers in southwest.

Table 3: Pearson correlation summary table showing relationship between interpersonal relationships and turnover intention.

Variable	N	Mean	St.Dev	Df	r	P	Remark
Turnover intention	248	68.0887	13.22555	246	.533**	<.001	H2 confirmed
Interpersonal relationship	248	84.6250	12.42306				

Source: Field Survey

Table 3 reveals that there is a significant relationship between interpersonal relationships and turnover intention;  $r(246) = .533$ ,  $P < .001$ . This implies that the hypothesis is confirmed. The table further reveals that interpersonal relationships had positive correlation with turnover intention. This implies that a unit increase in interpersonal relationships will increase the tendency for workers to display high performance. Coefficient of determination ( $r^2$ ) = 0.284. This denotes that interpersonal relationships of workers had large effect on their turnover intention. That is, interpersonal relationship accounts for 28.4% variation in workers turnover intention.

### Research hypothesis 3:

**A combination of independent variables (interpersonal relationship and perceived organisational support) of company workers will jointly and independently predict turnover intention.**

Table 4: Summary of regression for the joint and relative contributions of independent variables to the prediction of turnover intention.

Predictors	Beta	t-value	Sig	R	R <sup>2</sup>	F	P
(Constant)		-1.383	.168				
Interpersonal relationships	.249	6.133	.000				
Perceived organisational support	.681	16.768	.000	.816	.666	244.703	<.001

Source: Field Survey

Table 4 above reveals a significant combined effect of the independent variables (interpersonal relationship and perceived organisational support) to the prediction of workers turnover intention. The result yielded a coefficient of multiple regressions  $R = 0.816$ , multiple  $R\text{-square} = 0.666$  and Adjusted  $R\text{ square} = 0.664$ .

This suggests that the two factors combined accounted for 66.4% ( $\text{Adj.}R^2 = .104$ ) variation in the prediction of gas companies' workers' turnover intention. The other factors accounting for the remaining 33.6% are beyond the scope of this study. The ANOVA result from the regression analysis shows that there was a significant joint effect of the independent variables on the dependent variable,  $F(2,245) = 244.7$ ,  $P < 0.001$ . Therefore, the hypothesis is confirmed.

Table 4 further shows that the two factors (interpersonal relationship and perceived organisational support) are potent predictors of workers turnover intention. The most potent factor was perceived organisational support ( $\text{Beta} = .681$ ,  $t = 16.768$ ,  $P < 0.001$ ); followed by interpersonal relationship ( $\text{Beta} = .249$ ,  $t = 6.133$ ,  $P < 0.001$ ). The table further reveals that an increase in perceived organizational support and interpersonal relationships will increase the tendency for workers' turnover intention.

### **Discussion of findings**

The first hypothesis states that there will be a positive relationship between perceived organisational support and turnover intention of company workers in southwest. The result reveals that there was a significant relationship between perceived organisational support and turnover intention. This implies that the hypothesis is confirmed. The table further reveals that perceived organisational support had negative correlation with turnover intention. This implies that a unit increase in healthy perceived organisational support will reduce the tendency of company workers to display high turnover intention. The result corroborates with Guzzo et al. (1994) who found that expatriate managers who perceive higher levels of support from the organization were less likely to seek employment elsewhere. The negative relationship between POS and turnover intention was also evident in some other studies (e.g., Wayne et al., 1997; Eisenberger et al., 2001). Rhoades and Eisenberger (2002) concluded that desire to remain with

an organization had a large, positive relationship with POS. According to organizational support theory, if employees perceive more support from the organization, they are likely to develop more positive attitudes towards the organization (Eisenberger *et al*, 1986). For example Eisenberger *et al*, (1986) found that observations of support from the organization reduced absenteeism and increased organization citizenship behavior and employee performance (Eisenberger *et al*, 1990). High levels of POS are believed to persuade thoughts of trust and strong feelings of classification with the organization (Rhoades and Eisenberger, 2002).

Hypothesis two states that there will be a positive relationship between interpersonal relationship and turnover intention of company workers in southwest. The result shows that there was a significant relationship between interpersonal relationships and turnover intention. This implies that the hypothesis is confirmed. The table further reveals that interpersonal relationships had negative correlation with turnover intention. This implies that a unit increase in interpersonal relationships will reduce the tendency of a company worker to display high turnover intention. This finding is in support of the reports of Gerstner & Day, (1997), cited in Harris, Wheeler & Kacmar, and (2009) who found in their separate studies that, the satisfaction of relationship with superiors is found negatively correlated with turnover rate. In the same vein, Eatough (2010) reported that work-related behaviour and situations such as management style, limited resources availability, incorrect job instruction and fairness are the causes of interpersonal conflict with supervisors. Perceived fairness, or perceived equity, plays a critical role in how employees perceive their workplace treatment. This is an indication that a company where there is a uniform or interesting relationship between superior and subordinate as well as among the subordinate the tendency of thinking of quitting such will be low.

Hypothesis three states that a combination of independent variables (interpersonal relationship and perceived organisational support) of company workers will jointly and independently predict turnover intention. The result shows that a significant combined effect of the independent variables (interpersonal relationship and perceived organisational support) to the prediction of company workers turnover

intention. This suggests that the two factors combined accounted for 66.4% variation in the prediction of company workers' turnover intention. The result corroborates Khatri et al (2001) who reported that the procedural justice is negatively correlated to turnover intention while distributive justice is not. Likewise, Macaulay (1989) was two of the pioneers studying the correlation between turnover rate, performance and profitability. In their study they highlighted the linkage and alerted hospitality employers to the harm associated with high employee turnover rates on the business profitability.

Based on the predictive potential of perceived organizational support on employee turnover intention; the result corroborates Allen et al. (2003) argued, March and Simon's (1958) ground work on the inducements-contributions relationship between the organization and the employees also indicates that employees who receive more support as part of the inducements offered by the organization would have less desire to leave the organization.

The finding also corroborate the notion of Sherony and Green, (2002) who reveals that since employees often respond positively to the support they receive from their organizations, hence it is expected that POS will encourage a strong longing to stay with the organization. Eisenberger *et al.* (1990) perceived that individuals with high POS would be less likely to search for alternative employment in other organizations. On the other hand, Allen *et al.* (2003) found that POS was negatively correlated with turnover intention and actual turnover. Onyinyi (2003) investigated the relationship between POS and organizational commitment among health workers and found a weak but significant relationship between the two variables. In the same way, Makanjee et al. (2006) found that POS positively influenced radiographers' organizational commitment in South African hospitals.

## **Conclusion**

In an attempt to examine the influence of perceived organizational support and interpersonal relationship on employee turnover intention among service provider and manufacturing company. The result confirmed a significant combined effect of the independent variables (interpersonal relationship and perceived organisational support) to the prediction of company workers turnover intention. The most

potent factor was perceived organisational support, followed by interpersonal relationship. The result further reveals that an increase in perceived organisational support and interpersonal relationships will reduce the tendency for company workers' turnover intention.

### **Recommendations**

With respect to the findings made so far the following are recommended;

- Organisations are enjoined to include in their policies organizational provisions for the support of workers such as health provision for themselves and family, end of their package, leave bonus, car loan, e.t.c
- The management of the organizations should build friendship among staff irrespective of the cadre.
- Workers should be frequently changed from one section to the order so as to promote interpersonal relationship.
- Experts of a particular section should be made to train others so as to have a duplicate of those experts.

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# THE TRANSMISSION MECHANISMS FOR MONETARY POLICY: THE CASE OF EMERGING COUNTRIES

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## Abstract

This paper analyses the monetary policy transmission in the experience of four emerging countries (Chile, Russia, Mexico and Turkey) using a *vector autoregressive* model (VAR) . Main result of the empirical study is that exchange rate channel is effective for the monetary policy transmission mechanism in Turkey. In Russia, Chile and Mexico this channel is low. The interest rate channel is particularly limited in all countries.

**Key words** ; monetary policy, transmission mechanism, emerging countries .

## 1 Introduction

Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity. The monetary transmission mechanism describes how policy-induced changes in the nominal money stock or the short-term nominal interest rate impact real variables such as aggregate output and employment.

The monetary policy framework now uses the repurchase rate as the main instrument to signal the stance of monetary policy. At the same time, the (CBA, 2005) will maintain elements of its previous money targeting strategy to smooth the transition to the new regime and to preserve financial stability .

The monetary transmission mechanism describes the ways in which monetary policy impacts aggregate

demand and prices by influencing the investment and consumption decisions of firms, households, and financial intermediaries.

The interest rate channel works through the effect of real interest rate developments on aggregate demand .

The traditional Keynesian view postulates that monetary policy can influence the real cost of borrowing by setting nominal short-term interest rates .

Monetary policy can influence the exchange rate through interest rates (via the risk-adjusted uncovered interest rate parity), direct intervention in the foreign exchange market, or inflationary expectations.

The empirical analysis of the transmission channels of monetary policy in emerging countries is based on the VAR model . This method was applied in the case of most countries and is the most frequently technique used in the literature focusing on the transmission mechanisms of monetary policy. It is interesting to ask the empirical question of their relative importance and to evaluate the consequences of monetary policy in various emerging countries.

## 2 The empirical analysis

### The empirical literature overview

In recent years, the literature examining the transmission mechanisms for monetary policy has attracted the attention of several researchers especially given the interest in understanding the transmission channels .

**Table :The empirical literature overview**

Author(S)	Methodology and economics	Results
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Era Dabla-Norris and Holger Floerkemeier (2006)	The authors used a VAR model to examine the relationships between monetary policy variables and both output and prices in Armenia . we use monthly data for 2000:5–2005:12.	The autors founded that the capability of monetary policy to influence economic activity and inflation is still limited, as important channels of monetary transmission are not fully functional
Andreea ROȘOIU Iulia ROȘOIU ( 2013)	The author used Bayesian VAR approach to accomplish the main objective of price stability in the context of sustainable economic growth in the emerging countries Romania, Poland, Czech Republic and Hungary over 1998Q1-2012Q3.	Main result of the empirical study is that both channels are effective for the monetary policy transmission mechanism in Hungary and Czech Republic. In Romania and Poland they do not exhibit puzzles, but the impact of the macroeconomic variables is not very significant and shows very high volatility
Anil Perera , J. Wickramanayake ( 2013)	The author examined examines the effectiveness, relative importance of different transmission channels, in Sri Lanka using monthly and quarterly aggregate data and disaggregated data. Based on the empirical estimates obtained employing both unrestricted and structural vector auto regressions .	The results confirmed that transformations in the economic and financial environment play a role in increasing the sensitivity of output and prices to interest rates suggesting the changes in monetary transmission. Besides, These results provide important policy implications for emerging country central banks, particularly Central Bank of Sri Lanka.

<p>Serhan Cevik and Katerina Teksoz ( 2012)</p>	<p>The authors investigates the effectiveness of monetary policy transmission in the Gulf Cooperation Council (GCC) countries using a structural vector autoregressive model.</p>	<p>The authors concluded that the interest rate and bank lending channels are relatively effective in influencing non-hydrocarbon output and consumer prices, while the exchange rate channel does not appear to play an important role as a monetary transmission mechanism because of the pegged exchange rate regimes.</p>
<p>Hamid R. Davoodi , Shiv Dixit , Gabor Pinter ( 2013)</p>	<p>The authors used vector autoregression (VAR) models which are the most widely used methodology to analyze Monetary Transmission Mechanism .</p>	<p>The empirical analysis indicated that in In some countries for example Kenya and Tanzania and Rwanda have also started relying more on changes in the policy rate to guide monetary policy while continuing to use direct instruments (e.g., changes in reserve requirement ratio) to alter monetary policy conditions.</p> <p>In some countries and during particular episodes, monetary policy may have been conducted by simultaneously choosing both prices and quantities .</p>

Misati, Lucas, Anne, and Shem (2010)	This research used a Single equation methods: ARDL and 2SLS. Dependent variable: output gap . The cover periode between (1996m1–2007m2) : real rate, measures of financial innovation (ratio of bank asset to GDP, ratio of M3 to M1), and output gap.	Coefficient on real interest rate is negative and statistically significant, indicating contractionary monetary effects. The coefficient on the interaction of real interest rate and measures of financial innovation is positive and statistically significant, thus moderating effect of negative interest rate
Montiel and others ( 2012)	The authors used time series data to three macroeconomic variables (exchange rate, reserve money, and price level ) over the December 2001-May 2010 period in the case of Tanzania .	The authors showed that positive shock to reserve money (an expansionary monetary policy) increases the price level in both recursive models; effects are statistically significant but not economically; no output effect in either VAR .

### Data and methods

The data base are from the International Financial Statistics of the international monetary fund (IM), OECD and World Bank.

To conduct our analysis, we hold the following endogenous variables:

- ✓ The exchange rate (ER) : the exchange rate is an important variable to consider in these open economies. According to Gregory Mankiw N. (2004) the exchange rate is the price which are the exchanges between the two countries.
  
- ✓ The Money Market Interest Rates( MMIR) : It is an instrument for monetary policy in our empirical researc . The role of monetary policy of central banks is to control interest rates on the money market.

- ✓ The interest rate on government bonds (IRGB): The long-term interest rate is formed according to supply and demand in the bond market , the central banks not intervening in this market.
- ✓ Credit to the private sector (CPS): This credit refers to financial resources provided to the private sector, including through lending, purchase of securities other than shares, trade credit and other accounts receivable, which are debts to repay.
- ✓ M2 : Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government.
- ✓ CPI; Inflation is measured by the consumer price index . In fact , the percentage of the index change over a period of time gives the amount of inflation during that specific period.
- ✓ GDP; It is commonly used in the literature growth as a proxy of economic activity. This variable provides a better measure of the health of the economy.

### Estimation Methods

The estimation of the model parameters VAR was made using the RATES. This estimate was made through several tests and in a the fixed order.

- 1) Augmented Dickey–Fuller test : is a test for a [unit root](#) in a [time series sample](#). It is an augmented version of the [Dickey–Fuller test](#) for a larger and more complicated set of time series model.
- 2) Johansen cointegration test : Cointegration has become an important property in contemporary time series analysis.

In the absence of cointegration relationship, we go to estimate the VAR model, otherwise it must be determined vector error correction model (VECM).

- 3) Estimated VAR model: in our study, we will express the index of consumer prices depending on other variables that have a direct relationship to monetary policy.
- 4) Granger causality test: is a statistical hypothesis test for determining whether one time series is

useful in forecasting another, first proposed in 1969

5) The impulse response functions : the aim of this analysis is to show the impact of a shock of variable to other variables.

### **Methodology**

The modelling VAR proposée by Christopher A. Sims (1986) as an alternative in the structural macroeconomic models which empirical performances allows to analyse mechanisms of transmission of monetary policy.

According to Lardic and Valérie darling (2002), VAR model include three advantages : in the first they allow to explain a variable in comparison with its delays and according to the information contained in other variables, in second they have a space of very broad information and finally, this method is rather simple to implement and consists of procedures of estimate and tests.

The parameters of VAR model can be considered only on chronological series to be stationary. It is an ownership of invariance of the statistical characteristics. It is impossible to identify a process if all its characteristics change in the course of time.

This model allows to analyze the effects of one variable on the other through simulations of random shocks and to conduct an analysis in terms of causality.

A VAR model is written as follows:

$$Y_t = C + \Phi_1 Y_{t-1} + \dots + \Phi_p Y_{t-p} + \xi_t$$

$Y_t$ : is the vector of endogenous variables,

$C$  : This is the vector of constants,

$\Phi$ : is the matrix of coefficients to estimate

$\hat{\xi}_t$ : is the residual vector.

### **Results and interpretations**

#### **Test of stationarity:**

The assumptions of Augmented Dickey Fuller test are:

- $H_0 : \rho=1$  ( the unit root (non stationary))
- $H_1 : |\rho| < 1$  (Not unit root (stationary))

CV : Critical Value

- If the ADF value is less than the CV we accept the hypothesis H1: the X Series is Stationary
- If the ADF value is greater or equal to CV: we accept the hypothesis H0: The X series is not stationary.

Les tests sont effectués au seuil de 5%.

**Table 2: Unit root test**

	Statistique	(1)	(2)	(3)	Ordr of integration
Mexico	Exchange rate	-3,53*			0
	MMIR	-2,16	-1,85	-1,90	1
	D MMIR	-	-	-8,22*	0
	IRGB	-0,95	-1,59	-2,59*	0
	CPS	-1.51	-1 ,52	-0,73	1
	D CPS	-1.76	-2	-2,06*	0
	M2	-1,54	-1 ,64	-1, 39	1
	D M2	-	-	-4,81*	0
	CPI	-	-2,37	4,51	1
	D CPI	-2 ,37	4,51	-5,81*	0
	GDP	-2 ,08	-2,29	-1,28	1
	D GDP	-2,50	-2,47	-2,62*	0

Turkey	Exchange rate	-1 ,84	-1 ,61	0,47	1
	D Exchange rate	-2,66	-2 ,56	-2,08*	0
	MMIR	-2,46	-0,78	-1 ,62	1
	D MMIR	-	-	-3,65*	0
	IRGB	-	-	-5,06*	0
	CPS	-1,87	-1,68	-0,41	1
	D CPS	2,06	2,51	-2,34*	0
	M2	-1 ,49	-1,50	-2,57*	0
	CPI	-1,33	-1,16	-1,81	1



	D CPI			-4,42*	0
	GDP	-2,08	-2,29	-1 ,28	1
	D GDP	-2,50	-2,47	-2 ,62*	0
Russia	Exchange rate	-1,59	-2,06	0,21	1
	D Exchange rate	-2,85	-2,20	-1,97*	0
	MMIR		-2,46	-2,98*	0
	IRGB			-3,56*	0
	CPS	-1,45	-2,36	-1,54	1
	D CPS	0,25	-0, 62	-2,15*	0
	M2			-4,14*	0
	CPI			-3,80*	0
	GDP			-3,59*	0
Chili	Exchange rate	-1 ,72	-2.13	-0.04	1
	D Exchange rate	-2.30	-1.88	-1.99*	0
	MMIR	-1.42	-0.62	-0.34	1
	D MMIR			-2.47*	0
	IRGB	-1.43	-0.61	-0.34	1
	D IRGB			-3.42*	0
	CPS			-3.53*	0
	M2		-3.39*	-3.10*	0
	CPI	-2.35	-2.46	-1.39	1
	D CPI	-2.30	-2.45	-2.64*	0
	GDP		3.75	-2.87*	0

(\*) Significant at the 5%: the significance is that the series does not have a unit root.

(1) model with trend and constant.

(2) model without trend and constant.

(3) model without trend and without constant.

The hypothesis of the presence of a unit root, detected by ADF in the four countries is accepted for most

series since the calculated statistic is greater than the critical value , which then signals that the series are non-stationary in levels.

The results of Augmented Dickey -Fuller test showed that variables of exchange rate ( ER) , money market interest rate ( MMIR ), the consumer prices index(CPI) the nominal effective exchange rate (NEER) for Turkey and Chile have not stationary. Thus there unit roots . We will now proceed to the ADF test in first difference

In the case of Mexico and Russia , the credit to the private sector is integrated of order 1 and the interest rate on government bonds stationary at level . The monetary aggregate M2 and GDP for China and Russia are stationary.

### Johansen cointegration test

The study of cointegration can test the existence of a stable long-term relationship between the number of variables. It can retain the variables of a same degree of integration.

To test a cointegration , there are two choice test Engel (1987), Johansen (1988) (based on statistics of the trace and the maximum eigenvalue.

Based in study of Gouteron and Szpiro (2005) , in the absence of a cointegration relationship, we use a VAR model.

**Tableau 3: The Trace Test**

	n	Test Trace	Critical value at 5%
Mexico	0	1,21	68.52
	1	0,87	47.21
	2	0 ,63	29.68
	0	1,36	68.52

Turkey			
	1	1,022	47.21
	2	0, 6873	29.68
Russia	0	1,12	68.52
	1	0,77	47.21
	2	0,41	29.68
Chili	0	1,74	68.52
	1	0, 97	47.21
	2	0,26	29.68

The trace test indicates no cointegration at the 5% . We accept the null hypothesis of no cointegration in the four countries.

In the VAR modeling framework, the presence of co-integration requires correction model (Vector Error Correction Model) . So, since there is no cointegration relationship between variables in our model, it is clear from estimate a VAR model.

### Estimate VAR model

One of the practical uses of the VAR representation is the analysis of causality Granger. We estimate the VAR model that captures the impact of a delayed variable on herself and on other variables.

After the stationarity of variables, we construct a VAR model (Vector Auto Regressive). These models analyze the effect of one variable on another through the random shock.

Our objective is the evaluation of the monetary policy transmission mechanisms. For this we present the means to assess the transmission mechanisms of monetary policy before moving on the analysis of empirical results for these countries.

The first step is to determine the order "p" of the VAR process .

### Table 4 : choice of the number of Lag `p ':

pays	The ordre of VAR	1	2	3
Mexico	AIC	<b>-11.72</b>	-10.58	-10.47
	SC	<b>-10.98</b>	-9.86	-9.46
Turkey	AIC	-9.86	<b>-9.98</b>	-8.16
	SC	-9.58	<b>-10.12</b>	-9.76
Russia	AIC	<b>-8.15</b>	-7.08	-7.56
	SC	<b>-8.97</b>	-8.61	-8.46
Chili	AIC	<b>-10.15</b>	-8.63	-9.75
	SC	<b>-10.45</b>	-9.72	-9.06

Determining the number of lag of the vector Auto-regressive model is an important step in our empirical study. The AIC and SC indicate one lag for Russie , Chile and Mexique , and two lag for Turkey .

The estimated VAR model is presented in the following tables.

\* Variables are significant at 5%

\*\*variables are significant at 10%.

**Tableau 5: estimate VAR model VAR for Mexico**

	D (LER)	D (LMMIR)	D (LIRGB)	D (L CPS)	D (LM2)	D(LCPI)	D(L GDP)
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D(LER (-1))	0,061 (0,855)	-0,090 <b>(0,169)* *</b>	-0,061 (0,531)	0,120 <b>(0,195)* *</b>	-0,002 (0,935)	0,037 (0,671)	-0,095 (0,220)
D( LMMIR (-1))	0,362 (0,732)	0,515 <b>(0,025)*</b>	0,314 (0,321)	0,115 (0,680)	0,207 <b>(0,034)*</b>	-0,332 (0,247)	0, 396 <b>(0,118)* *</b>
D(LIRGB (-1))	0,394 (0,704)	0,49 <b>(0,027)*</b>	0,451 <b>(0,159)* *</b>	0,120 (0,659)	0,158 <b>(0,082)* *</b>	-0,382 <b>(0,181)* *</b>	0,354 <b>(0,148)* *</b>
D(LCPS(-1))	0,596 (0,629)	-0,412 <b>(0,096)* *</b>	-0,052 (0,882)	0,525 <b>(0,131)* *</b>	-0,014 (0,882)	0,653 <b>(0,067)* *</b>	-0,004 (0,986)
D(LM2(-1) )	-0,784 (0,833)	-0,640 (0,363)	-1,782 <b>(0,127)* *</b>	-0,160 (0,870)	-0,449 <b>(0,156)* *</b>	3,690 <b>(0,004)*</b>	0,004 (0,568)
DL(CPI (-1))	0,105 (0,877)	0,478 <b>(0,004)*</b>	-0,221 (0,284)	0,167 (0,366)	0,050 (0,371)	0,285 <b>(0,137)* *</b>	0,066 (0,662)
DL(GDP (-1))	3,067 <b>(0,055)*</b>	0,242 (0,364)	0,153 (0,709)	-0,538 <b>(0,173)* *</b>	0,188 <b>(0,120)* *</b>	0,004 (0,990)	0,298 (0,354)
Constant	9,673 (0,023)	-7,103 (0,532)	-7,290 (0,513)	3,627 (0,781)	27,385 (0,496)	-3,790 (0,606)	-27,182 (0,098)

**Tableau 6 : estimate VAR model for Russia**

	D( L ER)	D(LMM IR)	D(LIRGB )	D(L CPS)	D(LM2)	D(LCPI)	D(LGDP)
D(LER(-1))	0.790 <b>(0.011)</b> *	-0.012 (0.863)	0.087 (0.264)	0.093 (0.581)	0.015 (0.906)	-0.059 (0.523)	2.771 (0.791)
D(LMMIR(-1) )	-1.267 <b>(0.032)</b> *	0.037 (0.799)	0.041 (0.783)	0.107 (0.752)	0.133 (0.620)	-0.063 (0.734)	34.635 <b>(0.132)</b> * *
D(LIRGB(-1))	-0.555 (0.003)	0.479 (0.000)	0.734 (0.000)	-0.142 <b>(0.157)</b> * *	-0.137 <b>(0.092)</b> * *	-0.476 (0.000)	28.918 (0.000)
D(LCPS (-1))	-0.374 (0.000)	-0.087 (0.002)	-0.080 (0.005)	0.964 (0.000)	0.060 <b>(0.144)</b> * *	0.023 (0.402)	13.974 (0.001)
D(LM2(-1))	1.212 <b>(0.041)</b> *	-0.000 (0.997)	0.362 <b>(0.042)</b> *	-0.267 (0.449)	0.108 (0.690)	-0.096 (0.617)	-2.115 (0.922)
D(LCPI(-1))	2.194 (0.005)	0.671 (0.004)	0.874 (0.001)	0.402 (0.333)	0.377 (0.251)	-0.887 (0.003)	-77.058 <b>(0.013)</b> *
D(LGDP(-1))	0.512 <b>(0.075)</b> * *	-0.021 (0.774)	0.068 (0.392)	-0.063 (0.715)	0.138 (0.325)	-0.058 (0.544)	-12.452 (0.271)

**Tableau 7: estimate VAR model for Turkey**

	D( L ER)	D(LMMI R)	D(IRGB)	D(L CPS)	D(LM2)	D(LCPI)	D(LGD P)
D( LER(-2))	0.341 (0.576)	-0.032 <b>(0.151)</b> * *	0.028 <b>(0.081)</b> * *	0.000 (0.941)	0.004 (0.580)	-0.000 (0.993)	0.856 (0.301)
D(LMMIT(-2))	-24.884 (0.348)	-2.730 <b>(0.013)</b> *	2.155 (0.008)	-0.009 (0.986)	0.312 (0.369)	1.285 <b>(0.039)</b> *	38.805 (0.273)
D(LIRGB(-2))	-14.509 (0.704)	-3.043 <b>(0.044)</b> *	2.488 <b>(0.025)</b> *	-0.387 (0.648)	0.388 (0.446)	1.118 <b>(0.186)</b> **	35.535 (0.486)
D(L CPI(-2))	-0.219 (0.982)	0.248 (0.481)	-0.219 (0.390)	0.891 (0.003)	0.000 (0.999)	-0.185 (0.390)	9.127 (0.499)
D(LM2(-2))	-58.635 <b>(0.125)</b> * *	-1.763 <b>(0.174)</b> * *	1.172 (0.203)	-0.175 (0.822)	0.043 (0.925)	0.909 (0.241)	105.242 <b>(0.048)</b> *
D(LCPI(-2))	-17.473 (0.217)	-0.935 <b>(0.071)</b> * *	0.739 <b>(0.051)</b> *	0.444 <b>(0.163)</b> * *	0.324 <b>(0.096)</b> * *	0.756 <b>(0.024)</b> *	9.773 (0.586)
D(LGDP (-2))	9.195 (0.555)	0.127 (0.811)	-0.214 (0.578)	-0.288 (0.410)	0.129 (0.530)	-0.055 (0.865)	-0.916 (0.964)

**Tableau 8 : estimate VAR model for Chili**

	D( LER	D(LMMIR)	D(LIRGB	D(L	D(LM2)	D(LCPI)	D(LGD
	)		)	CPS)			P)
D( LER(-1))	0.820 <b>(0.020)*</b>	10.833 (0.269)	116.319 (0.421)	1.799 (0.519)	1.128 <b>(0.166)* *</b>	-19.433 (0.481)	0.618 (0.943)
D(LMMIR (-1))	-0.022 <b>(0.086)* *</b>	0.285 (0.461)	-6.774 (0.259)	-0.109 (0.342)	0.002 (0.929)	0.725 0.515	-0.074 0.832
D(LIRGB (-1))	-0.000 (0.691)	-0.043 (0.466)	-1.596 <b>(0.102)* *</b>	0.013 (0.447)	0.000 (0.940)	0.194 (0.270)	0.003 (0.955)
D(L CPS (-1))	-0.010 (0.743)	-0.985 (0.379)	0.631 (0.969)	0.969 <b>(0.113)**</b>	0.020 (0.814)	2.066 0.517	-0.299 (0.767)
D(LM2(-1))	0.130 (0.372)	6.356 (0.200)	14.073 (0.841)	1.489 (0.295)	-0.303 (0.431)	-10.370 (0.450)	5.906 <b>(0.199)**</b>
D(LCPI (-1))	-0.007 (0.614)	-0.159 (0.725)	-7.169 (0.313)	0.006 (0.958)	0.007 (0.845)	0.886 (0.505)	0.167 (0.692)
D(LGDP (-1))	-0.014 <b>(0.174)* *</b>	-0.740 <b>(0.049)*</b>	-6.563 (0.206)	-0.214 <b>(0.051)*</b>	-0.011 (0.649)	0.777 (0.417)	-0.134 (0.656)
Constant	-773.402 (0.385)	63.596 <b>(0.102)* *</b>	14.682 <b>(0.025)*</b>	39.013 (0.699)	-282.727 (0.517)	47.323 (0.279)	71.548 <b>(0.042)*</b>



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*Notes: Variables significant are in bold .*

- In turkey, chili and Russia, the exchange rate has a negative effect on inflation.

Otherwise, a depreciation of the exchange rate results by a high level of inflation, which is contradictory to the theory of Devereux et Yetman (2003) et Kara Ogunc (2005).

- The long-term interest rate has a positive and significant impact on the consumer price index in Turkey and Mexico. This may reflect a rise in interest rates causes a decrease in investment which reduces supply.
- In Mexico and Chile, the money supply has a negative impact on the consumer price index. On the contrary, in the Russia and Turkey, the impact of the currency is positive, which is consistent with the quantity theory of money conduct a rise in the general price level. According to this theory, the quantity of money determines the general price level, so the inflation rate depends on the rate of growth of monetary aggregates.
- Only in Mexico, there is a positive and significant effect on the consumer price index of credit . This can be explained by the supply of credit may be subject to an expansive monetary policy . For other countries the coefficients associated with variables that are not significant with a positive effect (Chili and Russia) and a negative effect (Turkey).

### **Granger causality test :**

To identify the transmission channels of monetary policy in emerging countries , bi-directional and uni-directional Granger causality between variables have been implemented .

The causal relationships between economic variables allows a better understanding of economic

phenomena , provides a better understanding of economic phenomena, and allows the implementation of an optimized economic policy. Here we will use the notion of causality developed by Granger .

For the Granger causality test:

- H0 : no causal
- H1: the existence of causality

**Decision** : If the probability is greater than 5% , we accept the null hypothesis otherwise we reject H0 and accept H1.

**Table 9 : Granger causality test .**

Pays	causale variable	caused Variable						
		ER	IRMM	IRGB	CPS	M2	CPI	GDP
Mexico	ER	-	<b>-4.789*</b> (0.000)	<b>-6.285*</b> (0.000)	-0.979 (0.345)	-1.632 (0.126)	<b>-4.823*</b> (0.000)	-0.718 (0.485)
	IRMM	<b>-4.854*</b> (0.000)	-	<b>7.977*</b> (0.000)	<b>3.641*</b> (0.002)	<b>3.895*</b> (0.001)	<b>7.765*</b> (0.000)	0.043 (0.962)
	IRGB	<b>-4.962*</b> (0.000)	<b>9.277*</b> (0.000)	-	<b>3.421*</b> (0.004)	<b>3.408*</b> (0.004)	<b>8.105*</b> (0.000)	0.021 (0.988)
	CPS	-0.141 (0.889)	0.476 (0.641)	0.884 (0.392)	-	1.728 (0.107)	1.328 (0.206)	-0.012 (0.997)
	M2	-2.015 (0.065)	<b>2.344*</b> (0.035)	0.814 (0.429)	<b>2.883*</b> (0.012)	-	<b>3.768*</b> (0.002)	0.184 (0.856)
	CPI	<b>-4.024*</b> (0.001)	<b>16.640*</b> (0.000)	<b>3.690*</b> (0.002)	<b>2.936*</b> (0.011)	<b>7.389*</b> (0.000)	-	-0.845 (0.413)

	GDP	-0.798 (0.439)	1.434 (0.175)	0.603 (0.556)	1.663 (0.120)	1.748 (0.103)	-0.109 (0.914)	-
Turkey	ER	-	-0.994 (0.341)	-0.586 (0.567)	0.489 (0.632)	<b>-4.837*</b> (0.000)	<b>-5.001*</b> (0.000)	-1.052 (0.310)
	IRMM	<b>-4.445*</b> (0.000)	-	<b>2.419*</b> (0.030)	-1.748 (0.104)	<b>3.955*</b> (0.001)	<b>7.285*</b> (0.000)	0.596 (0.561)
	IRGB	-1.834 (0.089)	<b>2.954*</b> (0.011)	-	<b>-2.350*</b> (0.035)	2.081 (0.057)	<b>3.306*</b> (0.005)	0.123 (0.898)
	CPS	1.127 (0.280)	<b>-3.391*</b> (0.004)	<b>-4.051*</b> (0.001)	-	-1.747 (0.104)	<b>-2.707*</b> (0.017)	-0.713 (0.488)
	M2	<b>-9.343*</b> (0.000)	<b>2.567*</b> (0.023)	-0.883 (0.392)	-0.586 (0.567)	-	<b>5.864*</b> (0.000)	1.187 (0.253)
	CPI	<b>-8.267*</b> (0.000)	5.227* (0.000)	-1.133 (0.277)	<b>8.558*</b> (0.000)	2.070 (0.058)	-	0.376 (0.712)
	GDP	0.687 (0.503)	0.227 (0.823)	-0.613 (0.550)	0.142 (0.888)	0.433 (0.671)	-0.061 (0.951)	-
Russia	ER	-	<b>-4.227*</b> (0.000)	<b>-2.897*</b> (0.012)	2.030 (0.063)	<b>-2.231*</b> (0.043)	<b>-2.971*</b> (0.010)	1.935 (0.075)
	IRMM	<b>-7.327*</b> (0.000)	-	<b>3.540*</b> (0.003)	-1.991 (0.067)	1.813 (0.092)	<b>2.400*</b> (0.032)	-1.791 (0.096)
	IRGB	<b>-7.148*</b> (0.000)	<b>3.216*</b> (0.006)	-	<b>-3.262*</b> (0.006)	1.398	<b>2.255*</b> (0.041)	<b>-2.953*</b> (0.011)

						(0.185)		
	CPS	<b>2.242*</b> (0.043)	-2.080 (0.057)	<b>-4.674*</b> (0.000)	-	<b>-2.282*</b> (0.039)	<b>-2.379*</b> (0.033)	0.847 (0.412)
	M2	0.223 (0.826)	-0.083 (0.935)	<b>-2.261*</b> (0.041)	1.868 (0.084)	-	0.575 (0.574)	-0.031 (0.974)
	CPI	-1.396 (0.185)	1.867 (0.084)	-1.661 (0.120)	1.131 (0.278)	<b>2.961*</b> (0.011)	-	-1.917 (0.077)
	GDP	<b>2.924*</b> (0.011)	-1.649 (0.122)	-0.007 (0.993)	-0.119 (0.906)	-1.004 (0.333)	1.289 (0.219)	-
Chili	ER	-	-1.319 (0.209)	0.302 (0.766)	1.341 (0.202)	1.553 (0.144)	-0.905 (0.381)	-1.941 (-1.941)
	MMIR	<b>-4.529*</b> (0.0005)	-	-0.747 (0.467)	<b>-5.543*</b> (0.000)	0.522 (0.610)	2.060 (0.059)	<b>2.289*</b> (0.039)
	IRGB	-0.040 (0.968)	0.975 (0.346)	-	-0.097 (0.923)	-1.019 (0.326)	-0.335 (0.742)	1.638 (0.125)
	CPS	1.638 (0.125)	<b>-3.680*</b> (0.002)	1.916 (0.077)	-	-0.596 (0.560)	-0.463 (0.650)	-1.848 (0.087)
	M2	-0.510 (0.618)	0.943 (0.362)	-0.894 (0.387)	0.032 (0.974)	-	-0.680 (0.508)	0.806 (0.434)

	CPI	-2.094 (0.056)	1.669 (0.118)	-1.932 (0.075)	0.548 (0.592)	-0.926 (0.371)	-	2.094 (0.0567)
	GDP	-0.441 (0.666)	-0.400 (0.695)	-1.458 (0.168)	-0.543 (0.595)	<b>-2.842*</b> (0.013)	1.107 (0.288)	-

(\*) Indicates rejection of the null hypothesis of 5%.

The table shows an homogeneity in the countries ( a bi-directional causality ) between variables (exchange rate & money market interest rate), (interest rates on government bonds & exchange rates), and (money market interest rate & interest rate on government bonds).

This presence of bidirectional causality denotes that variables influence each other in terms of predictive capacity . unidirectional causality between pairs of variables (the interest rate on government bonds cause the consumer prices index in the sense of Granger) and (the consumer price index cause the credit to the private sector within the meaning of Granger)

The econometric investigation of causality shows that there is no causal variables (gross domestic product cause the money market interest rates) , ( gross domestic product cause the interest rate on government bonds) (gross domestic product cause the credit to the private sector) in the four countries .

### **The Impulse response function:**

The impulse response function can explain the influence of the variables on the other variables in system .

#### **1-The interest rate shock**

The results of simulations on the 1995-2010 period indicate that a shock on interest rates (second line graphs: Figure 1) leads to higher prices in the four countries studied. The rise in inflation following an interest rate shock is a phenomenon contrary to theoretical expectations which is commonly known in the literature "price puzzle". This phenomenon can be seen as the consequence of specific transitional monetary regimes (Castelnuovo et Surico (2006))

Continuing the analysis of the impact of an increase in interest rates on the exchange rate, we notice the logical effect of an appreciation of the exchange rate in all countries except Mexico. This reflects the existence of an effect "Exchange rate puzzle" .

An interest rate shock is not a homogenous effect on the gross domestic product in all countries. A positive effect is observed in Russia and China . However , in Turkey , an interest rate shock results in negative effects on GDP . Moreover , in Mexico the GDP recorded alternately increases and decreases .

The credit response to a rise in interest rates is characterized by a negative effect which can be significant , in the case of Mexico , we see a positive and non-significant effect in other countries.

the response of The M2 monetary aggregate is positive for the three countries in our sample : Turkey, Chili and Russia. This result is particularly important, which is explained by the presence of "liquidity puzzle" ; a problem highlighted by Reichenstein (1987) and Leeper and Gordon (1991) . it is an interest rate increase following a positive shock on the monetary aggregate. Mexico is distinguished by the presence of negative and positive effects due to a the interest rate shock.

## 2- The exchange rate shock

The responses economic variables at the exchange rate shock are represented on the graphics more precisely in the first line.

D'une manière générale , les réponses des variables macroéconomiques caused by a depreciation of the exchange rate are more consistent with theoretical expectations . We note a positive effect of GDP following a depreciation of the exchange rate, and for all countries.

The structure of impulse response is identifiable in the case of CPI that react by a non-significant increase . The exception concerns Turkey , Where observed a prices decrease. The decrease could be explained by the increase of interest rates caused by the depreciation of the exchange rate. Similarly as in the case of credit , there is a drop in the case of Turkey and Russia. However , for Mexico and Chile , a positive shock to the exchange rate results in positive effects on private sector credit.

The depreciation of the exchange rate causes positive effects which persist throughout the period in

Russia and Mexico. Moreover, the response to an exchange rate shock is not observable in Turkey and Chile or there is a decrease and an increase in the interest rates. The homogeneity of the impulse responses to a depreciation of the exchange rate is identifiable at the level of the monetary aggregate M2. So, the positive effect of M2 is significant for the three countries (Chile, Russia and Turkey).

### 3-The credit shock

The response functions of credit shocks (Figure 1) on the other variables reveal a uniformity in Turkey and Chile for which a positive shock on credit results on the other variables by negative effects. A positive shock on credit generates a slight increase in GDP. These non-significant effects are identified in Russia and Mexico. The credit increase induced inflationary effects with a slight deflationary effect for these countries. Furthermore, a positive credit shock causes negative effects can be on the interest rate for all countries.

In terms of exchange rates, an insignificant depreciation observed for Chile and Turkey. In addition, the two countries are characterized by the presence of an appreciation and depreciation rates.

The fall of the response function of the monetary aggregate M2 has reinforced the decline in credit function curve for Turkey and Chile. This is consistent with the study of Barran, Virginia, Mojon (1996) which concluded that no currency of neutrality can result from the credit transmission channel: the actual effect of monetary restriction may be enhanced by the credit decline.

### 4- the money supply shock :

The money supply shock leads to increased inflation persists for the period Russia and Chile. For the other two countries, we see declines, for successive periods

In the case of credit, we found that homogeneity for both countries, for example Turkey and Mexico are characterized by the presence of simultaneous positive and negative effects. Our analysis shows an effect "liquidity puzzle." Indeed, a positive impact on the money supply is characterized by a rise in interest rates in Russia, or Turkey and Chile. However and specifically in Mexico, a positive shock in the money supply is reflected in the interest rate positive effects and negative effects throughout the period.

Finally, the exchange rate response following a M2 shock is characterized by an appreciation rate with a slight decline in most countries. So, The existence of negative and positive effects that can be associated with significant in the country of Mexico.

## Conclusion

The aim of this chapter is to provide empirical results on the transmission mechanisms of monetary policy in the four emerging countries. To this end, we estimated VAR models by several methodological characteristics, including the rejection of the hypothesis of co-integration and implementation VAR model.

Several important results emerge in this paper. First, we can define problems exploring the transmission mechanisms of monetary policy: our estimates show the existence of the problem of "price puzzle" of "liquidity puzzle" and that "the exchange rate puzzle". according Surico and Castelnuovo (2005) the problem of "price puzzle" could be related to lower monetary policy regimes.

To conclude, we can say that the interest rate channel is particularly limited in all countries in our sample. Indeed, the increase of the consumer price index following an interest rate shock is a phenomenon contrary to theoretical expectations, which is commonly known in the literature as the "price puzzle".

The exchange rate channel is low in the three countries. Contrary in the turkey, for which this channel is more active than the credit channel and the interest rate channel. Otherwise, predominance the money supply channel revealed only in Mexico. For Chile and Russia no channel appears clearly predominant. The exchange rate channel is effective for the monetary policy transmission mechanism in Turkey. In Russie, Chile and Mexique this channel is low. the interest rate channel is particularly limited in all countries in our sample.

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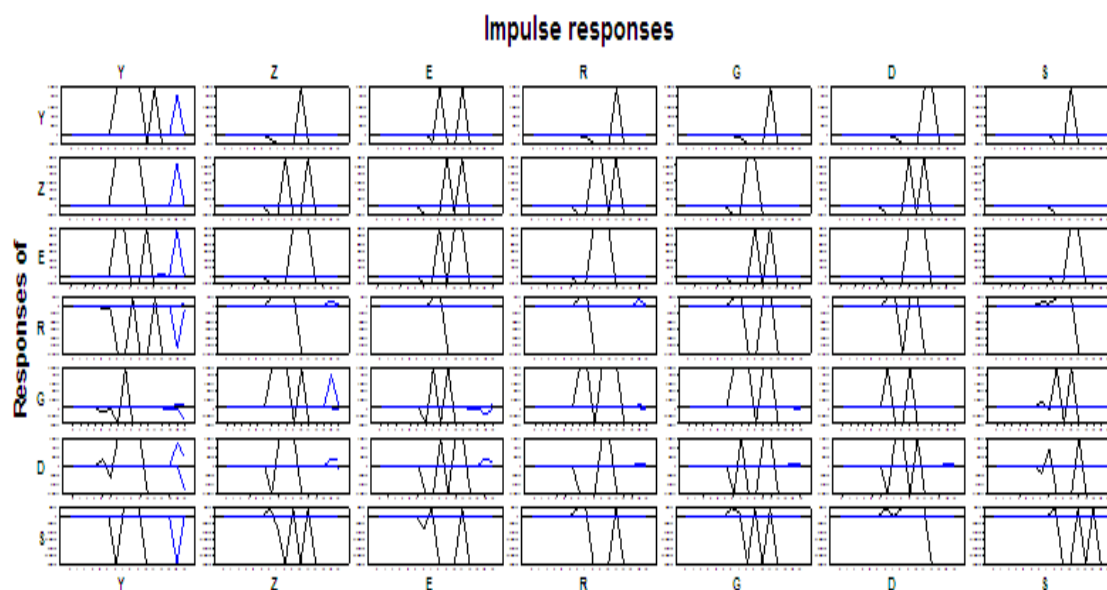
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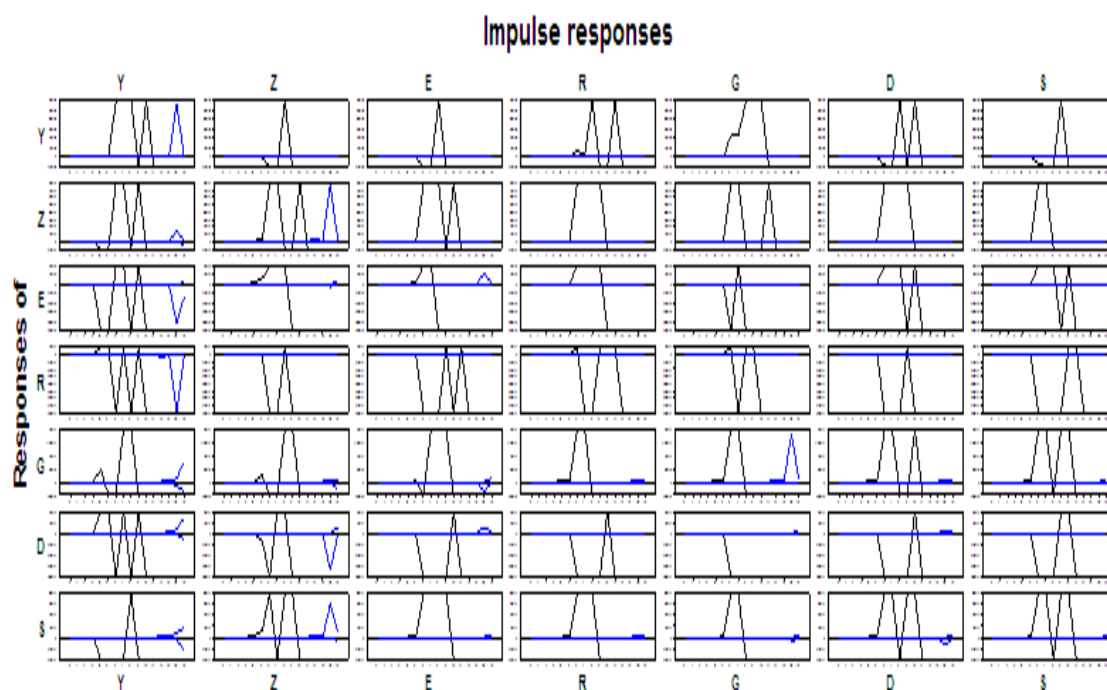
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## **Appendix**

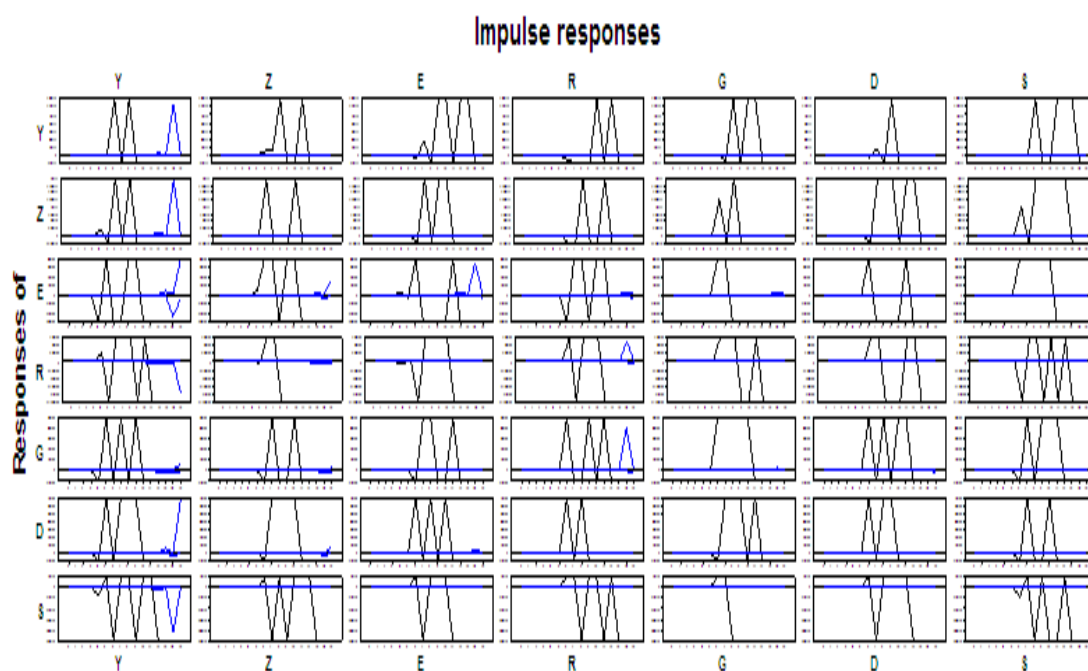
### **Figure : The impulse response function Turkey**



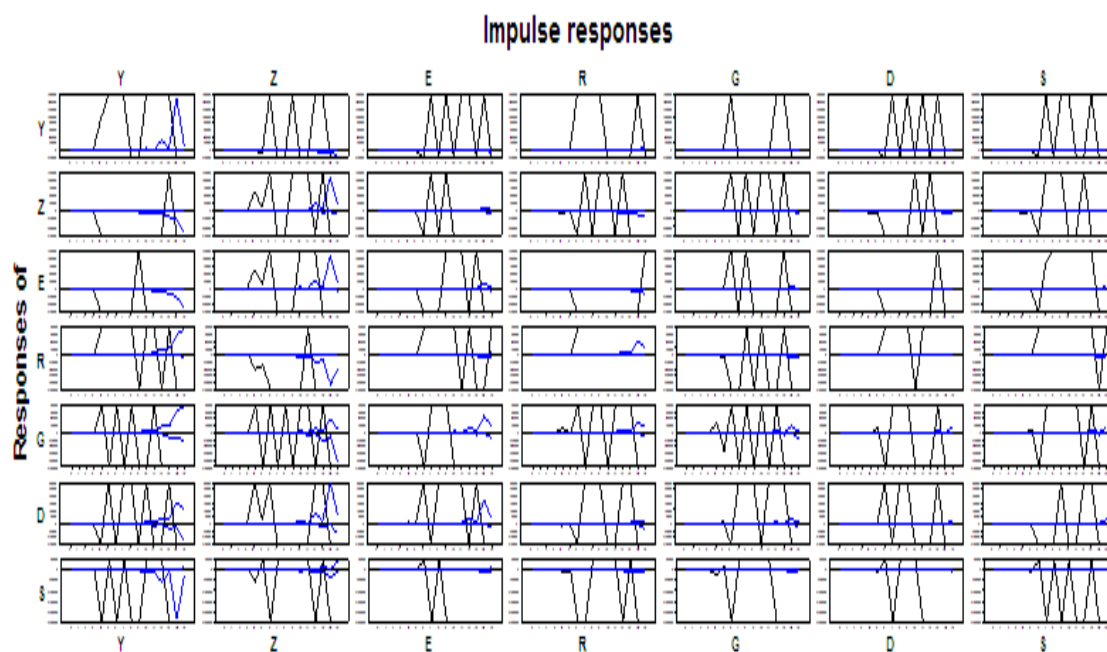
## Chili



## Russia



## Mexico



# INTERCULTURAL SENSITIVITY AND ITS IMPLICATIONS IN LANGUAGE TEACHING

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## **Abstract**

What is important in international communication is the mutual understanding with regard to the cultural differences. Robinson (1981) stated that one cannot see the world from others' eyes. What is important is the extension of the worldview through having more awareness regarding cultural differences. This study aims at reviewing the concept of intercultural sensitivity and its implications in language teaching in EFL contexts. In this regard, the researcher perused the literature to have the appropriate definition for this concept that is distinctively differentiated from other concepts such as intercultural awareness and competence. Then, two important frameworks were discussed to have the better view on the underlying factors that have the key role for the development of individuals' intercultural sensitivity. Intercultural sensitivity was also viewed from its role in the rudimentary step of attitude shaping that can have positive and negative role in language learning.

**Keywords:** Intercultural competence, intercultural sensitivity, language teaching, autonomy.

## **Introduction**

Culture is one of the most controversial issues that are discussed regarding the instruction of second or foreign language. Due to its importance, there have been large amount of research to specify its role in language learning. In this regard, there are two major perspectives. The first one deals with highlighting L1 cultural background of language learners without considering the target community. And, the second view advocates the presence and integration of the cultural features of the second and foreign language in

ELT texts books and asks for the direct and indirect instruction of the target language culture. The latter perspective has drawn more attention due to its importance for the real communication with native speakers of the target language. The knowledge of the cultural norms of the target community provides the language learners with sense of being global citizens who can interact appropriately. As Bada (2000, p. 101) stated, “the need for cultural literacy in ELT arises mainly from the fact that most language learners, not exposed to cultural elements of the society in question, seem to encounter significant hardship in communicating meaning to native speakers.”

One may have studied a foreign language for years without having the opportunity to communicate with others in supranational contexts and therefore this is quite clear that his/her ability to exchange meaning will be affected ,to some extent, by his /her lack of knowledge over the pragmatic norms. In this case, this is probable that the real act of communication be hampered due to lack of knowledge, for example, on the formal and informal styles. What may be formal in one community may be exactly the opposite in other community. This lack of knowledge necessitates the presence of cultural norms of the target community in linguistic and pedagogical aspects of language learning. In McKay’s (2003) view, culture affects the language by its influence on semantic, pragmatic features of the target language linguistically and it affects the selection of the authentic materials pedagogically. Whether the focus on the instruction of these materials is explicit or implicit, the selected materials should be the representative of the normal behaviors of the native speakers of the target language.

The first and the foremost concern of the language teachers with regard to the cultural norms of L2 should be the enough exposure through different input modalities. Although the simple exposure seems insufficient, it can pass cultural norms through the mind of learners. This can be a beginning phase for having more interculturally competent language learners. This stage of the integration of the target culture norms brings about cognitive and affective mind performances that are of our concern in this paper. Chen and Starosta (1998) considered the affective aspects of the intercultural communication and mentioned that intercultural sensitivity is the locus for the affective aspects of intercultural communication. In line with the great contribution, this study aims at reviewing the concept of intercultural sensitivity and its

probable implications in language teaching. This emphasis on intercultural sensitivity is due to its beneficial role for the development of the language learners' intercultural communicative competence from the affective point of view.

## **Intercultural Sensitivity**

### ***The Definitions of Intercultural Sensitivity***

Lack of consensus over any definition that includes all attributes of intercultural sensitivity brought about misunderstanding. Chen and Starosta (1997) believed that the reason for this issue is that there is no clear definition that can differentiate intercultural sensitivity from intercultural awareness and competence. In wider sense, Chen (1990) claimed that previous models and studies regarding intercultural competence have conceptual ambiguity. In Chen and Starosta's view, intercultural awareness is "the cognitive aspect of intercultural communication. It refers to the understanding of cultural conventions that affect how people think and behave" (Chen & Starosta, 1997, p. 9). Chen and Starosta stated that intercultural competence is related to the behavioral aspect of communication and it is shown through the verbal and non-verbal behaviors in interaction at supranational levels. Behavioral aspects of communication are the product of both intercultural sensitivity and awareness because the conglomeration of affective and cognitive aspects leads into a special sort of behavior. So far, the distinction between intercultural communication and awareness has been clarified. Regarding the Intercultural sensitivity, Chen and Starosta (1997) considered 'emotion' as the key word. Chen and Starosta defined Intercultural sensitivity as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes an appropriate and effective behavior in intercultural communication" (Chen & Starosta, 1997, p. 5). These aspects should work hand in hand to serve the communicative purposes. The lack of coverage on every one of these aspects may result in failure in international communication. These aspects should be taken into account regarding the preparation of the language learners because of parallel development of these aspects. That is, behavior is not always the result of cognitive and affective aspects. One's behavior may occur before cognitive and affective steps and forms further behaviors. Therefore, what learners face is an ongoing process.

Bhawuk and Brislin (1992) pointed out that intercultural sensitivity is the reaction individuals show when they confront people from different cultures. This ability is the prerequisite for the purposeful communication. From the practical perspective, intercultural sensitivity can be defined in action. That is, characteristics of the person who is interculturally sensitive can clarify the difficulty in the definition of intercultural sensitivity. In this respects, Chen & Starosta, 2000, p. 4) mentioned that:

interculturally sensitive persons are able to reach the level of dual identity and enjoy cultural differences by gradually overcoming the problems of denying or concealing the existence of cultural differences and attempting to defend their own world views, and moving to develop empathic ability to accept and adapt cultural differences.

### ***The proposed Models Related to Intercultural Sensitivity***

Bennett (1986; 1993) proposed a framework through which he claimed for the developmental stage for the cognitive process of intercultural sensitivity. He addressed all the stages in two major categories, that is, ethnocentric and ethnorelative. These categories can be called the major steps that individuals should follow to have more awareness and understanding of other cultures and have the ability to adjust and integrate their cultural norms with them. Ethnocentrism deals with the worldview that has been centralized based on just one culture and context while ethno relativism advocates the existence of different world views due to the contextual and cultural differences and it also mirrors the reality from different views.

The following table shows the subcategories:

Table 1: The Developmental Stages of Intercultural Sensitivity

Major Stages	Levels/Stages
Ethnocentrism	1.Denial
	2.Defense
	3.Minimalziation
Ethnorelativism	1.Acceptance
	2.Adaptation
	3.Integration

#### *Ethnocentrism:*

1. Denial: One of the reasons for denial may be related to the lack of access to other cultures due to social and physical isolation (Bennett, 1986). In Bennett's view, there may be relative conditions that people are not in touch with other cultures. He believed that this type of contact leads into parochialism. In extreme cases, negative attitudes towards other culture may result in the emergence of tribes that do not accept the presence of foreigners in their homogenous groups.

2. Defense: defense is the mechanism that serves as tool that staves off the threatening factors to the central world-view. "The most common Defense strategy is denigration of difference wherein undesirable characteristics are attributed to every member of a culturally distinct group. The denigration may be attached to race, religion, age, gender, or any other assumed indicator of difference"(Bennett,1986, p. 184).

3. Minimization: This last stage of the ethnocentrism does not explicitly show reluctance to other cultures. Rather, it minimizes the differences.

Bennett considered two forms for this level:



a. Physical Universalism:

b. Transcendent Universalism:

*Ethnorelativism:*

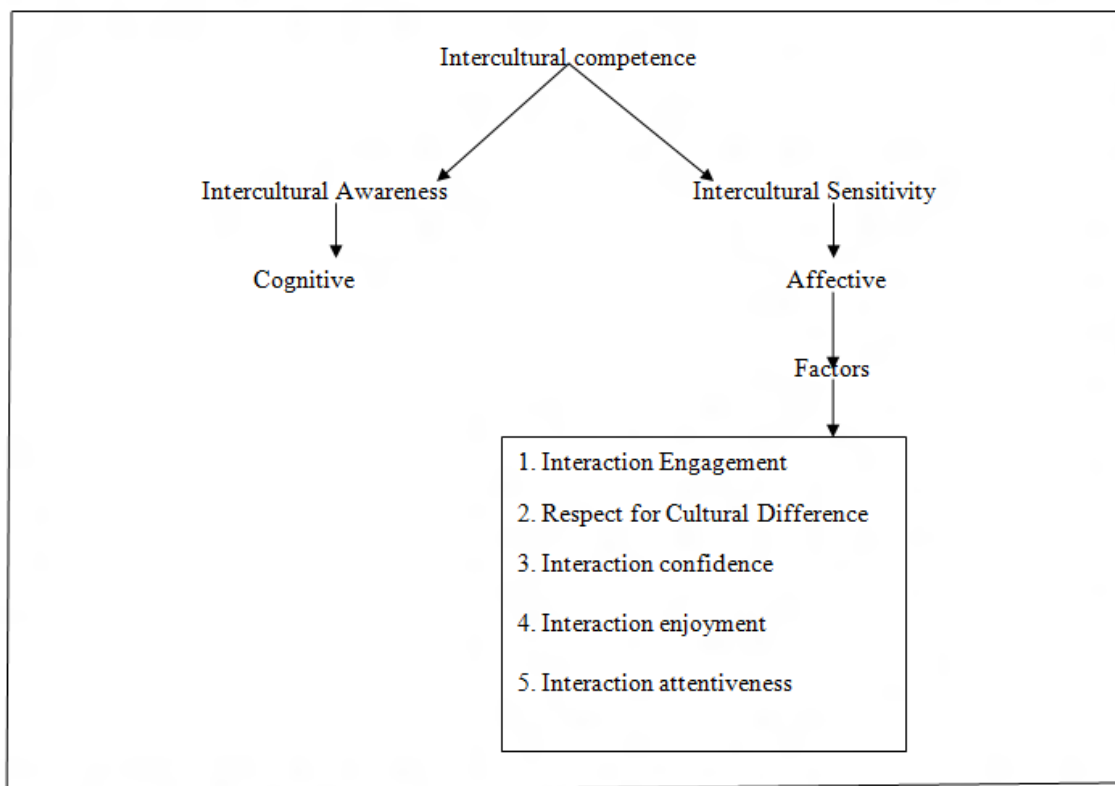
1. Acceptance: The second stage starts with the change of the attitude of the individuals' from being ethnocentric to be moderately ethnorelative. In this level, difference between cultures is respected and understood. Bennett (1986) believed that there are two levels within acceptance. The first one is the behavioral acceptance and the second one, which is deeper, is the understanding of the underlying cultural features of other cultures.

2. Adaptation: this level is the “temporary alteration of process that forms the heart of intercultural communication. The ability to change processing of reality constitutes an increase in intercultural sensitivity when it occurs in a cross-cultural context”( Bennett,1986, p. 185).The central part of this level is ‘empathy’(Bennett,1986).Empathy has been defined by Bennett as the “temporary shift in frame of reference such that one construes events “as if” one were the other person”( Bennett,1986, p. 185).What is important here is that this empathy is directed towards the target culture. Empathy can be regarded as the cognitive state and even the behavioral one through verbal and non-verbal behaviors. Cultural Pluralism is another form of adaptation that means the shift to several other cultures.

3. Integration: In this level, individuals can take advantage of the cultural diversity and enjoy the presence of several cultures. This stage is the end for the developmental identity of intercultural sensitivity that has positive effect on the intercultural competence. Individuals learn how to act according to the contextual factors and see themselves within different contexts not apart from them as aliens.

One of the newest models for the measurement of intercultural sensitivity is Chen and Starosta's model. They designed a questionnaire that is consisted of 24 items to measure the level of intercultural sensitivity. The validated questionnaire was published in 2000.Five factors have been identified in their models that are depicted in the following figure (figure 1):

Figure 1: Chen and Starosta (2000)



### ***Intercultural Sensitivity in EFL Settings***

Culture in language teaching is one of the most controversial issues that has been discussed. These discussions were over the teachability and learnability of target culture. Moreover, the influence of L1 and L2 culture and the extent to which they should be applied were investigated. The investigation in this interdisciplinary field is much owed to the work of Seelye (1981), Byram (1994), and Kramsch (1993).

Due to the importance of culture in communication, Kramsch (1993) emphasized on the integration of language teaching with the cultural features of the target community. The questions here is that what types of elements should be integrated to serve the purpose and what elements should be eliminated because of their probable negative loads based on the values of the L1 culture. Moreover, the dynamicity of culture should be taken into account. That is, the static view regarding target culture can be followed by instruction while the dynamic features of culture, which are revealed in the relevant contexts, can not be taught via just instruction. Rather, the exposure to target culture should be considered. However, providing enough exposure for language learners is demanding activity that is not cost-effective.

Therefore, the solution here can be readiness for autonomy. In other words, autonomy can be trained and supported by language teachers to make them ready to search for new identity. This new identity should be free of biases towards L1 culture to serve the communicative purposes.

Intercultural sensitivity as the affective part of intercultural competence can pave the way for communication in which there are mutual understandings between parties. This effective role is due to the relation between sensitivity and attitude. Attitude towards L2 culture shapes the communications and the perspectives. Sensitivity serves the affective process of attitude in the mind of learners and, therefore, is of great importance because the behavior as the final product of attitudes takes shape based on cognitive and affective processes.

## Conclusion

Awareness regarding the cultural elements and norms of the target community is not always the only contributor to the international interaction with native and non-native speakers of English. Rather, having positive view regarding the target culture and its people is also important and should be given more attention. This positive attitude owes much to the individuals' previous knowledge and background. One's judgment about others' action in different contexts is related to his or her sensitivity towards the reason for their action not only the action itself. The sensitivity towards the cultural differences can raise open-mindedness in multilingual settings. And, this open-mindedness brings ethnocentric view towards people's behavior in different contexts. What should be noted here is that the real instruction for having more interculturally sensitive students is based on their level of autonomy. Therefore, it is quite necessary to give learners independence to become sensitive towards new behavior and consider this difference natural. Additionally, they should also find both similarities and dissimilarities among cultures and have the ability to integrate them in international interactions.

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# **ASSESSMENT OF ORGANIZATIONAL MATURITY FOR THE IMPLEMENTATION OF THE PERFORMANCE APPRAISAL SYSTEM CASE STUDY: NATIONAL IRANIAN OIL COMPANY**

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## **Abstract**

Today's organizations, especially the Iranian organizations, are faced with a dilemma and it is that without specifying their fitness level, they prepare and implement new systems, in particular the performance appraisal system, and this means that, they fail in implementation of these systems, or they will not benefit from these systems to the extent that have invested and spent. In this study, after studying previous studies on the factors affecting the successful implementation and adoption of performance appraisal system in organizations, components related to readiness to accept it system have been identified, then, using the analytic hierarchy process and Chang weighting, the total weight of all components was determined, then, the total weight of all components in the National Iranian Oil Company is calculated. Finally, using YAGER fuzzy screening was determined that the National Iranian Oil Company is in what level of maturity and readiness. It was found that knowledge component in human resources' field has allocated the highest weight to itself, as well as practical solutions tailored to each of these components are briefly presented. This study in terms of purpose is an applied research and in terms of the nature and descriptive method is a correlational and survey study.

**Keywords:** performance appraisal, Analytic hierarchy process, YAGER fuzzy screening

## **Introduction**

The performance appraisal of staff and managers in any large institution or total staff of public

institutions, which are discussed in theory and practice as determining competence, performance appraisal and so on, including tools and effective means to manage human resources which by applying these tools correctly, not only goals and achieved mission of the organization will be achieved with desired performance, but also real benefits of staff and the community will be provided [1]. Although the employees appraisal is very important from the perspective of scientific and rational, due to the indifferent attitude towards the management measures, in most organizations, especially public institutions, not only doing the assessments were unsuccessful, but are criticized for various reasons by staff and even managers. Assessment is an ongoing activity that must always be common in the tasks. If a manager is going to improve plans his work and achieve organizational goals, so he must have more complete and more accurate appraisal of his work and staff performance. Performance appraisal is one of the important issues in human resource management, and the most esteemed managers and supervisors tasks [2]. In an organization, any person to progress and achieve the targets set by occupation needs to be aware of his position. This knowledge makes him aware from the strengths and weaknesses of his performance and behavior, and he can apply the necessary measures for more effective efforts. Organizations need to understand the performance of their employees, so they can improve their human resources based on it, and thereby increase the volume of production and their services, and make positive changes in the process of their movement. The acquisition of this knowledge and awareness is possible through performance appraisal system. If the system is well designed and used properly, will be appropriate tool for creating incentives, training and development, and improving employees' performance (Almasi, 2005). In an era of continuous progress, the era of value-added, high-activity era with limited resources and the era of improving productivity, having a poor appraisal system can have a significant organizational failure that will have consequences [3]. There is a problem and it is the failure to use this technology in the organizations, which after the studies conducted, experts concluded that the main problem is lack of knowledge of the organizations on its readiness for the use and implementation of this technology. The organization's level of readiness to accept and use it is discussed in this research.

### **Theoretical Framework**

Performance appraisal system is one of the most important and the most basic of human resources sub-systems obviously, performance appraisal of employees is a very important process, and one of the most sensitive issues that authorities' organizations are facing with it. Despite constant efforts to design efficient and effective systems for employees' appraisal, the evidence shows that, in general, officials are not satisfied with the methods and systems used to evaluate the employees. The main reason for this dissatisfaction is factors, including the complexity of the appraisal process and deficiencies in the appraisal system is comprehensive, but the organization as a social being need a rule to assess competencies of their employees, re-testing and measuring the performance of the system after a appropriate period of time to ensure the performance and its effectiveness and as well as elimination of the obstacles and difficulties are necessary. Performance appraisal of employees is one of the very difficult duties of assessors, because they know the results of optimistic evaluation and its impacts on their future progress, this issue makes difficult the appraisal process and there is a more problem and it is

different kinds of structural problems, which could cast doubt on the fairness of this process. Strong employee recognition is not possible with just a simple look at the numbers, it is essential that the criteria be recognized on relationship between the behavior and performance with the organization's strategy. There must ensure that appropriate performance indicators are used to assess the successful business and also the indicators are matched with the performance of employees. In this way, organizations can empower their employees to play a dominant role, and this can be effective in enhancing the capability of the organization to implement strategy. The primary objective of performance appraisal is providing feedback to employees according to their abilities and competencies in order to motivate and increase productivity. Today, in some organizations, instead of the term performance appraisal, the term performance management is used, and it is due to the extent of the role of the outcomes and performance appraisal to improve processes and employees performance. Studies show that, human resource systems lead to increase organizational performance with a positive impact on the attitudes and behaviors of employees. Failure to human resource systems, in addition to financial costs leads to increase other costs, such as negative attitudes to work, stress and reduce turnover. (Beken and Belitan 2005), also can lead to absenteeism work and behaviors out of control (Fisher and Hole, 2004). As a result, some researchers use the index of accepting human resource systems by employees, as well as other indicators such as return on investment and productivity (Gomez and Balkin, 1987). For these reasons, the analysis of the conditions under which human resource systems have the highest acceptance is worthwhile. Using previous research, we find that" what are the most important factors and models in assessing the readiness of the organization to accept performance appraisal system." In Table 1, a number of studies on organizational readiness for accepting the organization's information systems, including performance appraisal system with its components are presented.

Table 1 The elements of organizational readiness for implementing the performance appraisal system

Year	Criteria	Scholar
2006	Senior management commitment (support, participation, leadership, coordination, Patience) Strategic planning, setting goals, employee participation, interaction projects, organizational structure, corporate culture, employees readiness for change, training	Mei-I Cheng Andrew Dainty David Moore
2011	Management features (education related to IT, project experience in IT, the experience of using IT, the experience of projects IT) Features organization (information management within the enterprise, the demands of customers and funders)	Anders Haug Soren Graungaard

	Staff Features (IT skills, education related to IT, project experience in IT, the experience of using IT, group abilities, communication with managers)	Pedersen Jan Stentoft Arlbjorn
2011	Technological factors (balance between costs and benefits, match between the needs and the system) Organizational factors (ability of personnel (human resources domain knowledge, technical skills, communication skills), Senior management support, organization size, the degree of concentration) Environmental factors (compliance with the rules, the successful experiences of others)	Indrit Troshani Cate Jerram Sally Rao Hill
2013	Technological factors (organization infrastructure, IT, human resources, technical skills, adaptability) Organizational factors (level of concentration, the size of the organization, workforce skills, senior management support, involvement of employees, management commitment, knowledge of labor, education) Environmental factors (characteristics of industry, government regulation, protection infrastructure)	Ananya Raka Chakraborty Dr. Nur Naha Abu Mansor
2013	Organizational factors (senior management support, organizational readiness, information systems experience, size) Technological factors (perceived advantage, compatibility, complexity, openness, tangible results) Environmental factors (industry, market size, competitive pressure, external systems support)	Boumediene Ramdani , Delroy Chevers , Densil A. Williams
2015	Innovative climate, supervisor support, senior management support, compatibility between the chief and the head	Luigi Stirpe Jaime Bonache Jordi Trullen

Decision making is one of the most important and most basic functions of management, and achieving organizational goals depends on the quality of it, so that, from the perspective of one of the experts in the Decision making field, Herbert Simon, decision-making is the essence of management. Most managers decisions are affected by several qualitative and quantitative factors, most of these factors are at odds with each other, and they try to choose the best option among several options available. In most cases, decisions are appropriate when decision-making is examined on the basis of several criteria. Frequently, the criteria used to assess the decision optimality are numerous. The criteria can be qualitative and quantitative. In such circumstances, we face multiple criteria decision making (MCDM), in the



multi-criteria decision-making methods, which in recent decades has been of interest to researchers, rather than a measure of optimality, several measures are used. Multi-criteria decision-making method includes a set of techniques (including the weights or convergence analysis), which allows a range of criteria are weighted and scored, then ranked by experts and a group of beneficiaries. In these decision-making, several criteria are considered which sometimes are contradictory and multi-function. One of the multi-criteria decision-making models is AHP (Analytic Hierarchy Process). AHP, using quantitative and qualitative criteria, simultaneously, as well as the ability to evaluate the biocompatibility in the judgment can be effective to examine characteristic of the prioritization, selection and optimality of the problems.

## **Research Methodology**

This study, because its purpose, the development of practical knowledge in the field of performance appraisal system, and also because of studying in an organization (NIOC), and acquisition of experts' opinions, is a theoretical / applied research. This study, in terms of data collection, the type of research is descriptive, and in terms of the purpose, it is an applied research. In this study, the authors after developing the conceptual model, collected the required data, through books, articles, theses, Internet, interviews with experts and, ultimately, a questionnaire, and the data obtained were analyzed through analytical methods, and finally, conclusions are presented about the hypotheses and questions.

The research method has the following steps:

- Step1- In this step, we first extract the effective main component and sub-component on performance evaluation system to readiness to accept it through studying and review of previous studies.
- Step2-With a comprehensive study, we will find the factors affecting for readiness to accept performance appraisal system.
- Step3- Using the backgrounds and experiences of experts and professors, supervisors and advisers, we derive final factors, and the conceptual model will be offered.
- Step 4- population, sampling, and sampling and the sample size is selected.
- Step 5- At this stage, the method of AHP, as the decision model will be used, this method examines components and their effect on each other factors, and pairwise comparison will be used, and it specifies that the how components interact with each other, and how have an effect in each other, and finally, how these components affect the organization.
- Step 6- We define tools to collect data, and design a questionnaire design and measure the validity and reliability of the questionnaire.

Step7- Here, according to the model, we collect data from specified organizations.

Step 8- Here, using fuzzy AHP, and the priorities will be determined to prepare organization for the adoption of the performance appraisal system.

Step 9- At this step, we assess the level of preparedness of National Iranian Oil Company using **YAGER** fuzzy screening.

Important factors affecting the readiness to accept the performance appraisal system are divided into 4 groups:

1. Organizational factors, including the commitment of senior management, goals and strategy, organization size, innovative climate, the degree of concentration, organizational readiness, information technology experience, the culture of the organization.
2. Technological factors including relative advantage, complexity, compatibility, tangible results and cost.
3. Environmental factors, including competitive pressures, support ICT, the successful experiences of others.
4. Human factors, including knowledge of human resources, employee self-confidence, knowledge, IT staff and management, management communication skills, training.

Given that, this study is not based on statistical analysis, the population is not required, and only a large organization as the pilot was selected as below. Managers and experts of human resources, as well as senior executives, have been considered as the sample of this research. In order to collect the information needed to evaluate the readiness to accept the performance appraisal system to develop theoretical and research literature, the library method, and then according to the literature, and studies conducted within and outside the country, and the opinions of teachers and advisors and technical experts in the field, the researcher has been tried to the design of the questionnaire. Given that, the descriptive, survey method will be used in this study, so in this study; the FAHP method will be used which will be discussed in the following.

AHP method in 1980 was presented by Thomas Saaty in line with the multi-criteria decision-making, which has been used successfully in many scientific issues. This method has enjoyed a strong theoretical basis, and is based on clear principles. In fact, the AHP helps the decision makers to prioritize the goals and strategies in a complex, unstructured and non-transparent, environment. The method benefits from paired comparisons of elements of decision-making for determining the relative importance of the criteria and alternatives. In AHP, the problem is structured in a hierarchical structure with different levels, where each level contains a limited number of elements. The relative importance of elements is indirectly obtained by the subjective judgment of decision makers. Despite being common and its performance, it is

often criticized due to the neglect of uncertainty and confidence in decision makers' perceptions and subjective judgment (Akbarpoor MR, 2013). Due to this essential point, the traditional analytic hierarchy process, may not fully reflect the style of human thinking. In other words, the use of fuzzy sets have more compatible with linguistic descriptions and sometimes human vague descriptions, and thus it is better that decision-making in the real world be predicted using fuzzy sets (using fuzzy numbers). Fuzzy theory is used for dealing with most of the phenomena of the world in which there are uncertainties, and many collections, figures and events in the real world can be explained by fuzzy logic. Fuzzy AHP by generalizing the fuzzy concepts are involved in determining the pair comparison matrix (Salah Majid, 2011).

### *AHP method to solve problems*

View of the decision-making process in the network analysis method is shown in the following figure 1.

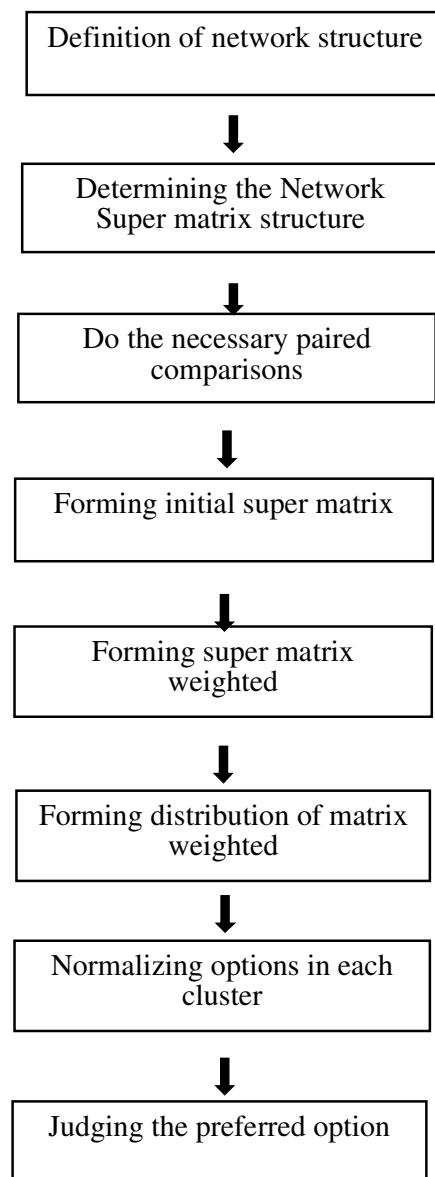


Figure 1- The decision-making process on the network analysis method

Four major steps for the fuzzy network analysis process:

Step 1- Making model, organizing the problem; the problem must be clearly stated and must be

analyzed as logical system of a network.

Step 2- Paired comparison matrix and priority vectors: The elements of decision-making couples are compared in each category according to their importance in the control measures. Groups themselves are compared as paired groups according to their impact on the target.

Step 3- Forming Super matrix (decision matrix). To obtain a general priority in a system with dependent effects, local priority vectors are considered for columns of a matrix. In fact, a decision matrix is a matrix divided into smaller components.(Figure 2)

Step 4- Calculating the final weight vector. If the Super matrix obtained in the third step covers the entire network, the weight of options and elements of different clusters can be found in the relevant columns in super matrix, and if Super matrix doesn't not cover the entire network, and only includes the internal communication between clusters, similar calculations should be continued to extract the final priority vector of options.

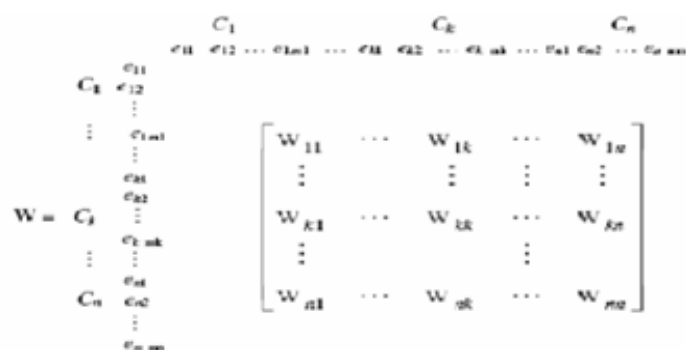


Figure 2- Super Matrix Standard

In order to achieve the purpose of research, paired comparison questionnaire was designed and distributed among professionals. Due to the phased approach in the study, verbal phrases and fuzzy numbers were used. In this section, according to the network diagram, paired comparisons tables have been made, and the weight of components is obtained by using the modified method (Ali Hamid Reza, 2010), and they are prioritized accordingly. In this software, Boucher method is used in order to calculate the adjustment.

## Data analysis and findings

In this section, analysis of the data will be analyzed, we have two main parts. The first part, which includes weighting and ranking of all main criteria and sub-criteria and alternatives, as mentioned earlier, it will be done using FAHP. The second section is to determine the priority level of all the main criteria and sub-criteria and alternatives, that it will be done using fuzzy AHP.

### *Ranking of components*

One of the strengths of fuzzy logic is the use of the linguistic variables and their mathematical formulation. To convert the linguistic variables to fuzzy numbers, one of the scales of linguistic variables must be selected. In other words, determining the degree of importance of each criterion is valued, when they are compared in pairs through Table 2, which is expressed by the analysis method developed by Chang.

Table 2- Fuzzy spectrum and the corresponding verbal phrases

Code	Verbal Phrases	Fuzzy numbers
1	The same priority or importance	(1, 1, 1)
2	Low priority or importance	(2, 3, 4)
3	Strong priority or importance	(4, 5, 6)
4	Very strong priority or importance	(6, 7, 8)
5	Quite strong priority or importance	(8, 9, 10)

In this section, with formation of pairwise comparison matrices, views of respondents must be collected in the form of linguistic variables in the form of a five-point Likert scale. After this action, linguistic variables can be converted into triangular fuzzy numbers, based on the table above. Comparisons between the alternatives are carried out based on each indicator and judge the importance of decision index with doing paired comparisons after the formation of the hierarchy for the problem. Experts and decision-makers, in fact, must complete the matrices that show the relative priority of indicators compared to each other. For convenience, they just determine the questionnaires as the relative importance between the criteria, so that, the indices are compared in pair as verbal. To solve the model, Manager Plus FAHP software was used, the results (Figure 3) show that, the priority of criteria to target in the National Iranian Oil Company is as follows:

1. The human criterion
2. The organizational criterion
3. The technological criterion
4. The environmental criterion

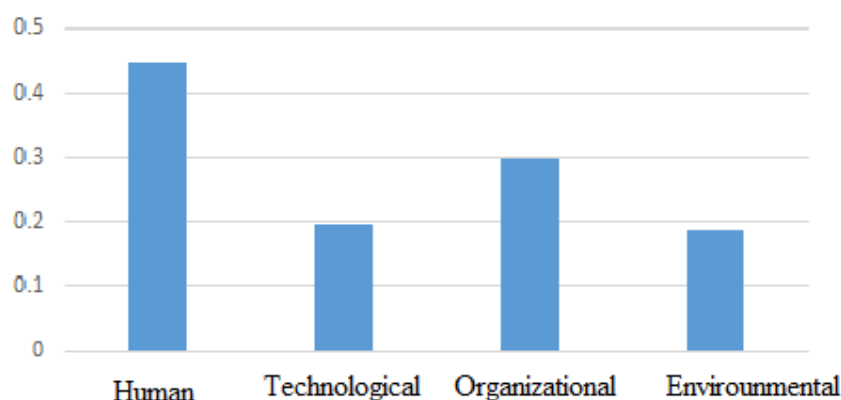


Figure 3- The final weights of criteria to assess organizational readiness to accept the performance appraisal system

This suggests that the role of the individual and the staff could be as a facilitator, as well as resistance against accepting the technology related to the performance appraisal system, it may helps organization to successfully implement in the best way, or with respect to all factors, and considering all stages of the project it may leads to failure project, because in the end, the user should use this system, and leads to added value for the organization. As can be seen in Figure 4, Training has been detected the most important factor in the readiness if organization for acceptance of the system by the experts in the National Iranian Oil Company, and its reason is also evident, as previously mentioned, in this organization, most managers and supervisors believe that don't have knowledge and information on the methods of assessment, and in their study have acknowledged that the assessment criteria are not in writing and objectively measurable, and there is no clear definition of performance standards. On the other hand, they know the influence of personal biases and human errors in the assessments above, therefore, education and informing managers seems necessary not only in the field of creating a culture of assessment, but also about the methods and techniques of evaluation. After training, knowledge of the human resources and management communication skills have allocated to themselves the second rank among the factors contributing to the organization's readiness to accept the performance appraisal system. All the successful leaders of organizations have benefited from the spirit of "learning from the experiences of others" and learning opportunities.

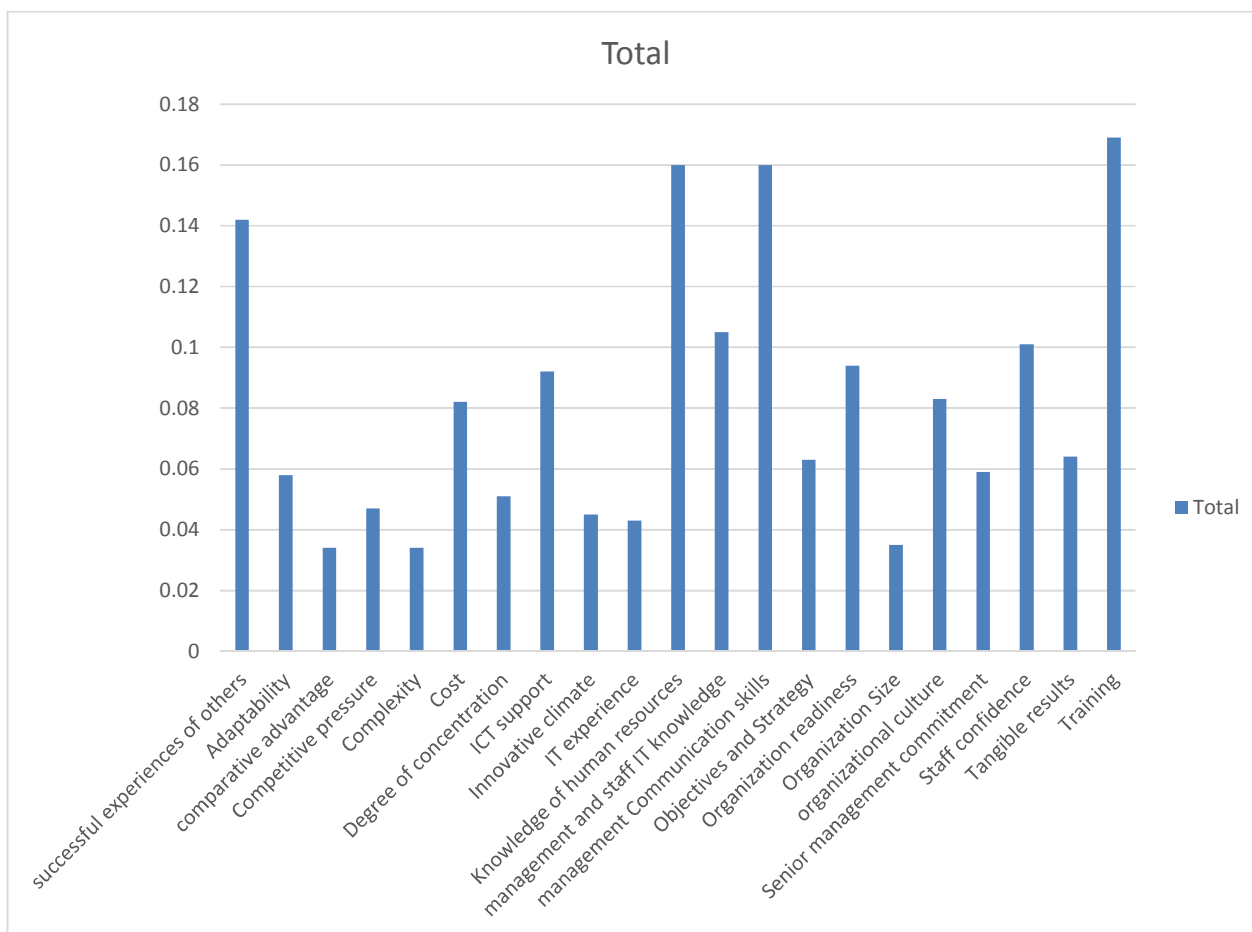


Figure 4- The final weight of the components in the National Iranian Oil Company

### *Fuzzy Screening*

After measuring the degree of importance of the criteria and sub-criteria, according to their mutual relations and effects on each other, and ranking them by using fuzzy network analysis process decision-making model, and analysis of the results using appropriate quantitative algorithms, such as fuzzy screening, the organization's readiness was evaluated to determine the level of its maturity based on the final components of the model presented in the study.

$A = \{A_1, A_2, A_3, \dots, A_n\}$ : in fact, a matter of screening including the three main components of a set of options for decision  $E = \{E_1, E_2, E_3, \dots, E_n\}$  and a set of expert  $C = \{C_1, C_2, C_3, \dots, C_n\}$  set of criteria, which is done in a two-step process (YAGER, 1993).

### *Determining the maturity level*

In order to determine the status of National Iranian Oil Company to accept and install a performance



appraisal system in which, after calculation of the final weights of the main criteria and sub criteria in the National Iranian Oil Company, at this stage, a questionnaire was prepared, and distributed among three expert staff to enter the weight and importance of each of the main criteria in their bank, and finally calculations were done using fuzzy screening method, which the final results of analyzes obtained on the state of readiness to implement the performance appraisal system in the National Iranian Oil Company are shown in Table 3.

Table 3- The evaluation results of the organization readiness for implementation of the performance appraisal system (Case study)

<b>Organization name</b>	<b>Organizational factor</b>	<b>Technological factor</b>	<b>Environmental factor</b>	<b>Human factor</b>
National Iranian Oil Company	M	H	M	L

As the table shows, the National Iranian Oil Company, in terms of organizational factors is in middle position, and requires little effort in this area. In terms of technology, it is in good condition, and does not require a lot of work in this area. In terms of the environmental index, the situation is average, and in terms of individual measures, the situation is not good, and great efforts are needed in this area. So, paying attention to the human factor in the organization is a vital factor in creating overall readiness for acceptance of the performance appraisal system and its successful implementation.

## Conclusion

Successful implementation of information system needs to be comprehensive in its different dimensions, so that the proper integrity and coordination between elements within the system, and also co-ordinate the whole system and its external environment can be created. Performance appraisal system, as one of the types of information systems, due to its high dependence on other systems and internal processes is prone to inconsistency and failure in the full deployment of the performance appraisal system program. Therefore, use of a comprehensive model to assess organizational readiness for acceptance and implementation of performance appraisal system, as one of the preconditions unavoidably, can significantly increase the chances for success.

In this study, by examining the performance appraisal system, related concepts, identification of key and effective components and sub-components specified, prioritizing and ranking them and studying models and frameworks for evolution of performance, readiness and organizational maturity in accepting the performance appraisal system, as well as taking advantage of relevant experts, in the form of Fuzzy network analysis process, key factors to measure organizational readiness for acceptance of performance

appraisal system were evaluated, identified, explained, rated and classified in relation with four factors of organizational, technological, environmental and human and 21 sub-criteria. Also, in this study, using good quantitative algorithms such as fuzzy screening method as well as laws related to dimensional analysis and indicators related to organizational capabilities to accept the performance appraisal system, tried to evaluate the degree of organizational maturity according to the main factors listed to implement a performance appraisal system. Thus, the architecture prototype to assess the readiness of the organization to accept the performance appraisal system was corrected and presented. It is clear that, with regard to the explanatory model, and offering a clear view of the need and assessment situation and organization's readiness assessment for the implementation of the performance appraisal system before deploying it can be effective in the successful implementation of the performance appraisal system and reduce operational risk for making it, particularly in terms of time and cost to implement and the staff resistance.

### Recommendations for future research

Finally, some recommendations for researchers interested in the study for future research are presented as follows:

1. However, in this study, the good criteria and measures were used to assess the organization's readiness to implement a performance appraisal system, but it should be borne in mind that, a researcher has developed these criteria by studying of the sources of the research, and used them in the research process and conceptual modeling. Rule, future research can consider and apply other metrics with respect to target and localization in their research.
2. Given that, in this study, fuzzy network analysis process was used to evaluate and rank the importance of the criteria, it is suggested that, in future research, combination of this technique with DEMATEL technique be used.
3. Because, in this study, the fuzzy screening method was used for the final step to assess the level of organizational maturity for the adoption and implementation of performance appraisal system, it is recommended that in future research, techniques such as fuzzy logic or other methods of measurement of the maturity level be used.
4. Finally, it is suggested that, to complement this research, a decision support system, as an decision-making expert system e designed based on assessment of readiness presented by which measuring the readiness of organizations using components presented is possible.

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# **AN EMPIRICAL ANALYSIS OF PRE AND POST MERGER IMPACT ON FINANCIAL PERFORMANCE: A CASE STUDY OF JORDAN AHLI BANK**

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## **Abstract**

The aim of this study is to analysis the pre and post-merger impact on financial performance of Jordan Ahli bank. In this study the post-merger financial performance of Jordan Ahli bank is measured by using financial and accounting ratios analysis from 2001-2004 before merger and 2006-2009 after merger. MS EXCEL 2010 was used to calculate ratios and SPSS software to analyze. For the analysis of before and after-merger performance 12 financial ratios were used in this study. As methodology of this study paired t-test statistic was used to measure the significant difference in financial performance. The results of this study show that out of 12 ratios it is clear of 8 ratios (66.67%) are in favor of after merger Jordan Ahli bank and 4 ratios (33.33%) are in favor before merger. On the basis of findings, it is concluded that financial performance of merger Jordan Ahli bank significantly improved in the post-merger period. Post-merger leverage, efficiency and liquidity ratios significantly improved while cash flow ratio insignificantly improved.

**Key words:** Merger, Banking sector of Jordan, Financial ratio analysis, paired t-test, Jordan

## INTRODUCTION

The Central Bank of Jordan (CBJ) was established in the late 1950s. The Law of the CBJ was enacted in 1959. In 1/10/1964 its operational procedures were started. The Central Bank of Jordan succeeded the Jordan Currency Board which had been established in 1950. The capital of the Central Bank of Jordan was increased approximately from one million to eighteen million Jordanian Dinars. The CBJ enjoys the status of an independent and autonomous corporate body, although its capital is entirely owned by the government.

The number of licensed banks operating in Jordan increased from 21 to 25 banks between 2000 and 2010; the banking sector includes 16 domestic banks (three of them Islamic banks), 9 foreign bank subsidiaries, Increase has resulted in an increase in the number of banks of foreign banks operating in Jordan from five banks in 2000 to eight banks in 2004, The Central Bank of Jordan granted Licenses to three Foreign Banks in 2004; These banks are: Blom Bank, Bank Audi and National Bank of Kuwait.

The largest five banks in Jordan are the Arab Bank, Housing Bank, Jordan Islamic Bank, Bank of Jordan and Jordan Ahli Bank, together control more than two-thirds of the total assets and three-quarters of total deposits.

On the other hand table 1 show the number of local banks dropped from 16 banks to 15 banks in 2005 due to merger of Philadelphia Bank with Jordan National Bank on 12.01.2005, then the number of licensed banks operating in Jordan returned to rise at the end of 2009 after the two banks obtain a license from the Central Bank of Jordan.

**Table 1 : Local and Foreign banks**

Year	Local banks		Foreign banks	Total
	Commercial banks	Islamic banks		
2000	14	2	5	21
2001	14	2	5	21
2002	14	2	5	21
2003	14	2	5	21
2004	14	2	8	24
2005	13	2	8	23
2006	13	2	8	23
2007	13	2	8	23
2008	13	2	8	23

2009	13	2	8	23
2010	13	3	9	25

Source: Central Bank of Jordan [www.cbj.gov.jo](http://www.cbj.gov.jo)

The banking law which took effect in 2000 is called the “Banking Law of 2000”, and amended in 2003. In general, the banking law addresses many topics:

the organization and management of banks, Islamic banks, bank licensing requirements and conditions for the operation of banks, accounts and financial statements, bank mergers, inspections and auditing, banking confidentiality, liquidation and corrective measures and penalties.

## Merger in Jordan

Table 2 show that in the banking sector in Jordan only one merger case was recorded; merger of Philadelphia Bank with Jordan National Bank on 12.01.2005.

**Table 2: Merged companies distributed by related sectors**

Sector	Number of Merged companies	Merged companies percentage
Industrial	10	43.48%
Financial and Banks	1	4.35%
Services	12	52.17%
Insurance	-	0%
<b>Total</b>	<b>23</b>	<b>%100</b>

\* Prepared by author

Jordan Ahli Bank (The name Jordan National Bank fell out of favor by the early 2005 in Jordan after merger) , Jordan Ahli Bank is a leading Jordanian institution, with a steeped national history and heritage. It was founded in 1955 and its main offices are in Amman. Ahli Bank was the sixth public shareholding company to be established in Jordan . Initial capital upon establishment: JD 250,000 (<http://www.ase.com.jo/en/2005>).

Resume trading on the shares of Jordan National Bank as of August 23, 2005. After the merger procedures of Philadelphia Investment Bank in the National Bank were finalized. The bank's capital became 66,050,000 JD. The

bank's code (JONB) and numerical code (111033) remains the same. On the other side the Chief Executive Officer (CEO) of Amman Stock Exchange (ASE) has decided to delist the shares of Philadelphia Investment Bank as of August 17, 2005.

According to our knowledge this is the first study in Jordan which measures the performance of Jordanian corporations' mergers before and after the merger, especially in the banking sector, based on accounting data from the merged banks. In this study, we will evaluate pre and post-merger of bank using ratios.

## **LITERATURE REVIEW**

There are mainly two approaches are used to evaluate the success of mergers and acquisitions. One is the operational performance approach, either measured through accounting data or through the estimation of cost and profit functions. The other approach explains the impact of merger announcements on the price (stock price) of publicly-listed banking companies.

Gjirja (2003) studied the efficiency impact of mergers and acquisitions in the Swedish banking sector. The purpose of this study is to evaluate the effects of the efficiency of bank mergers in Sweden. In this study a sample of 28 Sweden banks that underwent a merger during the year 1984 to 2002 are taken. This study used the un- balanced panel data analysis technique to test the significance. In addition, the analysis shows that post-merger, have no significant improvement in the technical efficiency of the bank. Sufian and Abdul Majid (2007) examined the merger's effect on the performance of the Singapore banking sector. In this study sample contains all banks that underwent mergers and acquisition during 1998-2004 in Singapore. In this paper Data Envelop Analysis (DEA) and Tobit regression are used to test the significance. The results suggest that bank profitability has a significant positive impact on the efficiency of banks; on the other hand poor credit quality has a significant negative impact on the performance of banks. Said, Nor, Wah Low and Rahman (2008) analyzed the effect of mergers and acquisitions in the Malaysian banking sector. The aim of this study is to make available proof of the proficiency improvements that banks experienced from the 1998—2004 merger application in Malaysia, and also to assess the performance of banking institutions. In this research a sample of ten Malaysian banks is selected. Three approaches to analyze the impact of mergers are used in this study namely paired sample t-statistics, Data envelopment analysis and regression analysis to test the significance. The results of this study showed that no significant improving in the productive efficiency of merged banks, many studies studied and examines the development of the financial

indicators, such as profitability, costs and efficiency measures, based on accounting data for the merged companies before and after the merger . But there are studies like Kemal (2011), Liargovas and Repousis (2011), Vitale and Laux (2012), Ahmed and Ahmed (2014) studied and examines the development of the financial indicators, such as profitability, costs and efficiency measures, based on accounting data for the merged companies before and after the merger.

From the studies above we can conclude that performance of the banks is affected by merger. It is examined from various studies that there is improvement in the financial performance of banks post-merger. But some other studies showed that there is no improvement in the financial performance of banks post-merger.

To our knowledge this is the first study in Jordan which measures the performance of Jordanian corporations' mergers before and after the merger, especially in the banking sector, based on accounting data from the merged banks. In this study, we will evaluate pre and post-merger the bank using ratios. Those ratios are used to analyze the financial statements; there are four main groups of ratios for banks:

1. Profitability ratios
2. Liquidity ratios
3. Leverage ratios
4. Cash flow ratio

## **HYPOTHESIS**

The following hypothesis is developed Based on the above review of literature:

**H<sub>0</sub>:** There is no significant improvement in Jordan Ahli bank overall financial performance after merger.

**H<sub>1</sub>:** There is a significant improvement in Jordan Ahli bank overall financial performance after merger.

To achieve the goal of the study the following section presents the methodology and data for our study, using the financial ratios, whether the performance of the bank has been improved through recent mergers.

## **METHODOLOGY AND DATA**

### **OBJECTIVES OF THE STUDY**



The main objectives of this study are:

1. To analyze and evaluate the impact of merger of Jordan Ahli bank on the financial performance.
2. To examine whether merger have improve the performance of Jordan Ahli bank.

### **Variables of the study**

The dependent variable of this study is merger ,and independent variables are the twelve financial ratios. independent variables are profitability ratios, liquidity ratios, leverage ratios and cash flow ratio

## **ANALYSIS AND RESULTS**

### **The capital adequacy ratio**

This ratio measures adequacy by the bank held to meet the risks that may be exposed, According to the Central Bank of Jordan instructed the regulatory capital must be at least 12% (This percentage is considered the minimum capital adequacy by the Central Bank of Jordan) of assets and risk-weighted items Off-balance-sheet items as well as market risk, Figure 1 show the trend of ratio during the period 2000 - June 2010 but it maintained a comfortable margin above the minimum required by the Central Bank of 12% (in 1997 the CBJ increased the minimum capital adequacy ratio to 12% and in 2003 doubled the minimum capital requirement) and the minimum set by the Basel Committee of 8%.. This ratio fell to 15.9 % and this is the lowest level during the ten years (2001-2010) in 2003, and it reached its highest level at the end of 2006 to 21.4%. This significant increase resulted mainly from the most banks increase their capital in 2006, and achieved high profits, which has reflected positively on the capital adequacy ratio. As at the end of June of 2010 the ratio stood at 19.4%, which is close to the figure in the previous year, which amounted to 19.6%.

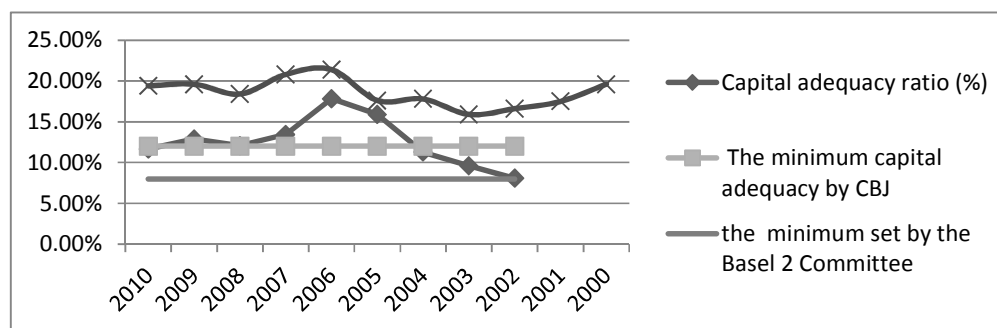


Figure 1

The banks maintain a comfortable margin of capital adequacy ratio during the period 2000 - June 2010 over the limit of a required by the Central Bank and the Basel Committee to lows, indicating that the banks, in spite of a major expansion, especially in facilities employing, still maintains adequate capital to meet the risks and this enhances the stability of the banking system in particular, and on the financial stability in general.

Table 3. Financial Ratios of Jordan Ahli Bank Pre and Post Merger

	After merger 4 years				Before merger 4 years			
	2009	2008	2007	2006	2004	2003	2002	2001
<b>Efficiency ratios / Profitability ratios</b>								
Return On Assets	0.83%	0.83%	0.55%	1.16%	0.38%	0.00%	-0.27%	0.01%
Return On Equity	8.69%	8.61%	5.50%	9.56%	6.14%	-0.01%	-5.86%	0.23%
Interest spread	49.88%	50.02%	47.21%	52.70%	55.08%	47.36%	37.31%	37.71%
Interest margin	2.59%	2.84%	2.91%	2.44%	1.89%	2.03%	1.67%	2.31%
<b>Liquidity ratios</b>								
Cash and Cash Equivalent to Total Assets	31.03%	34.30%	42.22%	42.97%	55.31%	48.54%	48.30%	41.36%
Investment to Total Assets	0.05%	0.39%	1.33%	1.99%	0.85%	1.33%	3.65%	4.86%
Deposits to Total Assets	67.29%	65.22%	62.89%	62.61%	83.13%	81.07%	74.91%	74.03%
Total Liabilities to Total Assets (Debt Ratio)	90.42%	90.36%	90.01%	87.78%	93.83%	94.39%	95.37%	94.89%
Net Credit Facilities to Total Deposits (Gross advances to total deposits)	54.33%	54.17%	48.20%	46.81%	32.17%	40.64%	44.25%	53.93%
<b>Capital ratios / Leverage ratios</b>								

Capital ratio ( Equity Ratio )	9.51%	9.57%	9.91%	12.15%	6.17%	5.61%	4.63%	5.11%
Total Deposits to Total Equity (Times)	7.07	6.82	6.35	5.15	13.01	13.84	12.78	12.39
<b>Cash flow ratio</b>								
Cash generated from net cash flow from (Used In) operating activities to Profit after tax (Times)	3.92	2.02	10.22	-10.63	43.62	-16565.38	-15.61	620.14

**Source:** Financial statement of Jordan Ahli Bank retrieved from [http://www.ahli.com/Annual\\_Reports.shtml](http://www.ahli.com/Annual_Reports.shtml)

Table 3 shows the data of various financial ratios of Jordan Ahli Bank. In the pre-merger scenario for the considered 4 years, the following financial ratios Return On Assets, Return On Equity, Interest margin, Investment to Total Assets, Net Credit Facilities to Total Deposits (Gross advances to total deposits) and Capital ratio (Equity Ratio) showed increasing trend for the considered period.

In the post-merger scenario, it was observed that Interest spread and Cash and Cash Equivalent to Total Assets showed decreasing trend for the considered period but Deposits to Total Assets, Total Liabilities to Total Assets (Debt Ratio), Cash generated from net cash flow from (Used In) operating activities to Profit after tax and Cash generated from net cash flow from (Used In) operating activities to Profit after tax showed a mixed trend.

### Paired sample t-test

Paired sample t-test is a statistical technique that is used to compare two population means in the case of two samples (useful when you have two interval/ratio variables) that are correlated. Paired sample t-test is used in between the 'before-after' or 'pre and post' studies, or when the samples are the matched pairs, or when it is a case-control studies.

**Table 4. Analysis of Financial Ratios of Jordan Ahli Bank**

Financial ratios	Status	Mean	Standard deviation	t-value	p-value Sig (2-Tailed)
<b>Efficiency ratios / Profitability ratios</b>					
Return On Assets	Pre-merger	.097	.188	11.306	.001*
	Post-merger	.842	.249		

Return On Equity	Pre-merger	1.937	2.812	-5.187	.014*
	Post-merger	8.090	1.779		
Interest spread	Pre-merger	4.436	8.521	-1.403	.255
	Post-merger	4.995	2.242		
Interest margin	Pre-merger	1.975	.268	-3.716	.034*
	Post-merger	2.695	.218		
Liquidity ratios					
Cash and Cash Equivalent to Total Assets	Pre-merger	4.837	5.696	6.492	.007*
	Post-merger	3.763	5.894		
Investment to Total Assets	Pre-merger	2.672	1.903	1.250	.300
	Post-merger	.940	.884		
Deposits to Total Assets	Pre-merger	7.828	4.499	4.170	.025*
	Post-merger	6.450	2.195		
Total Liabilities to Total Assets (Debt Ratio)	Pre-merger	9.462	.661	12.975	.001*
	Post-merger	8.964	1.254		
Net Credit Facilities to Total Deposits (Gross advances to total deposits)	Pre-merger	4.274	9.011	-2.740	.071
	Post-merger	5.087	3.935		
Capital ratios / Leverage ratios					
Capital ratio ( Equity Ratio )	Pre-merger	5.380	.661	-12.743	.001*
	Post-merger	1.028	1.255		
Total Deposits to Total Equity	Pre-merger	1.300	.612	10.976	.002*

(Times)					
	Post-merger	6.347	.852		
<b>Cash flow ratio</b>					
Cash generated from net cash flow from (Used In) operating activities to Profit after tax (Times)	Pre-merger	1.725	298.705	1.123	.343
	Post-merger	4.545	3.887		

**Note:** \*Significant at 5%

Table 4 presents the descriptive statistics and analysis of the various ratios of Jordan Ahli Bank. The average ratios of return on assets, Return On Equity, Interest spread, Interest margin, Net Credit Facilities to Total Deposits (Gross advances to total deposits), Total Deposits to Total Equity and Cash generated from net cash flow from (Used In) operating activities to Profit after tax of post-merger was found to be more compared before merger. This indicates that in the post-merger scenario the financial performance of the Jordan Ahli Bank has improved in terms of these ratios. However, the mean ratios of Cash and Cash Equivalent to Total Assets, Investment to Total Assets, Total Liabilities to Total Assets (Debt Ratio) and Capital ratio (Equity Ratio) of post-merger were found to be less compared to pre-merger.

To test whether there is significant difference in the financial ratios pre and post-merger, paired t-test is applied using SPSS. The summary of the analysis presented in table 4. Return on assets, Return on equity, Interest margin, Cash and Cash Equivalent to Total Assets, Deposits to Total Assets, Total Liabilities to Total Assets (Debt Ratio), Capital ratio ( Equity Ratio ) and Total Deposits to Total Equity the p-value is less than 5 percent, it can be concluded that there is significant difference in these ratios before after merger. For Interest spread, Investment to Total Assets, Net Credit Facilities to Total deposits (Gross advances to total deposits) and Cash generated from net cash flow from (Used In) operating activities to Profit after tax the p-value was greater than 5 percent so it can be concluded that there is no significant difference before and after merger.

**Table 5 Total ratios comparison**

<b>GROUP OF RATIOS</b>	<b>Total number of ratios calculated</b>	<b>Number of favorable ratios pre-merger</b>	<b>Number of favorable ratios post-merger</b>

<b>Efficiency Ratios (Profitability Ratios)</b>	4	1	3
<b>Liquidity Ratios</b>	5	2	3
<b>Capital/Leverage Ratios</b>	2	0	2
<b>Cash flow ratio</b>	1	1	0
<b>Total</b>	12	4	8
<b>Percentage</b>	100%	33.33%	66.67%

Table 5 shows that out of 12 ratios it is clear that 8 ratios (66.67%) are in favor of post-merger Jordan Ahli bank and 4 ratios (33.33%) are in favor of pre-merger. This shows that merger has improved the performance of Jordan Ahli bank. We would reject the null hypothesis and accept the alternative hypothesis at a significance level of 0.05.

## CONCLUSION

Merger is in the present time more important than ever, especially in financial sectors. In this study post-merger performance analysis of Jordan Ahli Bank in Jordan was discussed. In this study it was seen that post-merger of Philadelphia Bank with Jordan National Bank (Jordan Ahli Bank), Among the Jordan five largest banks, the Arab Bank is the most in total, while the Housing Bank places second. Jordan Islamic Bank comes third, followed by the Bank of Jordan and Jordan Ahli Bank. together control more than two-thirds of the total assets and three-quarters of total deposits. For this purpose a hypothesis was developed which is “There is a significant improvement in Jordan Ahli bank overall financial performance after merger”. In this regard key financial data was taken from the website of Jordan Ahli bank.

The financial ratios are the analytical tool used to examination of financial performance of businesses pre and post-merger of Jordan Ahli bank during the before merger period (2001-2004) and the after merger period (2006-2009). In addition, Paired sample t-test is used in this study.

Total 12 ratios are applied which are efficiency/profitability ratios, liquidity ratios, and capital/leverage ratios, cash flow ratio. Out of 12 ratios it is clear that 8 ratios (66.67%) are in favor of post-merger Jordan Ahli bank and 4 ratios (33.33%) are in favor of pre-merger. This shows that merger has improved the performance of Jordan Ahli bank. We would reject the null hypothesis and accept the alternative hypothesis at a significance level of 0.05.

### **Limitations of the study**

The limitations of the study are

1. Only merger's effect was seen on Jordan Ahli Bank.
2. This study does not include any other corporate sector of the economy.
3. Limited ratios are applied.

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# Ownership and Control Structures A Case Study

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## Abstract

This is a study on separation of ownership and control in Southeast Europe, and in particular it is a case study of Macedonia. For structured analysis of this case study we use the World Bank Microdata Library, specifically the Enterprise Surveys which contains firm-level data of a representative sample of economies private sectors.

What we are interested in are the ties of ownership and control and whether such linkages contribute to the development of domestic firms and the overall economy. Corporate governance systems and ownership structures are economic fundamentals which influence economic behavior and corporate performance. Market-oriented corporate systems and network-oriented corporate systems are novelty in much needed enterprise restructuring process due to economic transition.

This paper is a contribution to the research developing the business aspects of the Southeast Europe economy, as there is constant lack of scientific papers that deal with the specific issues of corporate governance and enterprise restructuring.

*JEL Classifications: G30, G38, L33, O11, P31*

**Keywords:** Ownership, Control structure, Corporate Governance

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## **1. Introduction**

The separation of ownership and control can date back to Adam Smith where it is clearly indicated that managers manage other people's money and thus there needs to be 'anxious vigilance' on their work, because they tend to exercise 'negligence and profusion' (Smith 1776). Further, contemporary attention to this phenomena was given by the works on provate property and modern corporations by Berle and Means (Berle and Means 1932).

It is evident that when important decision agents do not have proportional relations of their decisions to wealth effects, incentive conflicts arise between owners (principals) and managers (agents). Thus, an agency problem occurs. This problem is caused by separation of ownership and control and has been subject to extensive research (Smith 1776; Berle and Means 1932; Blomström and Kokko 1998; Zhou, Li et al. 2002). More recently ownership and control have been examined through the prism of ownership structure and performance, more specifically takeovers and share stakes (Aitken, Harrison et al. 1996; Girma, Greenaway et al. 2001).

Further, theoretical grounds were enriched with empirical studies linking ownership and legal environment, especially with investor protection (Balasubramanyam, Salisu et al. 1996; Conyon, Girma et al. 2002; Alfaro, Chanda et al. 2004). Also, there has been research on links between ownership and internal control which impacts executive performance (Dosi and Soete 1983; Hubert and Pain 2001). Control structures can be complex, thus it becomes trickier to recognize controlling investors and the leverages in majority voting (Conyon, Girma et al. 2002; Djankov and Murrell 2002).

## **2. Ownership and Control**

Separation of ownership and control can be observed with reference to owner managed firm. In that case the owner and manager 1) makes management decisions and 2) has share of the profit (residual claims). On the other hand, in publically traded company the shareholders have residual claims; however lack direct control over the board, which is usually enforced through voting rights. Therefore, shareholders have limited rights to control the firm and are not allowed in day-to-day decision making. As shareholders have the right to elect the board of directors, they use so-called proxy control i.e. voting rights.

## 2.1. Separation of ownership and control as a source of the agency problem

The agency relationship is usually defined as a contract that defines the engagement of the agent to perform service on behalf of principle by delegation of authority (Smith 1776). Hence, such relationship occurs between shareholders and managers in a joint-stock company, which is usually taken as a classic example. On the other hand, if there is a case where the owner and the manager are one of the same, there is no agency problem. This problem has been much researched and many useful propositions have been given by the literature.

External and internal monitoring mechanisms can be used as bas for control. Consequently, external control takes place through couple of mechanisms including capital markets performance, shareholder block capacities and the takeover bids on the market. Alternatively, internal control can take shape throughout the integrity of the firm as monitoring of the levels of management and between managers, especially owing to the board of directors (Zhou, Li et al. 2002). It has been argued that most efficient and low cost mechanism is the board of directors as it is common denominator for all companies no matter the size. The board also needs outside members so that it can control discretionary decisions of top managers, and that is due to the fact that outside members have incentives to develop standings as experts to foster the reputation of the company. Indeed, board members of low performing companies are less likely to become board members of any other company (McGuckin and Nguyen 1995).

Ownership can be very different between joint-stock companies i.e. it can differ between two extreme options, that is, it can be concentrated in blocks of stocks in the hands of couple individuals or it can be widely dispersed among the workers and other stakeholders including the cases of parent-daughter formations.

## 2.2. The Benefits of the Separation of Ownership and Control

There are three main factors determining the benefits of separation of ownership and control: 1) in some circumstances hierarchical decision making has upper hand over market allocation, 2) optimal firm size is difficult to estimate mainly due to economies, hence decision making requires complexity, 3) changing market conditions impact investment strategy and boards are able to pool and diversify for better allocation of recourses.

Market structures and hierarchical structures impose transaction costs (costs suffered in making an economic exchange or the costs of participating in a market). When it is the case and if such costs are high, hierarchical decision making has better efficiency over market allocation (Williamson 1979). Large size of a firm combined with hierarchical organization can have advantage over other organizational forms in transactional and productive efficiencies by using separation of ownership and control. In such cases benefits that prevail over costs, especially agency costs and thus it is expected to have high level of separation of ownership and control (Arrow 1974; Fama and Jensen 1983).

## 2.3. The Cost of the Separation of Ownership and Control

The separation of ownership and control is typified as agency problem (Jensen and Meckling 1976). There is separation between principals and agents i.e. shareholders and managers respectively. Further, agents characterize with maximal personal utility function and principals aim for control over behavior in

order to achieve profit. In such relationship inevitably there are costs, that is, costs of providing incentives to agents to get their goals in line with those of the principles. Therefore, the costs of separation of ownership are principal-agent costs: ‘the monitoring expenditures by shareholders, the bonding expenditures by managers and the residual loss from the divergence of behavior (even with monitoring and bonding) from the ideal’ (Bouckaert and De Geest 2000).

The literature shows that agency analysis puts different utility functions of managers and usually opposed to those of their principals. So, agency analysis puts in place incentive schemes aimed at inclining managers’ objectives to those of their principles, and such systems are based on control and reward performance. Nevertheless, there are some problems with this notion; specifically the compensation system and how it can be enforced as there are conflicting incentives. There are two concepts that indicate problems related to the separation of ownership and control. The first one is that there is no solid position that principles should have the ability to control, as it can undermine the benefits of the process. Second, it is not socially enviable for agents to act in the best interests of their current principals.

Further, in order to estimate costs of separation of ownership and control there are a number of steps incorporating communication of societal goals, approximation of managerial behavior in relation to those goals and formation of institutional arrangements in terms to lower the costs. It must be said that managerial behavior might not be in line with the ideal imposed because of two main reasons: 1) managerial incentives (a hazard problem) and 2) managerial ability (they could be incompetent), which is defined as adverse selection problem (Goergen, Mallin et al. 2010).

## 2.4. Mechanisms for Mitigating the Costs of the Separation of Ownership and Control

There are mechanisms for mitigating the costs of ownership and control as managers might be irrational and inefficient while pursuing their personal goals. These mechanisms are directed towards correction of behavioral incentives in order to conform agents' behavior to the goals of principles. Generally we can derive number of basic categories, which are to be explained below.

a) Business Failure

Business failure is one of the basic mechanisms that evidently shows incompetence and selects managers on bases of merit. It is well expected that business failure is serious constrain of moral hazard and severe correction to manager's behavior. When there are no other mechanisms of control, the market is a corrective force that rewards or fails firm management. If managers are not able to commit their behavior to benefit residual claimants (principles), it is to be expected that the principles (shareholders) will not be inclined to further investments in development of the firm as they do not exercise direct control. Asymmetric information will result in elimination from the markets (Akerlof 1970).

b) The Market for Corporate Control

When there is functional market for corporate control directors are strained to increase value, therefore increasing market share worth, otherwise they are faced with loss of their job. Such markets reduce the cost of separation of ownership and control because managers act upon market pressures albeit no direct control imposed by shareholders. The market for corporate control in this way is useful for mitigation of adverse selection and moral hazard (Baysinger and Butler 1985; Romano 1991; Daines and Jon 1992; Berndt and Gupta 2009).

Nevertheless, the market for corporate control has downside as a mechanism for mitigating the costs of the separation of ownership and control entangled with the efficient market hypothesis. Misbehavior of

manager is to be restricted by takeover activity/threat, and in order this to be the case there has to be a correlation between incompetence and stock price (Stout 1988).

#### c) Corporate Governance Structure and Oversight

The corporate governance structure is comprised of relations, mechanisms and processes that are employed in the control of corporations; hence they single out the dissemination of rights and responsibilities among different participants. A very important function of corporate governance is direction of the company, and having decision making structure includes the rules and procedures. Corporate governance sets objectives in line with the social, regulatory and market environment while including mechanisms for monitoring actions, policies and decisions of principles and their agents. Indeed, practices of governance are to align to the interests of stakeholders. Therefore it is managers' duty to maximize shareholder value (Friedman 2007). In order for a firm to have better oversight over the work executive managers there has to be inclusion of outside directors.

Some of the suggestions for a possible corporate governance reform towards better oversight are related to proliferating of the influence of outside directors. Consequently, there can be increase the number of outside directors (more extreme proposals include majority of outside directors), the process of nomination and directorial compensation can be removed from inside directors, retirement ages of inside directors should be made mandatory, requirements for shareholder involvement of directors into the firm as they should own shares, etc. (Jensen 2010).

#### d) The Alignment of Direct Managerial Financial Incentives

Direct financial incentives (instruments, warrants, shares, etc.) can be a good way to inline managerial behavior and personal goals to those of principles therefore maximizing share value. This is because it

share value is seen as viable mechanism for reducing agency costs, targeting directly the problem of moral hazard, however this mechanism does not affect adverse selection.

Incentives in financial instruments also could be introduced in combination with corporate governance mechanisms of control to create stronger incentives for managers, increase performance and value. There can be a corporate governance structure with majority of outside board members as control and significant compensation incentives in financial instruments for well performing managers. It must be noted that incentives in financial instruments that relay strongly on higher share price could induce inefficient risk taking behavior of managers that by any cost try to push the price of shares higher while risking the structure and well-being of the firm (Jensen and Murphy 1990).

#### e) Shareholder Empowerment

Another mechanism for reducing agency costs could be shareholder empowerment, that is, increase of powers of shareholders over those of the management. This mechanism is envisioned as a possibility to give shareholders managerial powers. Anyhow, it is shareholder empowerment is also criticized on the bases that it will compromise centralized management and thus reduce efficiency of overall management (Bratton and Wachter 2010).

The mechanism of shareholder empowerment gives more power of public shareholders to govern the firm while reducing costs of involvement, and it is usually best introduced in firms and markets where institutional investors are dominant. Institutional monitoring can cause raise of costs, representing only some of the shareholders, insider trading, political influences, etc. (Gilson and Kraakman 1991; La Porta, Lopez-de-Silanes et al. 2000).

## **The Case of Macedonia**

The base of the transformation process from command to market economy of transition economies is a liberalization paradigm i.e. privatization, liberalization and stabilization, and it is well founded on the presumption that the ownership transformation is not just a necessary condition for a market economy, however a merely sufficient one. Hence, the system that was introduced was largely dependent on different policies of ownership and control hastening the transformation. Characteristics that are typical for such process: first, undeveloped institutional constraints on discretionary managerial behavior such as property-rights, governance structures and market institutions; second, economic agents are quasi-state officials/owners/managers with lack of international existence; third, aggressive rent-seeking culture; fourth, the winners on the market are those perusing asset-stripping and export of capital; and fifth, the objectives of new owners of privatized enterprises are not profit maximization, but rather unfair competition (Kornai 2000).

There is comprehensive literature analyzing ownership and control structures, where empirical studies confirm the difference in performance between state and privatized firms (Conyon, Girma et al. 2002; Apostolov 2011; Apostolov 2013), as well as, that newly formed private firms are more efficient than both state and privatized firms (McGuckin and Nguyen 1995; Apostolov 2013). In this study we use integral theoretical approach which is based on property rights and share of ownership to study the relation to control structures. This research does not use profit maximization as core hypothesis, but rather it is inclined towards the utility-maximization hypothesis (Conyon, Girma et al. 2002). This hypothesis was accepted as main behavioral hypothesis which narrowly explains individual choices made by managers, workers and owners.

### **Ownership and Control Structures in Macedonia**

The economy of this country is characterized by three major groups of firms classified by type of ownership: 1) corporatized state-owned, 2) private firms established de novo, and 3) foreign-owned firms.



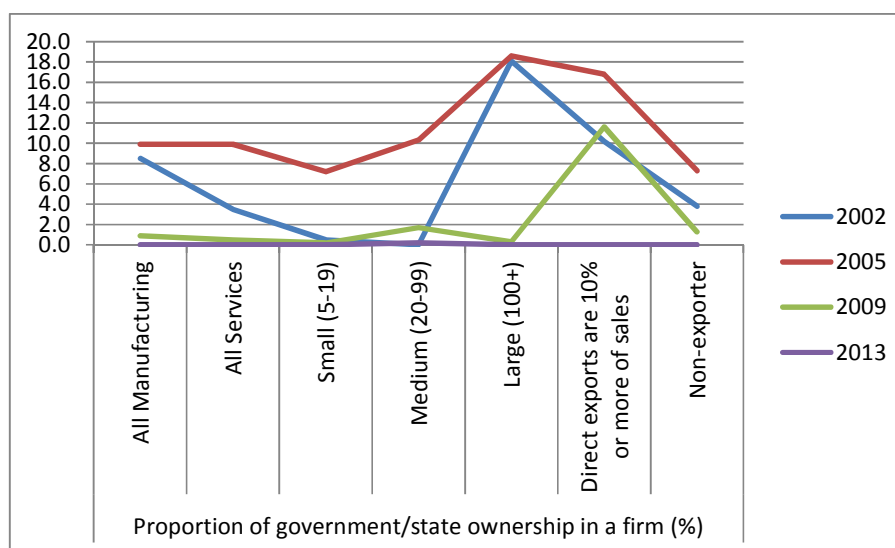
# Property-Rights Structures

## 1. Property-Rights Structures in Corporatized State-Owned

Different kinds of business organizations can be examined through the property-rights approach. This research uses this approach as foundation for the examination of the ownership structure of corporatized state-owned and private firms established de novo.

The state sector is characterized by corporatized enterprises. Corporatized state-owned firms have property-rights structure which is linked to state ownership of assets. In such case the government appoints a board of directors as management of the firm and owns the right of residual risk. The key agents of property rights is the owner i.e. the government and the managers appointed through board of directors. The risk bearing is appropriated by the state; whereas, the function of management is assumed by managers. According to the property-rights theory (Driffield and Munday 1998), the government must bear the residual consequences from the shocks. Hence, the managers have less motivation to manage it properly, and in practice the ‘asset – tunneling’<sup>5</sup> phenomena (Mata and Portugal 2004) is common.

Figure 1. Macedonia- Proportion of state ownership



Source: World Bank Microdata Library - Enterprise Surveys 2015

<sup>5</sup> ‘the transfer of assets and profits out of firms for the benefit of those who control them’

## 2. Property-Rights Structures in Newly Formed Private Firms

Newly formed private firms have distinct characteristics of their ownership structure which can be classified in two main groups. First, most of them are sole proprietorships where the owner is also a manager, and that constantly invokes the principal–agent problem in the control segment (who controls whom?). Second, few newly formed firms function as a proper company i.e. their ownership structure has the following shortcomings: 1) one party-private firm that concentrates all assets under its control; 2) all the shareholders own the right of residual risk; 3) the controlling shareholder appoints the other members of the board of directors as managers; 4) the shareholders, especially if also employees, are pressured to sell the shares to the board through public offering. The personal welfare of the largest shareholders is directly related to the ownership structure which makes management decision very personal and inclined to the mistakes of owner/manager.

Figure 2. Macedonia- Proportion of private domestic ownership

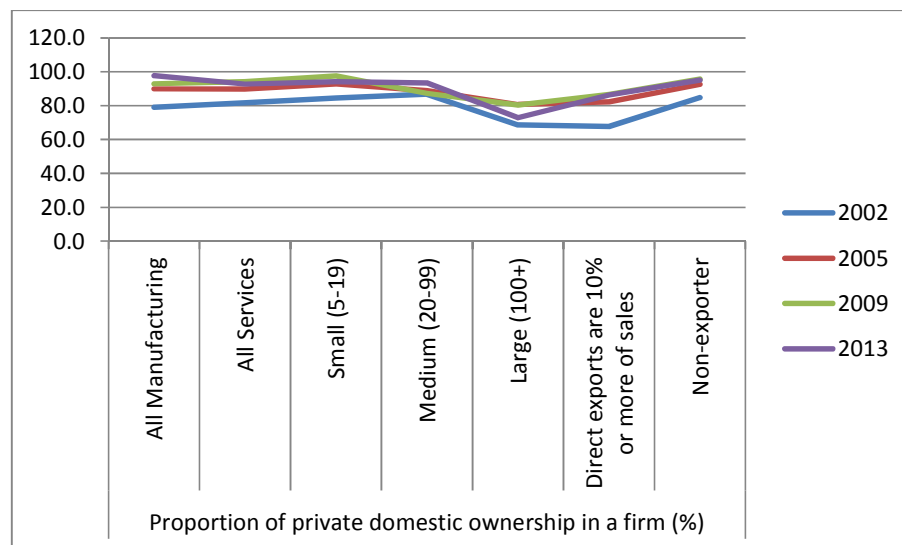
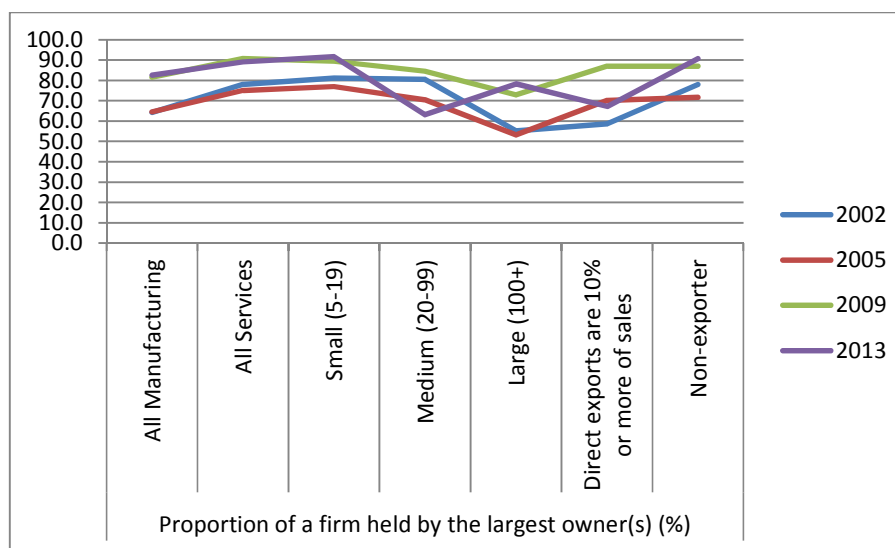


Figure 3. Macedonia- Proportion of firm held by the largest owner



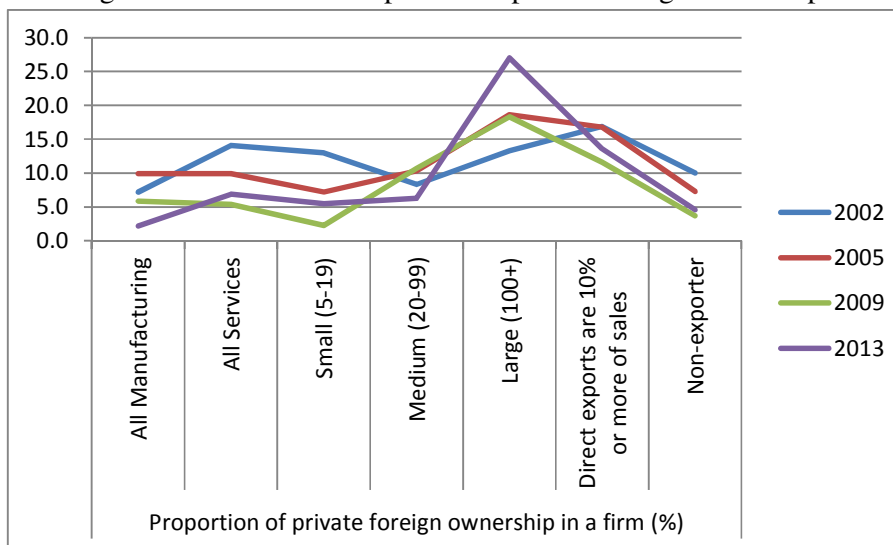
Source: World Bank Microdata Library - Enterprise Surveys 2015

### 3. Property-Rights Structures in Foreign-Owned Firms

The basic way for a firm to enter a market through foreign direct investment would be to set up a directly-owned subsidiary. There are other international companies that do not use such flat ownership structures, and enter into the market with more complex forms of ownership structure (Gomes-Casseres 1989; La Porta, Lopez-De-Silanes et al. 1999). Foreign direct investments have increased fraction in Macedonian economy, and understanding how they are organized is important for two reasons. First, the ability to create complex ownership structures that reach across borders can affect firms' real choices, such as, asset location, employment, or production. Second, firms design the internal structures to circumvent legal constraints imposed by their host countries, and unfortunately it is the case also in the analyzed country (Kesternich and Schnitzer 2010). Mainly there are two important ownership structures developed in the Macedonian economy with dominance of foreign ownership: 1) buy-outs of previously well-to-do state owned companies where the foreign owner has the controlling or whole ownership and 2) Greenfield and Brownfield investments due to imposed government measures (mostly in Technological Industrial

Development Zones (TIDZs)) where ownership is complete, but they are exempt from domestic tax and customs system.

Figure 4. Macedonia- Proportion of private foreign ownership in a firm



Source: World Bank Microdata Library - Enterprise Surveys 2015

## Enterprise Behavior

### 1. Enterprise Behavior in Corporatized State-Owned

There are specificities related to the ownership structure and behavior of corporatized state-owned companies. Further, most important probably is the fact that they have conditioned property-rights structure, that is, the only nominal owner is the government. There is Board of Directors, but most often than not, managers have dominant sway in decision-making. In general terms there is separation of ownership and control, nonetheless weak state control through boards of directors is major reason for great managerial freedom of choice and accumulation of capital at the expense of the company (Aivazian, Ge et al. 2005). Such position of the Board of Directors is due its composition, to be exact; it consists of representatives nominated by the sole owner (the government), who have interests that are not in line with those of the company or in most cases definitely different (Erakovic and Wilson 2005). This is why corporatized state-owned enterprises exercise passive market strategies and only make profit if they are natural monopoly (even this

could be questioned), hence passive managerial strategies of restructuring are common and tied to 'asset tunneling' (Shirley 1999). Performance indicators are low and will remain such due to disinvestment in their capital and equipment base.

## 2. Enterprise Behavior in Newly Formed Private Firms

Newly formed private firms have concentrated ownership where the dominant owner has majority 50% to 80% or it is sole owner with up to 100% of the company. The basic characteristic of such ownership structure is that the dominant owner is de-facto manager of the enterprise (Li, Vertinsky et al. 2004). This is in strict collision with separation of ownership and control and the essential source of defective management of the firm, where it is not expected efficient managerial behavior but rather a firm driven by personal incentives and idiosyncrasies. These companies also have passive managerial strategies of restructuring and defensive position regarding cooperation with outside/foreign companies in order to protect capital (usually tied to the personal wealth of the owner) (Estrin, Hanousek et al. 2009). Nevertheless, newly formed private firms have better performance indicators (profitability, productivity, and age of capital) compared to all the other firms. The hope is that they will adopt to market conditions as the time passes by and restructure their corporate governance functions (Li and Xia 2008).

## 3. Enterprise Behavior in Foreign-Owned Firms

Present literature on productivity spillovers can be separated into two general categories: inter-industry, subject to research is inter-industry dynamics i.e. horizontal spillovers; and intra-industry, mainly focused on vertical spillovers.

The literature gives negative, horizontal outcomes usually conditioned on several intra-industry factors in different parts of the world (Blomström and Sjöholm 1999; Konings 2001;

Gorodnichenko 2007).

Nevertheless, there are positive, vertical outcomes noticed in many studies which deal more specifically and consider factors in depth, such as region of origin and export orientation (Monastiriotis and Alegria 2011), distinctiveness of beneficiary economy and related FDIs (Acemoglu, Griffith et al. 2010), firm and sector characteristics (Halpern and Muraközy 2007; Keller and Yeaple 2009).

## Discussion

### *Possible paths*

Due to the analysis we can establish relation between ownership and control structures. Indeed, there are positive and negative pressures of introduced policies on ownership in this case study, however it is evident that overall, there is satisfactory picture of governance and enterprise restructuring progress.

The changes in ownership shapes control structures within specific characteristics of national governance systems to overall economic movements, with enormous influence of especially foreign direct investments and influx of foreign ownership. Thus, it is apparent that the new way of functioning of the systems creates an endogenous competitive characteristics for the home companies due time, through the process of learning and cooperation with foreign companies or their capital.

However, there is still more to be done in order to bring these economies closer to the standards of developed ones. Indeed, it is needed considerable improvement of corporate governance, institution-building to control agency problems and imposing already adopted regulation, as well as, enforcing new enterprise restructuring policies, within existing policies of overall transition economy restructuring.

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# TO ENHANCE REVENUE GENERATION VIA UTILIZATION OF GOVT., INSTITUTIONS AND SMES RATHER THAN TAXES\*

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## Abstract

Specifically the governments of developing countries are imposing the huge amount of taxes on the general public and because of long time economic fundamental unchanged system; these governments are unable to generate the big revenue from its own government institutions that is why the developing countries are facing the economic problems towards success. The institutions working directly under governments at least those should be self sufficient for their own needs and profit making. Government should also emphasis SMEs by implement new technology. If the SMEs of any developing countries will perform well then it can enhance the share of GDP annually and by exporting the goods that country can earn a better foreign reserve and can compete at inter-continental level. By adopting these ways a country can lead towards diversified growth performance.

**Keywords:** Revenue generation, taxes, developing countries, SMEs and diversified growth

**JEL classification:** E62, H71, P13

**Note:\*** This paper is original theoretical version with personal suggestion and institutions mean the government institutions of developing countries & SMEs should participate in huge revenue generation.

## 1. INTRODUCTION

All over the world, every country's government depends on the taxes and then they run their works by

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utilizing these taxes for the welfare of general public, development of infrastructure projects, defense, interior and even exterior matters. There is different kind of taxes and government collects it by adopting various ways directly and indirectly from the general public and the corporations on their income and sales basis. The basic focus we will emphasis is that every developing country has its own government institutions but their performances are not satisfactory. So, the governments of developing countries should take keen interest to care and boost the capacity of utilizing these institutions (Government Capital Assets) and generate the revenue because the governments have the authorities and can easily manageable with sensible and necessary actions. The associated focus of the governments should also on the development of SMEs (Small and Medium Sized Enterprises) because every developed country got success only by the help of manufacturing goods by SMEs and that became the reason of increasing GDP ratio every year and took placed in high level economies like developed countries France, Germany, Australia and Japan etc., (World Fact Book, 1991). Now we define some common government institutions which are working under government administration supervision. These institutions are railways, local city transports, national airlines and government hospitals. Every developing and less developed country are not managing actually these institutions very well that's why they are facing a lot of issues to stimulate the revenue and they are automatically unable to serve for their nations in accurate manners. Suppose if any country a national asset means a government institution like "Railway" is performing excellent services and very helpful for the transportation of general public then automatically every person would like and prefer these services and its revenue will be generated at extreme level. So, it means that government generated a big part of revenue by providing services rather than huge burden of taxes on general public. This way, that government is earning money simply by the consent of general public.

The other aspect, we already defined is the SMEs development. In this context initially every government should put maximum effort to buy or innovate of small level technologies and the access to these technologies should be very easy by the general public or small level business men. If the government works for these initial steps then by utilizing these new technical facilities the general public

will involve in the manufacturing of small level goods. With the passage of time that country will show the better performance to boost the cottage industry of that nation and will move to progressing economy by increasing its GDP level.

According to ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT <sup>10</sup>(OECD on June 2004) the 2<sup>nd</sup> CONFERENCE OF MINISTERS RESPONSIBLE FOR SMALL AND MEDIUM-SIZED ENTERPRISES, SMEs development requires a crosscutting strategy that touches upon many areas (e.g. ability of governments to implement sound macroeconomic policies, capability of stakeholders to develop conducive microeconomic business environments, inter alia, through simplified legal and regulatory frameworks, good governance, abundant and accessible finance, suitable infrastructure, supportive education, sufficiently healthy and flexibly skilled labour as well as capable public and private institutions, and the ability of SMEs to implement competitive operating practices and business strategies). Thus, SME development strategy must be integrated in the broader national development strategy and/or poverty reduction and growth strategy of transition and developing countries. SMEs must be able to respond quickly and efficiently to international market signals to take advantage of trade and investment opportunities and reap the benefits of the international trading system. This means they need to be competitive and productive. Effective business support systems are needed to enhance competitiveness and productivity of SMEs.

With this initial elaborating the different aspects we can see that just only imposing taxation is not only the way to earn or generate the revenue by the governments. However there is a need of many structural reforms and we should replace the old economic drivers with new one to achieve a diversified economical growth of a developing and less developed country.

## **2. RESEARCH AIM**

The relevance of revenue generation in the developing nations serves as a plan of action to ensure consistency and guide towards the effective growth of the country via utilizing the government owned organizations and by the promotion of Small and Medium Sized Enterprises. This study seeks to examine

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<sup>10</sup> The content is taken from OECD 2<sup>nd</sup> Conference dated 2-5June-2004 of Ministers responsible for SMEs



the methods and new innovations will be followed in the government policies to boost the economy level of a country.

## **2.1 RESEARCH OBJECTIVES**

The research objectives align segmented components which the study aims to achieve and outline them in sequential order to ensure collection of relevant facts that leads to successful compilation of meaningful actualities by taking different measures. The general objectives are outlined as follows:

- Describe the revenue generation and the various ways to earn money in government sectors.
- Discuss the process of revenue generation by diversified investments.
- Define the imposition of various taxes as a burden on general public.
- Explain the components of Taxes which have dual aspects positive and negative.
- Design a strategy to develop the Small and Medium Sized Enterprises (SMEs) for revenue enhancement.
- SMEs will take participate in the richness of Gross Domestic Product (GDP) and will be beneficial for the export and directly involvement to earn foreign reserves for the developing nation.
- Developing governments will increase revenue by institutions and SMEs rather Taxes.
- A huge no of people will be employed to indulge in SMEs sector by implementing this research

## **2.2 SCOPE OF THE STUDY**

Developing a plan of action to implement this research is a transparent path towards the growth of a country. Successful accomplishment of targets set emanates from exact design of revenue generation and such act should be in consonance with government's strategic, tactical and operational objectives. Assessing the effects of revenue generation via utilizing the government institutions and SMEs development signifies the importance of techniques set by governments. The significance of this study is noteworthy to less developed and developing countries and also for the cottage industry and the

employment of idle people.

### **3. LITERATURE REVIEW**

#### **3.1 Definition of Revenue Generation and different ways to earn revenue by government**

In the common meaning the revenue generation is a process in which the organization markets and sells its product or offer services to earn income. Here we are discussing in a different context like revenue generation by the governments of developing countries specifically where these governments depend on the taxes only and performing not suitable services as required by the general public. While we see the governments in the developed countries, there they are performing extra ordinary services for the general public and major part of nation is satisfied and getting the extreme services by these governments. Here the question is that how these developed countries are providing the extreme level services? We can elaborate in a very simple form like they have developed and worked on the new technology; these government institutes are equipped with the latest scientific facilities to overcome domestic problems by themselves. They do not go out to the rest of world to resolve these issues, they already have trained their government staff to practice the modern way of life.

The term revenue has been defined by various authors in different ways. Adam (2006) defined revenue as the fund required by the government to finance its activities. These funds are generated from different sources such as taxes, borrowing, fine, fees etc. It is also defined as the total amount of income that accrues to an organization (public or private) within a specified period of time (Hamid, 2008). States revenue comprises of receipt from taxation as well as those which are not the proceeds of taxation, but of either the realization from the sale of government properties or other interests and returns from loans and investment earning. Bhatia (2001) contends that revenue receipt include “routine” and “earned” income. For these reasons, according to him, revenue do not include borrowing and recovery of loans from other parties, but it includes tax receipts, donations, grants, fees and fines and so on.

Similarly, Pearce (1986) defined government revenue as all the money received other than from issue of and debt, liquidation of investments. Government revenue includes tax collections, charges and miscellaneous revenues, utility and insurance trust revenue for all funds and agencies of a government. Public revenue according to Stephen and Osagie (1985) is concerned with various ways in which the government raises revenue. From the above definitions, it can be said that revenue is the total amount of income accruing to a state from various sources within a specified period of time. State government, like the other two tiers of government, has sources and uses of revenue. Osisami (1994) states that there are basically two types of revenue that accrues to state governments. These are internally generally generated revenue and revenue allocated from the Federation Account. So, it means the government has various ways to generate the revenue but the basic depends on the imposing taxes.

### **3.2 Diversified and Portfolio Investment by Governments**

The countries where the growth level is extra ordinary, there the governments also take the very wise kind of portfolio investments. They invest their funds into those projects where they are very good in it. By using the expertise suggestions they invest into many projects and easily reduce the risk because a common path to reduce the risk is diversification. Here we can suggest one thing that if the government of any country will give importance to invest in a variety of capital investments then they can earn large revenue by minimizing the risk level. The other way we already focus that the government should give a plan to develop the Small and Medium Sized Enterprises sector because if they will invest in these small projects then by manufacturing more goods and services they can touch to intercontinental level. According to Securities and Exchange Commission of Washington D.C (2009) By including asset categories with investment returns that move up and down under different market conditions within a portfolio, an investor can protect against significant losses. Historically, the returns of the three major asset categories have not moved up and down at the same time. Market conditions that cause one asset category to do well often cause another asset category to have average or poor returns. By investing in more than one asset category, you'll reduce the risk that you'll lose money and your portfolio's overall investment returns will have a smoother ride. If one asset category's investment return falls, you'll be in a

position to counteract your losses in that asset category with better investment returns in another asset category.

Here we can easily judge that if the government of different less developed and developed countries will arrange a specific plan with financial experts for investments then they can minimize the risk and automatically will move to prosperity of their nation.

### **3.3 Taxes as a burden on general public**

All over the world the taxation is the fundamental way of revenue generation for a government. While the government makes the policies then actually some time they do not measure the real people's economic situation and burden of tax is imposed according to historically and static economic assumptions. These assumptions are often adopted more for ease of computation than economic accuracy. Here we give one example given by Institute for Research on the Economics of Taxation (IRET)<sup>11</sup> (2004) High graduated marginal tax rate on physicians' incomes may induce some doctors to retire, or to work shorter hours by sharing a practice, and inevitably lead to higher medical fees. Fewer doctors mean fewer jobs for nurses and support staff, longer waits for patients, and higher medical costs for patients and government health programs. The other example; A tax imposed on a truck owner's returns on his fleet, which reduces the number of trucks he can afford to run, hurts the truck drivers who are laid off. If a tax is imposed on the truck drivers' wages, the fleet owner must pay them extra or risk their dropping out of the labor force, which would leave trucks idle in the garage, earning nothing. A more rational system of calculating and displaying the real tax burden, one that took full account of how taxes are shifted, would make it easier to explain and adopt a more rational tax system. A more rational tax system, in turn, would maximize the efficiency of the economy as a whole, and would enable every individual to maximize his or her potential lifetime productivity and income.

What price do we pay for glossing over the true economic burden of a tax? Failure to understand and take account of the economic consequences of taxation leads to a gross misrepresentation of the distribution of the tax burden. This, in turn, has led to a tax system that, while supposedly promoting

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<sup>11</sup> IRET is a non-profit, tax exempt 501(c) economic policy research and educational organization

social justice, is actually harmful to lower income workers and savers, as well as damaging to the population as a whole. A better understanding of the economic consequences and real burdens of taxation is indispensable to achieving an optimal tax system, one that minimizes the economic and social damage associated with financing government outlays.

Some contents regarding the simplicity of tax, we can include according to the J. Lau(2003). These contents are defining that by adopting some specific ways the government can collect tax easily and that will not even recognized as a burden for the general public. The contents are as follow:

- I. For a given level of net revenue, the taxes are optimally set so as to maximize social welfare.
- II. A simple tax is easy to understand and thereby encourages compliance.
- III. A simple tax implies low transactions costs for both taxpayers and tax collectors alike, thus resulting in gains for both.
- IV. A simple tax is also easy to enforce.
- V. It is best to avoid a “proliferation”<sup>12</sup> of deductions—that is why a “flat tax,” or a “piecewise flat tax,” under which the marginal tax rate is (locally) constant, has a great deal of appeal.
- VI. Everyone should have to pay some direct taxes (except those with either no or very low incomes). People who pay taxes are more likely to realize that any additional public expenditure will have to be financed through additional taxes, the burden of which they will have to share. Hence, the demands for larger social welfare payments and more social welfare programs and other forms of income “transfers” may be moderated.
- VII. Paying taxes and filing annual tax returns should become a habit and taxpayers should be encouraged to begin doing so even if their incomes are low.

B. Marron (2016) Corrective taxes can encourage healthier, safer, and less polluting behavior. But how should governments use their revenue? Options abound to cut other taxes, boost spending, or reduce borrowing. We organize those uses into four categories: Off-setting new burdens created by the tax, furthering the goal of the tax, compensating people who bear costs from the taxed activity, or funding

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<sup>12</sup> A rapid increase in the number or amount of something

unrelated public priorities. We illustrate these approaches with examples of taxes on greenhouse gas emissions, unhealthy foods and drinks, financial transactions, tobacco, gasoline, and other products and activities. We discuss the pros and cons of competing revenue uses and describe tradeoffs across their social benefits and political appeal. Corrective taxes can therefore be an attractive way to raise revenue. They inspire people and businesses to live healthier, behave more safely, and pollute less while raising public revenue. But how should governments use that revenue? Governments have myriad options for cutting other taxes, boosting spending, or reducing borrowing.

**TABLE-1 How Governments can use**

**Revenue from Corrective Taxes**

<b>Offset the Tax Burden</b>	<b>Pursue the Same Goal</b>
Assist affected consumers	Support belt and suspender policies
Assist affected producers & Communities	Address remaining gaps
Counter macroeconomics drag	Invest in new opportunities
<b>Offset costs of the Taxed Activity</b>	<b>Pursue the Other Public Goals</b>
Compensate Victims	Recycle into tax cuts
Reimburse Funders	Spend on existing and new program
	Reduce public borrowing

Finally, if a tax is large enough, it may slow overall economic activity. To offset that drag, policymakers can apply some revenues to fund reductions in existing taxes that hamper growth. Macroeconomic analyses suggest that cutting distortionary taxes on labor and capital income could offset some, perhaps all, of the drag from introducing a carbon tax; of particular interest is the potential to cut corporate income taxes(Morris 2013)

All these examples in this literature we analyzed that if the taxes burdens are imposed without any right judgment then it has the adverse effect on economic growth because for the time being, they can see its

favourable but actually it has negative impact. We need to notice one thing that if this burden is at corporate level where net income level is high then these taxes are favourable for the government up to some extent. Why? Because here the government should also care that this excessive tax on corporation should not have an adverse affect on the worker or general public in the form of decrease in wages and increases the price of product manufactured by this organization.

### **3.4 Strategy to develop Small and Medium Sized Enterprises (SMEs)**

In this study now we can analyze easily that we talked on two aspects one in the utilization of government institutions and the second is small and medium sized enterprises development. Why we focus on the SMEs development because in every developed country this industry played a vital role in the economic growth of a country by more and more production in different varieties and became to inched up GDP and richen the export side.

Now with some literature review, we take the history of “Montenegro<sup>13</sup>” regarding its economic growth, GDP and its export level by the developments of SMEs. In the previous decade, Montenegro achieved significant economic growth with an average annual GDP growth rate of over 3%, along with an average single-digit inflation rate. Furthermore, significant political and economic reforms have been implemented in complete accordance with EU policy. The future of social and economic growth in Montenegro, and with that the small and medium sized enterprise (hereinafter SMEs) development policy, depends on the widespread application of the principles which are dominant within the EU and which will ensure that entrepreneurial efforts and investments are worthwhile. The Strategy for Development of Small and Medium Sized Enterprises 2011-2015, aims to achieve a more favourable business environment which would reflect positively in the strengthening of SME competitiveness, innovation and export, as well as lead to an increase in employment and uniform regional development.

The Principles which influenced the establishment of strategic objectives of the SME development policy relate to the fulfillment of the following priorities:

- Harmonization of the SME development policy with the current policy in the EU

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<sup>13</sup> Montenegro is a small Balkan country with rugged mountains, medieval villages and a narrow strip of beaches along its Adriatic coastline.

- by complying with the principles as defined by:
- Small Business Act (SBA);
- Europe 2020, a strategy for smart, sustainable and inclusive economic growth;
- Strategic and priority needs of SMEs
- Those identified through public-private consultations and partnerships
- Those arising from current fluctuations in the macroeconomic environment
- Development of SME policy resulting from its complex, multi-sector and multi-dimensional nature through:
- Necessity to harmonize other sector policies with the SME policy, especially in those areas affecting development of entrepreneurship
- Implementation of the Strategy based on the efficient coordination of various public sector institutions, at both local and national level, as well as cooperation and partnership between the public and private sector.

To implement this SMEs development strategy the country Montenegro decided and initially set some figure as a target to achieve in next five years from year 2011-2015. These targets defined the operational goals and the activities for the realization, the responsible government institution and also defined the time period a specific deadline in which targets should be achieved.

The targets in percentage figures were as follows:

**TABLE-2 Framework SME,s Action Plan 2011-2015 for implementation by country**

**Montenegro**

SN	Achievement Targets to develop SMEs	Percentage
1	Increase in the No. of SMEs	25%
2	Increase in No. of Employees within SMEs	17%
3	Increase in SMEs contribution towards EXPORT	35%



4	SMEs will achieve SHARE <sup>14</sup> towards GDP, Investment, Profits	50%
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After implementing this framework the World Bank announced a “Doing Business Report” Montenegro got a very better economic growth. This country improved its ranking by 24 places from 90<sup>th</sup> place in 2009 to 66<sup>th</sup> place in the ranking report of 2011. The neighboring countries which earned a better ranking than Montenegro were as follows: Macedonia (38), Slovenia (42), Bulgaria (51) and Romania (56). The neighbouring countries which ranked lower than Montenegro were: Albania (82), Croatia (84), Serbia (89), Bosnia and Herzegovina (110) and Kosovo (119).

Here we can easily see that within one year they set a strategy and by implementing it they achieved the favourable business climate. Upon this new strategy they designed it for five years, the totally support was given by the government of the country. For this big change they enhanced the level of competitiveness by adopting efficient and innovative factors. They also established the entrepreneurship institutional coordination system with the SMEs competitiveness. If the less-developed and developing countries will not take care and developments then they may lose a big share of GDP and cannot fulfill to compete at international market by increasing exports and adverse effect will be in the revenue generation as loosing of foreign reserves.

#### 4. METHODOLOGY

Developing and implementing the strategies of government institutions and SMEs require the accuracy in the plan of actions. To analysis and implementing these kind of actions need the utmost care in order to maintain a favourable economic growth. This study determines to the positive change regarding revenue generation by taking right actions by government as well as to develop SMEs. We derived this qualitative and quantitative research from the retrieval of some secondary resources published (references are given below) regarding the subject matter and

<sup>14</sup> SMEs achieving a 50% share of GDP, total investments, turnover, profits and gross added value from 2011 to 2015

other personal views arose with the passage of time in front of us. So, here our major source of data collection was secondary data because we can easily judge the performance of historical event held in past time and their activities are as a role model for the developing nations.

As well as with the secondary information, we also arranged some economic expert opinions directly from the persons (Kabia 2016) who had already worked on this kind of research for the development of small and medium enterprises for the world economy stability. He also defined that financial sector should design policies for SMEs and easy system for transactions for the rapid growth of economy and to inch up revenue. So, analysis will be drawn from the data retrieved in order to develop the final conclusion.

## **5. Analysis and conclusion Summary**

Developing and managing the revenue generation by utilizing the government institutions and SMEs progress, we need to adopt a care full planning process. We should be accurate and consistent in the preparation of plan of action. I want mention one more thing, if any strategy is going to implement or design, we need to do each and every work according to the principles of management. Like we should be focus on (i) planning (ii) Organizing (iii) Leading and (iv) Controlling. Any management work while we adopt these step then we can get success.

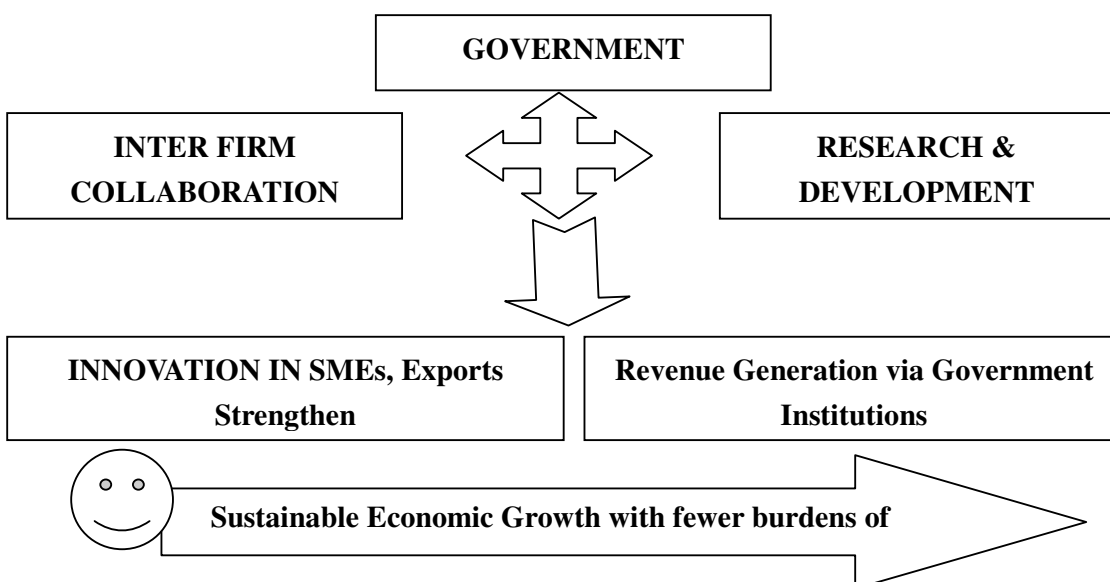
Our critical examination of retrieved data from different sources published, established the significance of “Revenue Generation via Utilization of Government Institutions and SMEs development rather than Taxes”. Further analysis unveiled that accurate policies can become a result of huge revenue in government sectors. Specially we can say in developing nations, the sectors working under government like Railway, City Transportation, national airlines can generate big income and fulfill their own requirements rather than to put a huge amount of different taxes on a innocent general public.

Here we also analyse the Levels of Understanding between SMEs and Government Institution Support positively associated with their innovation technology. On the basis of literature review, this model is showing in Figure.1 that the favourable relation between SMEs and Government Institutions in different collaboration networks among various technologies, innovations, supporting institutions, and research and

development organizations to enhance the productivity of SMEs and to boost economy level. Moreover, the support of government sectors towards the SMEs sector will have the positive change for the development of a country's economic growth and more productivity will be done to earn foreign reserves. Also review literature disclosed that role of SMEs has been the ultimate, which encompasses small businesses and leads towards the enhancement of GDP and export level. In less developed countries the SMEs are not developed. Actually at initial level the government of that country should use its relations at intercontinental level and can spend a capital budget for the import of technology and can be helpful for small business owner to take initiative.

**FIGURE-1**

**GROWTH MODEL with fewer burden of Taxes**



The other way, they can train their workers to learn some new technical education and then they can become a part of GDP by manufacturing goods more and more and country can be able to increase its export level. We conducted this research for the quality of revenue generation of a less developed and developing countries, further investigations can be done on this study using more deep ways for the growth of various nations.

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# INFLUENCE OF ENTREPRENEURSHIP EDUCATION, GENDER, AND PARENT BACKGROUND TO RELATIONSHIP BETWEEN SELF EFICACY AND ENTREPRENEURSHIP INTENTION

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## ***Abstract***

*Many colleges now equip students with the knowledge and practice of entrepreneurship in their class. Research aims to examine research model whether gender, parents 'occupation, and entrepreneurial education effect on relationship between self-efficacy and entrepreneurship intention. Using survey method and questionnaire to many students, multiple regression analysis shows the results that self-efficacy influence entrepreneurship intention. However, entrepreneurship education, gender, and parent occupation did not moderate the relationship between those two variables.*

***Keywords:*** *self-efficacy, entrepreneurship intention, gender, entrepreneurship education, parent occupation*

## **INTRODUCTION**

The high economic growth and sustainable from a country needed to make the population welfare can be increased; one important element of economic growth is the presence of an independent business activity continues to grow in terms of both quantity and quality. Entrepreneurs play an important role and efforts to foster interest in the younger generation to become entrepreneurs after graduation should continue to be pursued. In the younger generation, emphasizing the importance of a person to start from youth

entrepreneurship must be intensified, in line with the complexity and dynamics of the community, as well as macro-economic problems in Indonesia who dwell on two main issues, namely economic growth and reduction of unemployment. Country prosperous Indonesia is a country with high economic growth, the ability of the better resources and more equitable prosperity. Research Igwe et al. (2013) in Nigeria concluded a similar things, namely the need to appear tough and growing number of entrepreneurs with high ability to create a competitive advantage there.

Currently in Indonesia is estimated at only about 570 339 people or 0.24% of the total population of 270 million people who are actively become entrepreneurs (source: <http://louisdavidaror.blogspot.com>, accessed February 2015); while David McClelland declared to be a prosperous country, a country must have a minimum of two percent of the total population of entrepreneurs. From the data above shows still takes about ten times the number of entrepreneurs in Indonesia so that the minimum percentage of self-employed are met. Other data also show that the public interest to become entrepreneurs is also low; College graduates interested in becoming entrepreneurs is only 6.4%, while for senior high number is only 22.4%. The potential for the younger age groups to become entrepreneurs is relatively large, with a Bachelor graduation rate reaches three hundred thousand people and high school graduates reached two and a half million people per year.

At present, in line with efforts to print young entrepreneurs, many colleges that provide students with knowledge about entrepreneurship, both in college, or to the practice of entrepreneurship in the field. The curriculum and syllabus for the entrepreneurial kulliah eyes constantly updated to follow the dynamics of the business world and the business environment in Indonesia; with the entry into force of the ASEAN Economic Community (AEC), the syllabus of these courses has also improved. Progress is real and massive of information technology also encourages continuous improvement in the contents of entrepreneurship courses, considering the business world today can no longer be separated from the role of information technology (e-commerce activities, financial reporting, and others). However, entrepreneurship courses are still widely practiced in the Faculty of Economics or the Faculty of Business; this is due to the perception that only students from proram economic studies should learn entrepreneurial activity; can say that it is due to the absence of 'space' in addition to the courses for non-economic courses. This led to many students in college do not gain the knowledge and practice of entrepreneurship becomes difficult to do business if one day they decide to become entrepreneurs. However, there is also an opinion stating that entrepreneurship is an activity that requires a lot of 'art', so it does not require such a systematic knowledge of other sciences. Thus, the question arises whether the provision of knowledge and practice of entrepreneurship in students have a significant impact on a person's interest to become entrepreneurs. Longitudinal studies of Vanevenhoven and Liguori (2013) in the eighteen thousand students from over four hundred universities in more than seventy countries shows students can be sampled to test the variables associated with entrepreneurial activities such as self-efficacy and intention to entrepreneurship, because most of creation independent business done by the younger generation compared to other age groups in society.

From the above background, was appointed research to know whether gender, parents' work, and the provision of knowledge and practice of entrepreneurship in students when they are in college, with

students who just got an understanding of entrepreneurship to students who have done entrepreneurial activity, will have a significant impact on students' self-efficacy in running an independent business and the person's interest to become entrepreneurs after they graduate later.

## REVIEW LITERATURE

Many argue that being an entrepreneur or self-employed is a choice, and there are aspects of the talent in the profession. In practice, the entrepreneur does not have someone who is totally into entrepreneur, called entrepreneurship; Sinha and Srivastava (2013) states that a number of employees who work in an organization and indirectly also to the principles of entrepreneurship, called intrapreneurship. Some others argued that the profession of entrepreneurship can be taught and educational activities to become entrepreneurs as a means of achieving it. Another opinion stated that the factor of the success of an entrepreneur is determined by internal factors and external factors (source: <http://ekonomi.kompasiana.com>, accessed February 2015). Internal factors are factors that exist in a person who encourages a willingness and motivation of achievement; These factors are thought (mind), heart, soul, and behavior. While external factors is the support of family, the community, which supports the business environment, and government regulation as capital assistance, technical support, and more.

Research on the entrepreneurship behavior be interesting for researchers in various countries in Asia and Europe. Research on entrepreneurial behavior can be seen from various perspectives: economics, psychology and sociology. Economic perspective view entrepreneurship behavior based on the readiness of entrepreneurship through economic instruments such as economic conditions, capital, government regulation and other economic factors. Sociologyperspective explain entrepreneurial behavior from human relationships, lifestyle and culture of the community and societal norms that shape the behavior of entrepreneurs. Psychological perspective explains entrepreneurship behavior from psychological factors such as personal aspects and entrepreneurship motive (Hamilton and Harper, 1994). Various models are derived from the research findings of behavioral self-employment has also grown in recent times. Jain and Ali (2015) suggests the influence of self-efficacy and attitudes to entrepreneurship orientation towards a person's interest to become entrepreneurs.

In general, self-efficacy is a condition where people believe that a behavior is easy or difficult to do, including experiences and a number of hurdles to be considered individual (Wijaya, 2008). Wilson et. al. (2007) states in common with self-confidence; In his research on the influence of self-efficacy to entrepreneurial activity, they suggested a strong relationship between one's confidence to be able to do his job to become entrepreneurs. Self-efficacy to be important in entrepreneurship research because of the nature of those variables; self-efficacy related to the ability-oriented tasks from one to assess the barriers and opportunities that exist on the internal side (personality) and the ability to observe the external business environment (Drnovsek et.al., 2010). Someone who has a low level of self-efficacy tend not to believe that he has the capability to effectively undertake specific tasks (Aviram, 2006).

Wilson et. al. (2007) and Ayodele (2013) state there are six dimensions of self-efficacy, i.e the ability to solve problems, make decisions, manage finances, creative thinking, persuasion skills, and the ability to lead. While Sarwoko (2011) measure three-dimensional self-efficacy, ie self-confidence, leadership, and

mental maturity. Some research suggests a close relationship between interests of self-efficacy and ability to be entrepreneur (Konakli, 2015; Aviram, 2006; Izquierdo and Buelens, 2011; Ayodele, 2013; Peng et al, 2012). However, the research model of Wijaya (2008) concluded that self-efficacy has no effect on a person's interest in entrepreneurship, while simultaneously model of research on the influence of attitudes to entrepreneurship, self-efficacy and subjective norms on interest in entrepreneurship and behavioral entrepreneurship meet eligibility models.

Entrepreneurship intention is the desire, interest, and willingness to work hard to make one's way or trying to meet their needs without being afraid to risk it, and want to learn from failure. Ayodele Research (2013) and Nitu-Antonie and Feder (2015) shows that one's intention to entrepreneurship is the best predictor of the real entrepreneurial activity; whereas Sarwoko (2011) considers entrepreneurship intention is the tendency of individuals to conduct entrepreneurship by creating new products through take business opportunities and a risk taker people. Peng et al (2012) stated that there were several other terms for entrepreneurship intention, such as career orientation, entrepreneurs newborn, and others; they take interest in entrepreneurship as a mental orientation as a strong desire, dreams, and hopes to influence their choice do for entrepreneurial activity.

In general, 'intention' can be defined as the tendency of a relatively settled on someone to get interested in a particular field and were delighted involved in various activities related to the field; therefore individuals interested in becoming entrepreneurs in general tend to feel interested and pleased with the entrepreneurial profession. Individuals interested in becoming entrepreneurs cognitively has a sufficient understanding of the benefits, challenges, and risks to be faced, was pleased with her choice (affective), and will act (conative) as he believed.

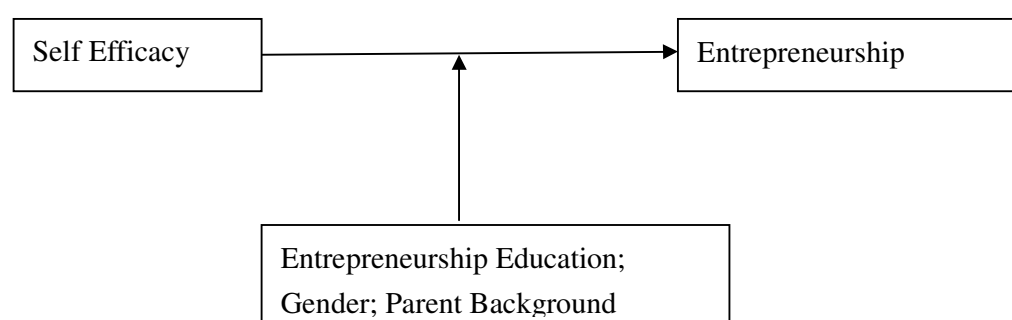
Moderation variables used in this study is the Entrepreneurship Education, Gender and Employment Parents. Meaning, scope, and content of entrepreneurship education to students vary widely, with the content tailored to the characteristics of universities, lecturers competence, competence and line of business practitioners brought in, as well as the interest of the students. Jamieson (1984) stated that there are three categories of entrepreneurship education: education about entrepreneurship, education for entrepreneurial activity, as well as education in entrepreneurial activity. If education about entrepreneurship is more related to theoretical knowledge as well as efforts to bring students to the world of entrepreneurship, then Education for entrepreneurship is narrower in scope and deals with the practical ability to initiate entrepreneurship. While education in entrepreneurship related to training related to practical managerial, such as product development, market research, and so forth.

In the normal course of entrepreneurship in Indonesia, in general there are two types of teaching, the classroom teaching that emphasizes entrepreneurship theory and teaching in the classroom and then practice doing an entrepreneurial activity outside the classroom. In the first type, the students only got theories and motivation to become an entrepreneur, without requiring them to practice these activities; this can be due to lack of facilities and practices, limited lecturers to supervise and guide the activities of the competence of lecturers were lacking in terms of entrepreneurship, or lack of practitioners who can



guide the practice. While the second type, students are required to undertake entrepreneurial activities in a given period of time and with a certain output targets; Here professors or practitioners appointed role as facilitators and mentors in these activities. Piperopoulos and Dimov (2015) in his study of the two types of entrepreneurship education argue that students who get a chance to practice with the guidance of professors or practitioners will have self-efficacy and interest in entrepreneurship that is greater than the students who only got the theory of entrepreneurship in the classroom. In addition, a lot of research indicate finding the important role of gender (Chlosta et al., 2012; Greene et al., 2013; Shneor and Jenssen, 2014) and the background work of parents (Farooq et al., 2016) on the formation of intent to entrepreneurship young generation.

From the above discussion, the model can be expressed as follows:



**Figure 1. Research Model**

From the above model, hypothesis' proposed in this study are:

H1: Self Efficacy have a positive and significant effect on Entrepreneurship Intention

H2: Type of Entrepreneurship Education Student Self-Efficacy moderate the relationship between Self Efficacy to Entrepreneurship Intention.

H3: Gender moderate the relationship between Self Efficacy to Entrepreneurship Intention.

H4: Parent background moderate the relationship between Self Efficacy to Entrepreneurship Intention.

## METHOD

Research design is a survey with questionnaire; sampling technique in this research is purposive sampling technique, with 177 students as a sample. Measurement of self-efficacy has many variations; Wilson et.al. (2007) considers self-efficacy has many indicators, and they incorporate an ability to make decisions in certain situations and problem solving skills to be part of a self-efficacy measurement. In addition, they also incorporate some other measurement indicators that are considered influential on self-efficacy measurements, such as the ability to manage finances, leadership capabilities and managerial capability in managing the business. In this study, the variables of self-efficacy was measured with nine items of questions with indicators capability to be able to take the opportunity and were able to grab the occasion, the indicators tranquility which is defined as a person's ability to control emotions when facing situations and problems in the business world, an indicator of persistence someone to be able work under pressure and

perform priorities, as well as indicators to focus on the task and the time and schedule to achieve them. While entrepreneurial intentions is measured by Wilson et articles. al. (2007), with an emphasis on how keen they are to immediately self-employed after college, their sincerity to immediately self-employed, as well as how much they are motivated to be an entrepreneur. Kautonen (2015) proposed the possibility of run their own business within twelve months after the person intends to be an entrepreneur. Measurement of moderating variables, namely Entrepreneurship Education, Gender and Parents Background is measured with dummi(coding) variables. For Entrepreneurship Education, codes are 1 for students who just get a theory of entrepreneurship, and2 for students who are already practicing entrepreneurship both on campus and off-campus. For Gender, codes are 1 for Men and 2 for Women; for Parent Background, codes are 1 for the work of entrepreneurs and code 2 for not entrepreneurs. Data were analyzed using multiple linear regression analysis.

## DATA ANALYSIS

The first stage is validity analysis and reliability analysis, with the result as follows:

Table 1. Results of Validity and Reliability

Cronbach's Alpha	items
.887	17

Table 2. Results of Test Validity

Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EF1	62.66	46.702	.640	.877
EF2	62.74	45.627	.661	.876
EF3	62.87	47.708	.450	.883
EF4	62.85	47.061	.508	.881
EF5	62.95	46.631	.489	.882
EF6	63.13	48.204	.343	.888
EF7	63.38	47.229	.431	.884
EF8	62.93	45.408	.637	.876
EF9	63.05	46.492	.444	.885
NIAT1	62.94	46.923	.584	.879
NIAT2	62.35	49.075	.376	.885
NIAT3	62.92	45.617	.645	.876
NIAT4	62.77	46.508	.574	.879
NIAT5	62.89	45.107	.663	.875
NIAT6	62.82	45.288	.638	.876

NIAT7	62.79	47.451	.412	.885
NIAT8	62.60	47.435	.558	.880

from table 1 it shows that Cronbach Alpha (0,887) is above 0.7 and in the table 2, in column ‘Cronbach Alpha if Item Deleted’, there are no numbers above 0,887; it prove that questionnaire items are valid and reliable.

the second stage is to examine the relationship between self-efficacy variable with entrepreneurship intention variable; using regression analysis, results are as follows:

**Table 3. Regression Analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565	.319	.314	3.180

**Table 4. ANOVA Results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	545.700	1	545.700	53.978	.000
	Residual	1162.607	115	10.110		
	Total	1708.308	116			

**Table 5. Regression Coefficient Results**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.955	2.373		6.302	.000
	ef	.503	.069	.565	7.347	.000

Tables 3 shows that the adjusted coefficient of determination (Adjusted R-square) is 0.314; it is mean that 31,4% variation of Entrepreneurship intention can be explained by self efficacy variation, and the rest variation (68,6%) be explained with other variables (such as motivation, confidence, personality etc). table 4 and Table 5 related to regression coefficient test. From table 4 significance number for the F test is 0,000, as well as significance number for t in table 5 is 0,000; all significance numbers far below 0.05. It shows that Hypothesis one is received; independent variable (Self Efficacy) has a positive and significant relationship with the dependent variable (Entrepreneurship intention). These results are in line with research findings Akanbi (2013), Shinnar et al. (2014) and Tsai et al. (2016), which suggested a positive relationship between two variables. Sweida and Reichard (2014) also states the same thing, with emphasis

on the influence of self-efficacy to emergence of women entrepreneurs.

To test the effect of moderating variables Effect of Entrepreneurship Education on Self Efficacy relationship of independent variables with the dependent variable Entrepreneurship Intentions, do regression with moderating variable. The results as follow:

**Table 6. Entrepreneurship Education Moderating Effect Test**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	R Square Change	F Change	df1	df2	Sig. F Change
1	.574	.329	.317	3.170	.329	27.97	2	114	.000	
2	.578	.334	.316	3.173	.005	.799	1	113	.373	

From table 6 shows that the change of Adjusted R Square is very little, just 0,005; when it was tested its significance level is above 0.05 (0.373). Thus Hypothesis 2 is rejected and it can be concluded that the Influence of Entrepreneurship Education does not moderate the relationship between Self Efficacy and Entrepreneurship intention; entrepreneurship education, either just theory or the theory is accompanied by practice entrepreneurial received a student does not make students who have high self-efficacy emmpunyai would certainly intend to entrepreneurship. Someone could have never got entrepreneurship education, but because they have enough self-efficacy that he may intend to start entrepreneurial activities. This differs from the findings of research Piperopoulos and Dimov (2015) who argued their moderating influence of entrepreneurship education on the relationship of self-efficacy and interest in entrepreneurship. Bae et al. (2014) found a weak association between education and entrepreneurship intentions; if the relationship between the two variables is controlled by a variable entrepreneurial intentions before the education, the relationship between the two variables become insignificant. This suggests a systematic education in entrepreneurship when someone yet does not guarantee that people will have a real intention to entrepreneurship. Research on the Fayolle and Gaily (2015) concerning the provision of entrepreneurial education on students and their impact in the short or medium term (over six months) shows the results of students showed no serious interest to intend to become entrepreneurs if educational outcomes are measured in the short term. However, when measured in the medium term there is a real impact educational effect on the desire for entrepreneurship. More of the same is shown from the results of research Cornwall et al. (2015), which examines the impact of short-term study (four weeks) on entrepreneurship in the number of participants; education results did show a significant increase in knowledge about entrepreneurship and knowledge of the business world, but no significant impact on entrepreneurial intentions. However, research by Saeed et al. (2013) shows that entrepreneurship education to students intensively able to increase self-efficacy of the students, which in turn have an impact on the desire to become entrepreneurs, although the motivation of the students not only on the

wishes of a lot of money or gain freedom in the work. However, research Elert et al. (2015) in some schools in Sweden showed an interesting finding, that there is the influence of entrepreneurship education on intentions for entrepreneurship, however, longitudinal data within a period of 16 years after their entrepreneurship, education is not a significant impact on the level last from the business they founded.

This shows the effect of education is only limited to the success of entrepreneurial activity.

To test the effect of gender as a moderation variable in the relationship between Self Efficacy and Entrepreneurship intention, do regression test with the result as follows:

**Table 7. Gender Moderating Effect Test**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
						R Square Change	F Change	df1	df2	Sig. F Change
1	.565	.320	.308	3.193	.320	.320	26.782	2	114	.000
2	.567	.321	.303	3.204	.001	.001	.222	1	113	.639

table 7 shows that change of Adjusted R Square is very little, just 0,001, and not statistically significant (.639). Thus Hypothesis 3 is rejected and it can be concluded that gender does not moderate the relationship between Self Efficacy and Entrepreneurship intention. Research from Fatoki (2014) on a number of student respondents in South Africa showed similar results; although male students showed greater entrepreneurial intentions than women, but the differences were not statistically significant. Greene et. al. (2013), which specifically examines the role of a mother to her daughters showed that mothers will tend to push their daughters also run her own business as a entrepreneur. Model research from Shneor and Jenssen (2014) with path analysis on more than one thousand five hundred students in Norway show that self-efficacy variable is positively related to entrepreneurship intention, but gender did not moderate the relationship between the two variables, and testing of the model shows that man's behavior will be different with the women in person's intentions to be entrepreneur.

To test the effect of parent background (whether entrepreneurs or not) in the relationship between Self Efficacy and Entrepreneurship intention, do regression test with the results as follows:

**Table 8. Parent Background Moderating Effect Test**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
						R Square Change	F Change	df1	df2	Sig. F Change

					Change	Change			Change
1	.511	.261	.248	3.085	.261	19.751	2	112	.000
2	.525	.276	.256	3.067	.015	2.327	1	111	.130

Table 8 shows the change of Adjusted R Square is a little bit, just 0.015, and not statistically significant (.130). Thus Hypothesis 4 is rejected and it can be concluded that parent background does not moderate the relationship between Self Efficacy and Entrepreneurship intention. Research from Farood et al. (2016) in the number of respondents in Pakistan showed different results; statistically, there is a marked difference between entrepreneurial intentions of students with family background entrepreneurs with those who did not come from entrepreneur family. Similarly, research from Akanbi (2013) in the number of respondents in Nigeria, which show the influence of parents' work on entrepreneurship intentions of their offspring; however, the variables in the research work of parents is to serve as the independent variable and not as a moderating variable.

From three moderating test results, it appears that entrepreneurship intention person is influenced by self efficacy and is not associated with entrepreneurship education obtained, whether he is a man or woman, and whether the parents have an entrepreneurial background or not. Thus, self-efficacy fostering a student must be done so that their intent to continue to increase entrepreneurship; on the other hand, need no conversion of entrepreneurship education in college, because education should be able to encourage someone who already has self-efficacy become more interested in becoming entrepreneurs.

## CONCLUSIONS

The study aims to test the model of entrepreneurship intention, with the specific purpose to test whether self-efficacy as independent variable influence entrepreneurship intentions as a dependent variables. Using students as samples and regression analysis, showed that the model of the formation of entrepreneurship intention in young people (students), self-efficacy variable proved positive and tangible effect on entrepreneurship intention variable. For the second objective, namely to test the influence of a number of moderating variables on the relationship between self-efficacy with entrepreneurship intention, results show that entrepreneurship education, gender, and parent background, do not moderate the relationship between the two variables.

## SUGGESTIONS

Some practical advice can be given related to the above findings. The first is the need for efforts to increase the efficacy of a person, especially the younger generation, to be able to obtain the managerial ability in managing an independent business. Capabilities that should be mastered is the ability of financial management, production management, marketing skills, HR management skills, as well as a number of soft skills capabilities such as communication skills, negotiation skills, and leadership. Additional lecture or a number of practical skills can be awarded to a graduate student, so they intend to run their own businesses after graduation. The second is an attempt to give an understanding to the students; because of parent background has no effect on a person's success in entrepreneurship, the

students are getting interested in managing an independent business should work to improve their skills. Do not be hampered by the problem of capital, heredity, so that they become feel free to decide a career as an entrepreneur.

For future studies, samples for next research can use non-economic background of students (engineering, law, and others) who have a different perspective than the students set in economics (management, accounting, or development studies). In addition, independent variables can be added, such as motivation for someone to become entrepreneurs, level of one's courage to take risks in pursuing his future, including entering the world of entrepreneurship, one's personality, and other variables.

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