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## **Does Funds' Turnover Effect Close-Ended Mutual Funds' Performance? Evidence from Pakistani Mutual Fund Industry**

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### ***Abstract***

*This study is undertaken to evaluate the impact of funds' turnover on their performance. For this purpose the close-ended mutual funds, listed in Mutual Funds Association of Pakistan, are selected. The semi-annual data are used for the time period from 2008 to 2012 which are extracted from the close-ended funds' financial reports. Simple linear regression, using SPSS, is applied to analyze the impact of funds' turnover on their performance. The study finds significant positive relationship between funds' turnover and their performance.*

**Key Words:** *Mutual fund, turnover, performance, Pakistan*

### **Introduction**

In 1962 mutual funds were introduced in Pakistan by the public offering of National Investment Trust. Presently NIT is being operated as the only open-ended mutual fund in public sector of Pakistan. After NIT another fund, Investment Corporation of Pakistan was formed in 1966 and floated 26 close-ended mutual funds. In 2000, Government decided to reconstruct the corporations, and in 2002, it started the privatizations of ICP. From the 26 mutual funds, 25 mutual funds were divided in two lots. ABAMCO limited acquired the first lot containing 12 funds out of which 9 were merged in close ended funds with the title name as ABAMCO Capital fund. Remaining three funds were merged into another fund with the title of ABAMCO Stock Market Fund. On the other

hand, the second lot was acquired by PICIC Assets Management Company Ltd. containing 13 ICP Funds. These funds were merged into a single close-ended fund with the title of PICIC Investment Fund. After than PICIC acquired another Fund (ICP SEMF) which was declared as a new close ended fund named PICIC Growth fund in the extraordinary general meeting of certificate holders on 16<sup>th</sup> June 2004. It was authorized by SECP on 20<sup>th</sup> July 2004.

Presently there are 130 open-ended and 14 close-ended mutual funds operating in private sector (MUFAP, March 2013) and SECP is the regulatory body of all types of mutual funds in Pakistan. In Pakistan, mutual funds are increasing in numbers as they provide the diversification opportunity to investors. Small investors don't have sufficient skills and resources to keep an eye on the management of their investment so they prefer indirect investment. Mutual funds give the opportunity to small investors to invest in a professionally managed investment entity and also to take advantage of the diversification as well as potential for higher returns.

In Pakistani financial markets different categories of mutual funds are available e.g. Islamic funds, income funds, equity funds, balanced funds, asset allocation funds, fund of funds, index tracker funds and money market funds. This provides an opportunity to small investors to select from a variety of alternatives to better match their requirements. The current study is about the impact of funds' turnover on their performance. Currently, there are two divergent views about turnover and performance. One view is that financial markets are overall efficient and higher turnover increases the transaction cost of the fund without giving sufficient benefit and therefore the performance of the fund decreases as the turnover increases. While the second view is that market are not highly efficient and based on knowledge and experience funds' managers can identify occasions when to buy or sell. This active management of the fund brings higher returns even after paying higher transaction cost. The current study is about these two divergent views of funds turnover and performance. This will be helpful for fund managers as well as for investor to make appropriate decisions regarding funds' management and investment.

## Literature Review

Many researchers analyze the impact of turnover on performance of funds e.g. Carhart (1997) finds negative relationship between mutual funds turnover and return in US mutual fund market. By taking the Swedish mutual funds which are invested in Swedish Securities and by taking the data for the period 1993-1997 Dahlquist et al (2000) perform a study to examine fund management fee, turnover ratio, past performance and fund size have relation with performance. Their study opines that the funds which have higher turnover ratio perform well as compare to those funds which have low turnover ratio. Whereas, Friend *et al.* (1970) document the slight positive relationship between risk adjusted fund returns and turnover. Brennan, Chordia & Subramanian (1998) find significant negative relationship between trading volume and fund return. By taking the data from the period 1963 to 1991, Datar, Naik & Radcliffe (1998) employ turnover ratio and document that the stock returns have negative relationship with turnover ratio even after controlling size and book to market risk premium. They also state that the turnover ratio is ideal substitute for liquidity as its data are easy to obtain and it has strong theoretical background and support. They find no evidence of other factors like seasonal effect by taking the data from the period 1986 to 1993 Claessens, Dasgupta & Glen (1995) investigate the returns by using many variables which include price to book value, earning to price, exchange rate, market returns, turnover and size. They document that turnover and size have descriptive power in stock returns in different countries.

Ippolito (1989) also examines the overall efficiency of mutual fund industry by taking 143 US mutual funds and by using data over the period 1965 to 1984. Using Jensen measure for performance evaluation and to investigate the impact of expenses and turnover on performance, he finds that the management fee and turnover are not related to performance of fund. Rakowski (2002) using daily data, documents that the returns are strongly influenced by turnover.

By taking 69 Malaysian equity funds which includes 25 Islamic and 44 conventional funds, Pui See and Jusoh (2012) conduct their study to examine the characteristics that effect mutual fund performance on the data of five years. They examine the effect of

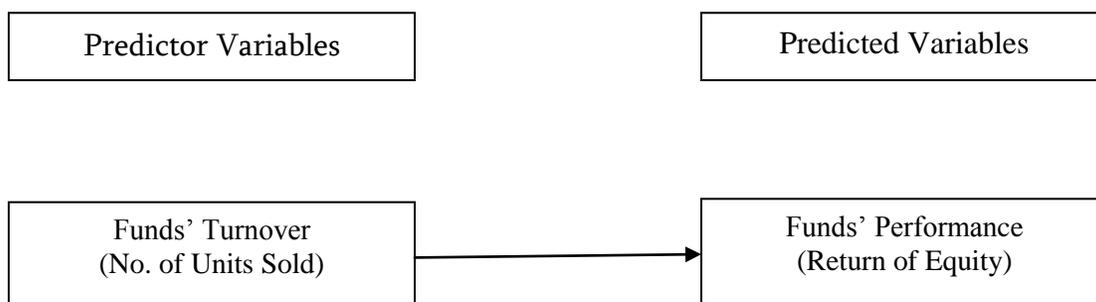
expense ratio, fund age, turnover ratio, fund size and risk. They find that turnover ratio and expense ratio have significant relationship with fund performance.

Wermers (2000) investigates the American registered Funds which are invested in American securities. By using the data for the period 1975-1994, he investigates the relationship between turnover and fund size with returns and document that the funds having high turnover ratio are earning more and have more risk-adjusted returns as compare to funds which have low turnover ratio. Elton, Gruber, Das, and Hlavka (1993) in their study find that risk adjusted returns have negative correlation with turnover and expense ratio when there is difference between the performances of small capitalization. Khorana (1996) in his study documents that before changing in management the portfolio turnover of a fund must be relatively high which reflects herding behavior.

Abbasi, Kalantari & Abbasi (2012) conduct their study to examine the relationship of turnover with performance. They use Multiple and Combined ANOVA and find significant positive relationship between turnover ratio and performance. Whereas, Droms & Walker (1996) in their study, find that expense ratio and turnover are negatively correlated with fund performance.

Dellva & Olson (1998) in their study find significant positive relationship between turnover fund performances at 1 percent significance level.

## Theoretical Framework



## Hypothesis

H<sub>1</sub>: Fund's Turnover has significant impact on Fund's Performance.

## **Methodology**

### **Population and Sample Size**

The population of the study consists of all close-ended mutual funds listed in MUFAP. Total 13 close-ended mutual funds are listed in MUFAP. 12 close-ended funds, from a total of 13, have been selected which are having their data publicly available.

### **Independent Variable**

In this study “turnover” is the independent variable. It is the total trading of a fund on semi-annual basis. It can be sales or purchases and can also be calculated through other ways like by dividing the sum of sales and purchases with the average of opening and closing units and by taking the number of shares being traded or volume of amount being traded. In this study we have taken total units sold in a particular period as turnover. The log value of the total share traded is used as an independent variable in this study.

### **Dependent Variable**

Performance can be measured through many ways like by examining the changes in share prices, Return on Assets (ROA) and Return on Equity (ROE). In this study we have taken ROE as the dependent variable. It is calculated by dividing Net Income with Shareholders Equity. Though it is an accounting measure of performance but it is widely used and supported by historical literature in the field of finance. In a country like Pakistan, where stock exchanges are very volatile, accounting based measures of performance are preferred over market produced data.

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholder Equity}}$$

### **Data Collection**

Five years semi-annual data are used in this study for the period January 2008 to December 2012. The data are extracted from the companies' online databases and financial reports.

## Data Analysis

To test the underlying hypothesis, ordinary linear regression is used. SPSS is used to run the regression and other statistical tests.

## Discussion of empirical results

Before running the regression the data were checked for normality and autocorrelation. Based on the values of Skewness and Kurtosis the data were found normal. Similarly, based on the Durbin-Watson value no autocorrelation was found, therefore, the data are suitable for regression and other statistical tests. These tests are not reported here but are available to interested readers on demand.

The table 1 shows the value of R, R square and Adjusted R square. The value of R is 0.465 while the values of R square and Adjusted R Square are 0.216 and 0.210, respectively. So the coefficient of determination shows that 21.0% of the variation in a fund's performance is explained by the fund's turnover. Although this may not be high value of coefficient of determination but keeping in view a single explanatory variable, turnover, it is a reasonable value. To further support this, the F-value and its significance in table 2 show that the overall model is fit for this test and also statistically significant.

Table 1  
*Model Summary*

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.465	.216	.210	.26741

a. Predictors: (Constant), Turnover

b. Dependent Variable: ROE

The table 2 shows the overall model fitness which is also a measure of statistical significance of the coefficient of variation. The F-value is 32.545, which is statistically significant at 0.01.

Table 2  
*ANOVA Results*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.327	1	2.327	32.545	.000
	Residual	8.438	118	.072		
	Total	10.765	119			

a. Predictors: (Constant), Turnover

b. Dependent Variable: ROE

Table 3 shows the beta coefficients and their statistical significance for the independent variable(s). In the coefficients table the beta coefficient of Turnover is 0.119 with a standard error of 0.021. So the t-value is 5.705 which significant at a p-value of less than 0.01. It means the Turnover has significant positive relationship with ROE of mutual funds in Pakistan.

Table 3  
*Coefficients of the Variables in Used in the Model*

Model		Unstandardized		Standardized		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.837	.144		-5.822	.000
	TURNOVER	.119	.021	.465	5.705***	.000

a. Dependent Variable: ROE

\*\*\*Significant at 0.01 level

## Conclusion

The study was undertaken to examine the impact of mutual fund's turnover on its performance and finds significant positive relationship between them. The positive relationship means that funds having high turnover perform better as compare to those having low turnover in Pakistan. The results are also supported by the different researchers who also find significant positive relationship between funds turnover and fund's performance e.g. Wermers (2000), Dalquist *et al.* (2000) and Rakowski (2002). The findings of this study can be associated with relatively lower market efficiency in Pakistani. So those fund's managers who are actively manage their funds' portfolio are better than passive fund managers. Although, those managers who turnover the funds' portfolio more frequently bear more transaction costs but the benefits they generate for the funds are even greater so it offset the additional costs and also give benefits to the investors.

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## **The Impact of Job Satisfaction on Employee Performance in Pharmaceutical Industry of Pakistan**

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***Abstract-**In the present turbulent environment of pharmaceuticals in Pakistan, employee performance and job satisfaction has gain great importance. This study is descriptive in nature and consists of a sample of 120 employees (middle level managers). Job satisfaction (dependent variable) and employee performance (independent variable) are measured on five point Likert scale. Employee's performance is operationalized as working condition, relationship with supervisor and job uncertainty. Regression analysis OLS is used to test the hypotheses and concluded that job uncertainty is a main area of concern for employees of pharmaceutical industry. It is also mentioned that improve workings conditions determines the higher level of job satisfaction and greater job performance.*

***Keywords:** Job satisfaction, employee performance, working condition, job uncertainty, pharmaceutical*

### **Introduction**

Job satisfaction shows that how much an individual is associated with his or her job in the organization. Human resource is an important asset and key source for organizational development. But if employees are not satisfied then they might be a cause of big loss for organization so that managing human resource is a big dilemma for organizations (Ellickson &Logsdon, 2002). Management always tries to satisfy their workforce. Higher satisfaction level of employees' satisfaction leads to higher return to the organization. There are different factors which affect satisfaction level of employees. Some of the important factors related to satisfaction level of an employee are working conditions, supervisory relationship and job security (Nguyen, Taylor& Bradley, 2003). A lot of research work has been done on this specific phenomenon but there is still a gap to find out facets of job satisfaction i.e. working condition, relationship with supervisor,

and job uncertainty and its impact on employee performance. So, the purpose of this research is to fill the research gap and to answer the question regarding the impact of job satisfaction on employee performance. This study aims to find out the impact of the above stated factors on satisfaction level of employees.

## **Literature Review**

### **Job Satisfaction**

Khan, Nawaz, Aleem & Hamed (2012) conducted research on the reasons of employee satisfaction in the organization. Their study shows that job satisfaction and dissatisfaction not only depend on the nature of the job but satisfaction is highly correlated with the expectations that what the job supply to an employee. According to Al-Hussami (2008) the nature of the job is not responsible for the satisfaction and dissatisfaction of an individual. But the individual's expectations associated with the job highly depend. Further, Mulinge & Mullier (1998) describe that intrinsic and extrinsic reward, social benefits to employees and on merit promotion in job will increase the job satisfaction. Fisher, Locke & Henne (1992) define that the term job satisfaction is multifarious experience in nature which highly depend on different factors i.e. relax working conditions, handsome salary, good relationship with supervisors etc.

Spector (1997) described that the people of an organizations are satisfied when they like their work and know their roles and responsibilities in the organization. Furthermore, it is added that job satisfaction is an affective or expressive reaction towards a variety of features of an employee's work. Okpara (2004) described that a person is highly satisfied in an organization when the pay, promotion and relationship with supervisor are positive. Out of these facets pay is an important factor which highly satisfies employees. Additionally, Sokoya (2000) also conducted the research on employee performance in the public sector organizations and concluded that income is a major factor which satisfies employees.

### **Job Uncertainty**

Kabir & Pervin (2011) conducted research on the causes which affect job satisfaction of pharmaceutical sector. Primary as well the secondary data were used; open ended interviews were designed to collect data. The variables included to study employee

satisfaction are supervision, salary and job security. Out of these variables job security highly affect the satisfaction level of the employees. Jain, Jabin, Mishra & Gupta (2007) conduct the research on job satisfaction as connected to the organizational environment and work-related anxiety. Results show that organizational climate has high impact on employee satisfaction.

Employee dissatisfaction highly depends on the insecurity of job amongst the employees. Guest (2004) stated that individuals working in an organization become reluctant toward their work when they feel insecurity of their jobs. Low job security, low wages and lack of promotion are the leading factors of employee dissatisfaction in the organization. Abegglen (1958) found through the study of Japanese workers that lifetime employment and seniority system, job security leads to high satisfaction in the organization. Further, Bolt (1983), Mooney (1984), and Rosow & Zager (1985) also concluded that job performance is highly dependent on job security.

Iverson (1996) conducted a study on 20 pharmaceutical companies in Japan and the results show that job security is the leading factor which motivates the employees toward work. MorrisLydka, & O'Creevy (1993) concluded that job performance and organizational commitment is negatively correlated with job insecurity. Judge *et al.* (1998) study the factors which are responsible for job satisfaction in organization. Results show that organizational social behavior, motivation and job involvement are positively correlated and increases the employee performance. On the other hand, job insecurity, absenteeism and work stress leads to dissatisfaction in organizations.

### **Working Conditions**

Khan, Mariyym, Pasha & Hasnain (2011) conduct research on the impact of organization culture on job satisfaction of employees using a sample size of 150 employees. Variables included in the study are organizational culture (communication between supervisors and employee, rules and policies, supervisors support, reward and benefits) and job satisfaction (pay, supervisor, co-workers, and promotion). Results of the study show that factors of organization culture and working conditions have positive impact on the satisfaction level of employees.

Cranny *et al.* (1992) describe a number of factors which are responsible for employee satisfaction including; salary, promotion and relax working condition which includes proper time table for each employees, holidays and bonuses. The results show that these factors have positive and significant relationship with employee's satisfaction.

Ali & Akhtar (1999) explore the factors which increase the employee performance in organizations and their results show that healthy organizational climate in favor of employees positively affect the performance of the employees and increase the level of employees satisfaction.

### **Relationship with Supervisor**

Aydin & Ceylan (2009) conduct a study on employees' satisfaction in terms of organizational culture and spiritual leadership. The factors which they focused are organizational culture and spiritual leadership. They take a sample of 578 employees from the metal industry. Results show that employee satisfaction is positively associated with organizational culture and spiritual leadership. Mulky (2011) explored the factors which affect the performance of salespersons of pharmaceutical companies in India. Survey results show that the relationship of supervisors with salesperson is positively associated with job satisfaction and increases their performance.

Supervisor's support to employees is very important but it should be immediate support in favor of employees which has positive impact on their performance (Griffin, Patterson & West, 2001). In today's dynamic environment the gain and loss of an organization highly depend on efficient leadership. Effective leadership includes increasing employee's performance to higher standard, raising employee's vision to higher sight and building their personalities (Drucker, 1985).

According to Chakrabarty, Oubre, & Brown (2008) supervisor should apply such techniques through which the employees can easily understand the working requirements and how the job should be done. Politis (2001) has examined the roles played by leadership in the process of knowledge acquisition and a survey was carried out on 227 persons who have been engaged in knowledge acquisition activities to examine the relationship between leadership styles and knowledge acquisition attributes. The results showed that leadership styles that involve human interaction and encourage

participative decision-making are positively related to the skills of knowledge acquisition.

### Theoretical Framework of the Study

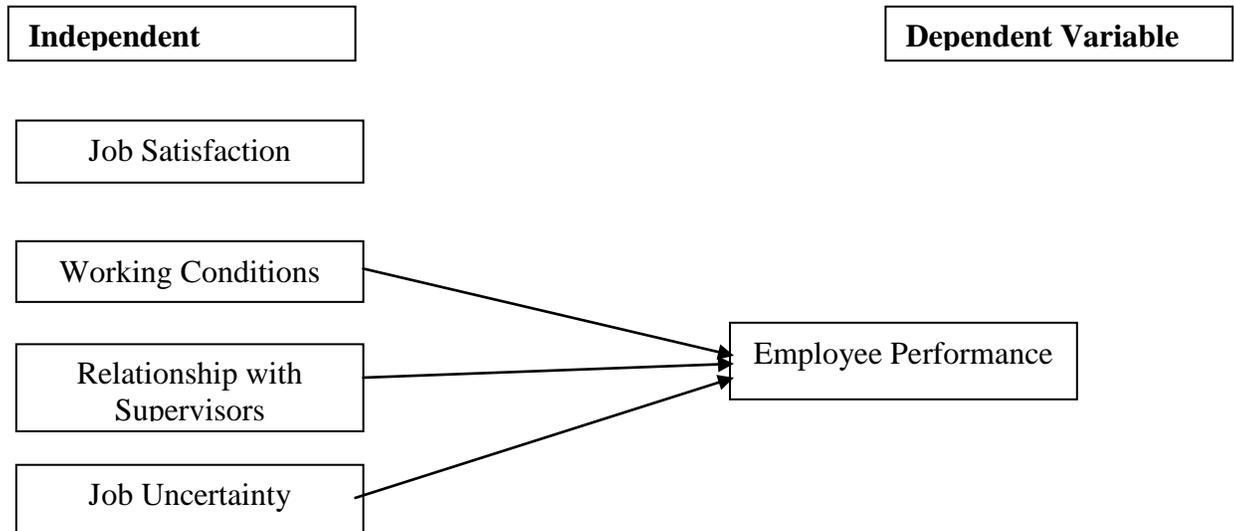


Figure 1

Schematic diagram showing the relationship of variables

### Research Hypotheses

$H_1$ : Job Satisfaction has positive and Significant Relationship with Employee Performance

$H_{1a}$ : Working Condition has positive and significant relationship with Employee Performance

$H_{1b}$ : Relationship with supervisor has positive and significant relationship with Employee Performance

$H_{1c}$ : Job Uncertainty has positive and significant Relationship with Employee Performance

### Methodology

This study is causal in nature. To empirically test the hypotheses of this study primary data is used. Primary data are collected through structured questionnaires. Data from middle level managers and medical representatives of pharmaceutical companies of Islamabad are collected. Population comprises of all the middle level managers and medical representatives of pharmaceutical companies of Islamabad. Non-probability

based convenience sampling technique is used in this study. Based on the number of pharmaceutical companies in Islamabad, a sample of 120 people is selected for data collection. There are around 12 medium and large scale pharmaceutical companies in Islamabad therefore the selected sample is reasonable for the study. A previously validated research instrument from Kabir & Parvin (2011) was used for data collection. To empirically test the hypotheses descriptive statistics, Ordinary Least Square Regression (OLS), and other statistical models are applied using SPSS.

## Findings

**Table 1**

*Descriptive Statistics*

	Mean	Std. Deviation	N
Employee Performance	3.9211	.24101	120
Relation with supervisor	3.6424	.37802	120
Working condition	3.8745	.42573	120
Job uncertainty	3.701	.44127	120

Table 2  
*Model Summary<sup>b</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.835 <sup>a</sup>	.697	.690	.27950	1.56

a. Predictors: (Constant), Relation with Supervisor, Working Conditions, Job Uncertainty

b. Dependent Variable: Employee Performance

Table 3  
*ANOVA<sup>b</sup> Results*

		Sum of				
Model		Squares	df	Mean Square	F	Sig.
1	Regression	20.882	4	6.961	89.100	.000 <sup>a</sup>
	Residual	9.062	116	.078		
	Total	29.944	119			

a. Predictors: (Constant), Relation with Supervisor, Working Conditions, Job Uncertainty

b. Dependent Variable: Employee Performance

Table 4

*Regression Coefficients<sup>a</sup>*

		Un-standardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.284	.258		1.098	.274
	Working conditions	.233	.052	.232	4.501	.000
	Job uncertainty	-.073	.058	-.071	-1.268	.208
	Relation with supervisor	.754	.054	.799	14.052	.000

a. Dependent Variable: Employee performance

The R value is 0.835 which represents the simple correlation and therefore indicate the degree of correlation. The  $R^2$  value indicates variability of dependent variable explained by independent variables.  $R^2$  value is 0.698 which specify that employee satisfaction significantly contributes toward employee performance. The model applied is significantly good enough in predicting the outcome variable as  $F = 89.10$  and  $F \text{ Sig.} < 0.01$ . By looking at the Bcolumn under the un-standardized coefficients column the regression equation is presented as:

$$EP = 0.284 + 0.233(WC) - 0.73(JU) + 0.754(RWS) + \varepsilon_i$$

Where EP is employee performance, WC is working conditions, JU is job uncertainty, RWS is relation with supervisor and  $\varepsilon_i$  is the error term.

The regression coefficients of independent variables along with their t-values and p-values are presented in coefficient table. Relation with supervisor and working condition both positively effecting employees performance. For both the t-values are statistically significant at  $p < 0.01$ . On the other hand, job uncertainty negatively effects employee performance but its value is statistically insignificant. The results of this study validate the findings of previous researchers in this area. Like the findings of Cranny *et al.* (1992), Ali & Akhtar (1999) and Khan *et al.* (2012) this study also confirms that working conditions significantly affect employees' performance. Similarly, this study validates the findings of Politis (2001), Aydin & Ceylan (2009), Mulky (2011) and Griffin *et al.* (2011) that good relation with supervisor significantly improves employee's performance. But result for job uncertainty, although negatively related to employee performance, is statistically insignificant. Therefore this study is unable to validate the previous studies like Morris Lydka, & O'Creevy (1993), Judge *et al.* (1998), Gest (2004) and Kabir & Pervin (2011). This may possibly be associated with relatively more job opportunities available in Islamabad. Job uncertainty may not a major issue for employees where job opportunities are more.

### **Conclusion**

Based on the findings of this it is concluded that better working conditions and good supervisor relation with employees can significantly improve employees' performance in the pharmaceutical industry of Pakistan. Although the sample is only limited to the employees of pharmaceutical companies of Islamabad but the findings can be generalized to other cities of Pakistan. Job uncertainty though negatively affecting employee's performance but its value is not statistically significant. This study is limited in nature and therefore more in depth investigation is required. Future studies can focus on larger sample size as well as other factors like work-family life balance, relation with fellow workers, flexible working hours etc. can be incorporated.

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## **Working Capital Management and Firm Performance of Construction and Material Sector in Pakistan**

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### ***Abstract***

*The purpose of this study is to investigate the relationship of profitability on working capital management. Working capital management efficiency measured with cash conversion cycle and its components. The present study evaluates the efficiency of the working capital management of construction and material sector of Pakistan for the period 2008-2012. Panel data analysis has been used and data has been taken from financial statements of construction and material companies. Hypothesis were tested using multiple regression analysis and was found that profitability has negative significant relationship with profitability, positive significant relationship with day's average inventory but insignificant relationship with day's average payable and cash conversion cycle. Working capital management impacts directly on firm's profitability and managers can achieve their major objective of maximizing shareholders wealth by reducing cash conversion cycle, inventory and receivable period and by delaying the payments payable to different parties.*

**Keywords:** working capital management, performance, cash conversion cycle

### **1. Introduction**

Working capital is the money which is always available for the business to maintain its operations. It is the capital available to purchase inventory, pay employees and finance other short term capital expenditures. This makes managing working capital an important business skill. Working capital describes as capital invested in current assets and converted into cash within short time period and is again invested this cash. So, it is constantly receiving or circulating and also recognized as floating capital or circulating capital.

Working capital management is important element in determining firm performance. For running firm's operations sufficient working capital amount is very essential and efficiency in this area helps to operate fixed assets profitably. It promise the firm's long term success and to obtain the goal maximization of the shareholders funds. Improper management of cash on due dates may result in loss of cash discount and loss of reputation due to non-payment of debt. Ogundipe and Idowu (2012) investigated that an inappropriate working capital management of accounts receivables, inventories and accounts payables will bring difficulties to continue a firm's operation that affects market value of the firm. Mohamad and saad (2010) examined that the managing working capital leads to development in market value of firms and effectiveness, this feature leads to operational and strategic thinking of company in order to work efficiently and effectively. Supplier's credit policy and credit time period to customers both have an impact on profitability of the company.

There are different approaches of working capital management. These are aggressive approach, conservative approach and matching approach. . In aggressive approach current assets need are financed through short term funds and current liabilities are kept in a greater portion as compared to long term debts. There is low cost, high risk and high profit. In conservative approach current assets should be used to finance through long term funds and greater portion of long term debts is used instead of current liabilities. There is high cost, low risk and low profit. Matching approach describe that permanent working capital should be invested through long term finances and temporary working capital need should be invested through short term finance. The use of short term sources should be restricted to only emergency situation or when there is unexpected outflow of funds. There is low cost, high risk and high profit.

The approach of working capital financing is implemented by a company is very important and it has an impact on its profitability and liquidity. If the firms will follow aggressive working capital policy then they have negative returns. Aggressive financing policy gives company profitability because short-term funds are less expensive to purchase so funding costs can be lower but aggressive financing policy not often yields high profitability and also creates the greatest risk of illiquidity. Nazir and Afza (2005)

study shows the negative relationship between the working capital investment aggressiveness and financing policies and measures of profitability of firms.

Current assets increase have a negative impact on the profitability of firms while low level of current assets may bring difficulties in maintaining firm's operations and lower level of liquidity. According to Barine, (2012) working capital decisions describe financial decision making of risk and return. Higher working capital reduces illiquidity risk and increases profitability of firms. For creation of firm value an optimal working capital management is consider to contribute positively. Optimal level of working capital can be describe as the one in which an equilibrium is maintained between efficiency and risk and involve attaining the optimum level of different components of working capital for example account receivables, inventory and payables.

Working capital management depends on two decision issues for the firm and they are:

- The optimal level of investment in current assets.
- The appropriate mix of long term and short term financing and use this investment in current assets.

These decisions are control by the tradeoff between profitability and risk. Firm manager should manage the tradeoff between liquidity and profitability maximization accurately to obtain optimal working capital management (Jail, 2010). If net working capital of company is smaller than its liquidity risk is higher. If conversion of current assets in to cash brings any disruption it may result failure in the payment of current outstanding liabilities (Fletcher, 2007).

By reducing the cash conversion cycle, inventory period and days account receivables, managers can increase the firm's profitability but they cannot raise profitability by rising the day's payable period (Deloof, 2003; and Napompech, 2012). Managers can increase share holders value and ROA if they reduce their inventory size, cash conversion cycle and payable period and increasing in supplier time period and liquidity will bring overall firms' performances (Azam and Haider, 2011). Managing working capital correctly is important for companies that use intensively fixed capital same as those that use intensively working capital. (Ching *et al.*, 2011).

In this paper the problem will be analyze “does the change in working capital effects firms’ performance in Pakistan”? And identify the important variable that effect on working capital management.

To examine the problem the researcher develops the following objectives:

- Determine the relationship between working capital management and profitability of the firm.
- Determine the impact of accounts receivables days, inventories days, accounts payable days and cash conversion cycle on firm performance and
- To determine working capital needs of firms.

Working capital management determines the optimum investment level in current assets such as cash, inventories, receivables, and other investment in short term. Major focus in working capital management will be given to the firm's investment optimization. This research is mainly based on the impact of the working capital management on the firm’s performance in Pakistan. In this paper for comprehensive measure of working capital management cash conversion cycle is used. The performance measures with Return on assets (ROA) and defined as profit before interest and tax divided by total assets (Padachi, 2006; Lingsiya and Nalini, 2011, Sen and Oruc, 2010; Azam and Haider, 2011), Current ratio, size, sales growth, debt ratio used as control variables.

Specific research studies especially on the working capital management impact and firm performance in Pakistan are rare. Our study will throw light on the working capital management by measuring firm performance in Pakistan will contribute to the literature. This study will allow many large companies in changing environment of Pakistan to determine their own working capital management and help to set tradeoff between liquidity and performance to adopt optimum working capital policy in order to increase profitability. The findings of this study will provide an insight on the company working capital management policy for concerned managers. They would know that in order to increase the performance level at how much level they can increase their liquidity and the optimal level of inventory level and receivables.

The remainder of this paper will organize as follows: In second section a review of literature on the topic of the working capital management and firm’s performance and

past empirical studies will be discuss. The third section will describe data collection, methodology and analysis procedures. The fourth section will gives details regarding the results of the research. Finally the fifth section includes findings and conclusion.

## 2. Literature Review

Working capital management is an essential part of corporate finance. Working capital management includes working capital components, receivables, inventory, payables and for day to day operations using the cash efficiently. Firms may maximize their value by an optimal level of working capital.

Debtors' collection period, cash conversion cycle, capital structure and size have significantly negative relationship with the cash position while creditor's payment period and profitability have positive relationship with the cash position. So, not only does firms improves their profitability by reducing the cash conversion cycle but it has also the tendency to improve the cash position of firms. (Yeboah and Agyei, 2012)

Managers by reducing the number of day's accounts receivable and inventories can increase corporate profitability and less profitable firms to pay their bills wait longer (Deloof, 2003; García-Teruel and Martínez-Solano, 2007). Lower gross operating profit is related to an increase in the accounts payables number days. Low profitable firms take benefit of credit period given by suppliers and wait longer to pay bills. Managers for their companies generate profits by handling the cash conversion cycle properly and by keeping each component to an optimum level for example account receivables, inventories and accounts payables (Lazaridis and Tryfonidis, 2006). Working capital management and profitability of firm has strong relationship. High investment in receivables and inventories will lead to lower profitability and current asset to total asset will lead to higher profitability. Increase in the cash conversion cycle will reduce the profitability of firms (Lingesiya and Nalini, 2011).

Working capital management associates with inflation, growth opportunity, size and economic growth. Their results show that to maintain optimal working capital management the managers should consider and firm specific (internal) macroeconomic (external) factor to (Taufiq *et al.*, 2010). Firms can increase profitability by reducing

accounts cash conversion cycle and receivable period. Leverage has a negative significant relationship with firm value and as a control variable with profitability. This indicates that due to increase in the level of leverage value and profitability of the firm will decline (VURAL *et al.*, 2012).

Alipour (2011) selected Tehran stock exchange and found that cash conversion cycle is the important measuring tool to calculate the working capital management efficiency. Working capital management and profitability of companies has significant effect on the profitability of the companies. By decreasing inventory and accounts receivables managers can generate value for the shareholders. Gill *et al.*, (2010) measured profitability through gross operating profit and found significant relationship statistically between the profitability and cash conversion cycle and It shows that by keeping accounts receivables at an optimal level and handling properly the cash conversion cycle managers can create profits for their companies. The relationship between firm's profitability and accounts receivables is negative this indicates that to reduce the cash gap in the cash conversion cycle, low profitable firms will decrease their accounts receivables.

Bagchi and bhaskar (2012) found that working capital management variables and profitability of firms has negative relationship and as profitability of firm decreases Cash conversion cycle increases, for the shareholders managers can create a positive effect by decreasing the Cash conversion cycle to a lowest level. Debt and profitability has also negative relationship. Mathuva (2010) also investigated that firms by operating effectively and efficiently their resources are able to achieve and keep competitive advantage of the organization through reducing the cash conversion cycle to a minimum level. Sen and Oruc (2010) determined the efficiency level of firms traded in ISE (Istanbul Stock Exchange) and the relationship between return on total assets and working capital management. They found the relationship between cash conversion cycle, current ratio, net working capital level, days accounts receivable, days inventory has significant negative with return on total assets.

García-Teruel *et al.*, (2007) investigate that working capital management has important role in medium and small sized firms. Medium and small sized profitability of firms and the day's account receivable and days of inventory has negative significant

relationship. Quayyum (2012) found that the Profitability and different Working Capital Components has significant level of relationship between industries also shows that level of relationship change from industry to industry significantly.

Managers cannot raise profitability level by increasing the payables deferral period and they by shortening the cash conversion cycle, inventory period, and receivables collection period they can increase the profitability of their firms and also indicates that gross operating profits depends upon industry characteristics of the firms (Napompech, 2012). Corporate governance does not improve working capital management efficiency but improve the larger broad (Gill and Biger, 2012). Working capital intensive companies will yield more profit if managing inventory and cash conversion cycle properly. For improving Return on sales for firms that use working capital and Cash conversion cycle and days inventory are important but day's inventory is most important variable for Return on assets. For improving Return on sales and Return on assets, Day's working capital and Debt ratio are main variables that affect the companies (Ching *et al.*, 2011).

Risk-return nature of financial decision making is example of Working capital decision. Risk of illiquidity reduces by increasing in the firm's working capital and also raises the overall profitability for companies. Efficiency of firm's operations requires proper management and trade-off of risks and returns Nwidobie *et al.*, (2012). In order to maximize the value of a firm manager of firms needs to obtain required tradeoff between and profitability and liquidity. Cash conversion cycle is affected positively with Profitability, shows that managing their working capital for more profitable firms are less motivated and for inefficient working capital management managers in financial markets are failed to penalize in emerging markets (Abuzayed, 2011).

Working capital management and firm's capital expenditure has significant relationship. Policies of working capital management based upon many factors and these are operating cash flow, capital expenditure and sales growth, etc. Operating cash flow for firms has a significant impact on working capital management and predict as control variable. When the Companies have growth opportunities they manage working capital effectively that they can fulfill the required capital expenditure for expansion of their

business (Appuhami, 2008). Managing working capital properly is very essential regardless of the type of company whether fixed capital intensive or working capital.

### **3. Research Methodology**

The secondary data required to perform the research was collected from the official sites of the listed firms on Karachi Stock Exchange. Additionally, some of the required data was gathered from the State Bank, rest of the data is collected from annual reports and SBP analysis reports. Yearly data included on sales, cost of goods sold, total assets, average receivable, Days average Inventory, Days average payable, cash conversion cycle, and leverage ratio. There are 35 listed constructions and material firms at Karachi Stock Exchange and those firms are not included whose observations were missing for few years or data was not available. The data used for research purpose consisted of 5 years annual data of the variables. Data of all the variables belonged to period starting from fiscal year 2008 to fiscal year 2012. There are total 125 observations.

#### **3.1 Dependent Variable**

Return on Assets (ROA) used as dependent variable and can defined as profit before interest and tax divided by total assets. (Padachi, 2006; Lingsiya and Nalini, 2011; Sen and Oruc, 2010; and Azam and Haider, 2011) have used this variable in their study.

#### **3.2 Independent Variables**

Cash conversion cycle used for measuring working capital management. It shows that the companies first have credit transactions, companies buy and sell goods in credit and then they recover receivable account which is called cash conversion cycle.

Cash conversion cycle = Days average receivables + Days average Inventory - Days Average payment

Days average receivables =  $360 / (\text{Sales} / \text{Account Receivables})$

Receivable collection period is important for operational and financial performance of firms and determines the difficulties in collecting sales made on credit. The average collection period is the average number of days a company needs to accumulate its accounts receivables, i.e. the number of days on average required to transfer into cash.

Days average Inventory= $360 / (\text{COGS} / \text{Inventory})$

Days average inventory measure is the procedure of converting raw materials into cash and is the component of cash conversion cycle.

Days Average payment period= $360 / (\text{COGS} / \text{Accounts payable})$

Accounts payable are actually liabilities to avoid default risk and within a given period of time must be paid off.

### **3.3 Control Variables**

Control variables are used and includes following variables: Current ratio, size, sales growth and leverage. Current ratio defined as current assets divided by current liabilities. Current ratio gives a sense of efficiency of a company's operating cycle or its ability to converts its goods into cash and shows company ability to pay its short term debt by using current assets, (Padachi, 2006; Lingsiya and Nalini , 2011; Rehman and Nasr, 2007; and Azam and Haider, 2011).

The logarithm of sales or the LOS is used to know how the firms have grown in the recent years. The companies are more profitable which have more sales so the company size is used as proxy for size. (Deloof , 2003; Padachi , 2006 ; Alipour, 2011; and Rehman and Nasr, 2007). Sales growth is used to measure investment growth opportunity and is calculated by  $(\text{This year's sales} - \text{previous year's sales}) / \text{previous year's sales}$  (Deloof , 2003; and Abuzayed, 2011).

Leverage ratio can be defined as financial risk of company and determine that how much of the company's assets are financed by debt. Firms leverage is calculated by dividing long term total debts by the total assets. If the firm has more debt the more would be the interest factor which would in turn affect the profitability. (Deloof , 2003 ; Padachi , 2006; Rehman and Nasr, 2007).

All above variables have relationships that affect working capital management.

### **3.4 Hypothesis**

To find the relationship between working capital management and firm performance following hypotheses are generated and to support these hypotheses statistical data calculated.

**H 1:** There is significant relationship between day’s average receivable and profitability.

**H 2:** There is significant relationship between day’s average inventory and profitability.

**H 3:** There is significant relationship between day’s average payable and profitability.

**H 4:** There is significant relationship between cash conversion cycle and profitability.

### 3.5 Model Specification

To find the relationship between working capital management and firm performance in Pakistan four regression models developed using empirical framework first used by Deloof (2003) and later work of Padachi (2006).

$$ROA_{it} = \beta_0 + \beta_1 (DAR_{it}) + \beta_2 (CR_{it}) + \beta_3 (LOS_{it}) + \beta_4(SG_{it}) + \beta_5(LEV_{it}) + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1 (DAI_{it}) + \beta_2 (CR_{it}) + \beta_3 (LOS_{it}) + \beta_4(SG_{it}) + \beta_5(LEV_{it}) + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1 (DAP_{it}) + \beta_2 (CR_{it}) + \beta_3 (LOS_{it}) + \beta_4(SG_{it}) + \beta_5(LEV_{it}) + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1 (CCC_{it}) + \beta_2 (CR_{it}) + \beta_3 (LOS_{it}) + \beta_4(SG_{it}) + \beta_5(LEV_{it}) + \epsilon_{it}$$

## 4. Data Analysis

To analyze the data various analysis techniques were used

### 4.1 Descriptive statistics

Descriptive statistics shows that on average firms has return on assets of (59) % it indicates that they are not able to maintain their operations overtime and profitability. Firms take average 86days to convert inventory into goods whereas average collection period for firms is 22days and firm’s holdup their payables for 152 days. Average firms’ cash conversion cycle is (46) days it indicates that the firms have excess cash to invest for 46 days. Liquidity current ratio suggests that firms can pay their short term liabilities 0.894 times out of current assets. On average sales grow annually almost 29% whereas 14% of their liabilities taken up by debt.

**Table 1: Descriptive Statistics**

	ROA	DAR	DAI	DAP	CCC	CR	SG	LOS	LEV
Mean	-0.588	21.871	85.971	152.270	-44.429	0.895	0.293	0.969	14.112

Median	0.867	3.203	13.632	31.242	30.550	0.081	0.094	0.125	0.264
Maximum	-0.320	8.309	34.956	75.308	-21.323	0.729	0.119	0.668	14.881
Minimum	-23.640	0.109	2.179	21.125	-2704.387	0.026	-1.000	0.020	0.000
Std. Dev.	9.694	35.810	152.406	349.301	341.560	0.901	1.054	1.403	2.957

#### 4.2 Correlation Analysis

Correlation analysis is used in the model to get the relationship between working management and firm’s performance. Correlation analysis results show that Return on assets is negatively related with Days average relievable and days average payables. It shows that if day’s average receivables and day’s average payable decreases than these have a positive impact on the profitability. Day’s average inventory and cash conversion cycle positively correlated with return on assets. Current ratio is positive which indicates the relationship between profitability and liquidity and companies with more liquidity are more profitable. Leverage ratio is negatively correlated which shows that if debt decrease profitability increases while sales growth and company size is positively correlated with ROA.

**Table 2: Correlation Analysis**

	ROA	DAR	DAI	DAP	CCC	CR	SG	LEV	LOS
ROA	1								
DAR	-0.240	1							
DAI	0.002	0.108	1						
DAP	-0.101	0.001	0.291	1					
CCC	0.080	0.153	0.160	-0.893	1				
CR	0.264	0.028	-0.015	0.272	-0.282	1			
SG	0.020	-0.048	-0.073	-0.115	0.080	-0.049	1		
LEV	-0.222	-0.001	0.312	0.023	0.116	-0.234	-0.099	1	
LOS	0.241	-0.188	-0.490	-0.697	0.474	-0.049	0.079	-0.367	1

#### 4.3 Multiple Linear Regressions

To investigate the relationship between working capital management and firm performance Regression analysis is used.

**Model 1**

Table 3 represents the regression results of first model. According to first regression model hypothesis 1 is accepted at 5% significant level and indicates that there is significant relationship between day’s average receivable period (DAR) and profitability. Coefficient of DAR is negative at which calculated t-statistic is more than critical value. So it shows that there is a negative significant relationship between receivable period and profitability. Firms earlier in collecting their receivables earn high profits as compared to firms recovering receivables late. Adjusted R square of 15% shows that after adjusting for degrees of freedom model is capable to explain 15% of profitability.

**Table 3: Coefficient Model (A)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.340	4.943	-1.890	0.061
DAR	-0.058	0.023	-2.524	0.013
CR	2.748	0.929	2.958	0.004
SG	-0.017	0.769	-0.022	0.982
LEV	-0.676	0.644	-1.049	0.296
LOS	0.582	0.302	1.931	0.056

**Summary Model (A)**

R-Squared	Adjusted R-Square	S.E of Regression	F-Statistics
0.183	0.149	8.944	5.339

**Model 2**

Table 4 shows the second regression model which is run by using the day’s average inventory as an independent variable. The results show the positive significant relationship between day’s average inventory and profitability whereas t statistic is equal to critical value.

Hypothesis 2 is accepted but relationship is positive it indicates that firms with high day’s average inventory maintain too much inventory and cash is tied up in goods that cannot be sold this is not good for the company and to move out this inventory quickly, management have to decrease prices, selling its product at a loss. The adjusted R<sup>2</sup> has a value of 13% and F-statistic has a value equal to 4.751 that reflects the significance of the model or significance of R square.

**Table 4: Coefficient Model (B)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-17.603	5.352	-3.289	0.001
DAI	0.012	0.006	1.960	0.050
CR	2.765	0.939	2.945	0.004
SG	0.103	0.777	0.133	0.895
LEV	-0.747	0.657	-1.138	0.257
LOS	1.006	0.329	3.057	0.003

**Summary Model (B)**

R-Squared	Adjusted R-Square	S.E of Regression	F-Statistics
0.166	0.131	9.035	4.751

**Model 3**

According to the third regression model third hypothesis is rejected that there is significant relationship between days average payables and profitability because coefficient of day’s average payment is negative and significant but p value is more than 0.05. The value of t-statistics is (0.232) which is more than critical value.

**Table 5: Coefficient Model (C)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-11.696	7.122	-1.642	0.103
DAP	-0.001	0.004	-0.232	0.817
CR	2.819	0.987	2.857	0.005
SG	0.042	0.793	0.053	0.958
LEV	-0.597	0.689	-0.866	0.388
LOS	0.658	0.448	1.468	0.145

**Summary Model (C)**

R-Squared	Adjusted R-Square	S.E of Regression	F-Statistics
0.140	0.104	9.178	3.871

**Model 4**

According to the model 4 hypotheses is rejected at 5% significance level and cash conversion cycle is insignificant as t statistic is less than critical value. The results are against with analysis that in the decrease of Cash Conversion Cycle will generate high profits for the company and it also shows that firms by maintaining the Cash Conversion Cycle to a higher level can create value for their shareholders. The value of F-statistic is 4.008 and the value of adjusted R-square is 10% which shows the

significance of the model. It means companies couldn't maintain their cash conversion cycle profitable and couldn't use their large part of investments in working capital this is the reason that cash conversion cycle is insignificant.

**Table 6: Coefficient Model (D)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.559	5.664	-1.864	0.065
CCC	0.002	0.003	0.801	0.424
CR	2.929	0.974	3.006	0.003
SG	0.019	0.789	0.024	0.981
LEV	-0.717	0.690	-1.039	0.301
LOS	0.577	0.360	1.602	0.112

**Summary Model (D)**

R-Squared	Adjusted R-Square	S.E of Regression	F-Statistics
0.144	0.108	9.155	4.008

## 5. Conclusion and findings

The different analyses identified important management practices and it helps managers to improve the financial performance of the companies and to recognize the areas of their operation. The result gives information to managers about financial management practices used in the firms. This study has shown that profitability has negative significant relationship with profitability, positive significant relationship with day's average inventory but insignificant relationship with day's average payable and cash conversion cycle. (Deloof, 2003; Alipour, 2011; Rehman and Nasr, 2007) found negative significant relationship with cash conversion cycle but I found insignificant relationship between cash conversion cycle and profitability. This is due to the reason that this sector has average negative returns this shows firms are more fixed capital intensive and doesn't maintain their working capital requirements properly, firms needs to manage their working capital efficiently.

Working capital needs of an organization change with time and firms should maintain a good management of its assets and liabilities. This research concludes that there is need for further empirical studies to be undertaken on construction and material sector of working capital practices by increasing the size of sample so that the study can help to disclose the hidden factors that explain the better performance of some business

and how these practices could be increase to the other industries. This would also help out policy makers and to identify the requirements and problems faced by construction and material sector in Pakistan. This analysis has been controlled by the sample size and the nature of the data, which could have affected the results.

In order to reduce the cash conversion cycle a firms either decrease days average Inventory, days average receivable or increase days average Payable to increase the amount of cash on hand to use this to pay current liabilities or able to use this cash for expenses, dividend payments and growth. These results can be strengthened if the firms manage their working capital in more efficient ways. By manage accurately accounts receivables, cash, inventories and account payables the firms will increase and improve performance. Due to changing world of economy, advancement of technology and increased global competition, this sector must struggle to increase their profits to bring their cash conversion cycle at optimum level to increase profitability.

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## **To Investigate the Impact of Big Five Personality Traits on Customer Advocacy Behavior**

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### **Abstract**

**Purpose** – The purpose of this study is to investigate the impact of Big-5 personality traits on customer advocacy behavior.

**Design/methodology/approach** – A model was developed to assess the impact of the personality traits including conscientiousness, extraversion, agreeableness, openness to experience and neuroticism on customer advocacy behavior. The model was tested on 142 customers of a telecommunication company. Survey research method was used in this research and questionnaire was the tool used for collecting data.

**Findings** – The findings suggest that customers who have stronger levels of openness to experience are indeed more willing to contribute as advocates. The customers with higher levels of conscientiousness, extraversion, agreeableness and neuroticism do not have positive and negative effect on customer advocacy behavior.

**Research limitations/implications** – The model was tested for the customers of only one telecommunication organization so the results cannot be generalized over the customers of other telecommunication organizations. Furthermore, the data is collected from only telecommunication industry's customers so the results/findings of this research cannot be applied to other industrial sectors.

**Practical implications** – The study considers the customers potential that how they can be further engaged to serve as advocates and thus improve the firm's marketing performance.

**Originality/value** – Much of the previous work has been based on analyzing different factors that affect the customer advocacy behavior, this study advances on analyzing the role of customer's personality traits on customer's advocacy behavior.

**Keywords** – Conscientiousness, Extraversion, Agreeableness, Openness to experience, Neuroticism, Customer advocacy behavior.

## Introduction

In various disciplines the concept of advocacy has been used widely, which means 'to recommend' or 'to be in favor of', while in legislation this term of advocacy is used as 'the person who speaks on behalf of the other person' (OED 1998). While in terms of marketing the term advocacy means a person truly representing the interests of the customers (Urban, 2005).

Uma (2005) said that the researcher Urban (2005) said that to be the advocate of customers is a new foundation laid on the firm's belief of providing absolute and unprejudiced information related to the interests of the customer, keeping in mind the products which suits the customers (keeping fair struggle with their competition), design of the product, and creating affiliation which results into an allegiance in their relationship. On the contrary, 'advocate for your customer and they'll advocate for you'.

Immense literature is available on the advocacy behavior of customers still there is lack of understanding about the personality traits and their relationship with advocacy behavior of customers. The aim of this paper is the manipulation of the personality traits upon the customer advocacy behavior. In particular this paper targets the sundry personality traits of the varied people which affect the customer advocacy behavior.

One of the indispensable questions that arise in the studies of personality is that the individual differences are portrayed by which personality traits. Hierarchical models have been employed by many researchers in the last few decades in order to mount the answer for this question. One of the models among these is the Big Five (Digman, 1990; Goldberg, 1981; McCrea and Costa, 1999), which consists of openness to experience, conscientiousness, extra version, agreeableness and neuroticism, which can educate and foresee various individual differences over an array of settings, including intellectual and substantial fitness, job contentment, and work performance (e.g Barrich and Mount, 1991; Judge, Heller, and Mount, 2002) as well as customer advocacy behavior. Extensively accredited model of character portrayal is Big Five Model (John, Noumann, Soto, 2008).

Personality traits not only fluctuate among persons but these differences also demonstrate longitudinal divergence that is they revolutionize with the change in time (Small, Hertzog, Hultsch, and Dixon, 2003).

One of the crucial elements of personality associated with psychosomatic progression is willingness (openness) intellect (Colin G. De Young, Racheal G. Grazioplene a, Jordan B. Peterson, 2010).

Extraverted is referred to as socialization (Furr, 2009). Extraversion (associated with optimistic concern and activation) and Neuroticism (is associated to pessimistic sentimental concentration) are well thought-out to be instinctively determined (Mac Donald, 1995; Pothbart and Derryberry, 1981; Yik and Russell, 2001).

Agreeableness and conscientiousness is associated with the effortful command, a super-ordinate dogmatic structure (Jensen Campbell *et. al*, 2002). One of the significant concepts in this scaffold is that each sphere represents units of character. For example the Big Five dimensions (i.e neuroticism, extraversion, openness, agreeableness, and conscientiousness).

One of the emerging view points in the realm of marketing is that customers should be taken as valued property (Blattbug and Dieghton, 1996; Bolton *et. al*, 2004; Peppers and Rogers, 2004).

Supplementary expansion in modern customer relationship management literature by keeping the view that the firm can enhance customers worth's duration by developing and increasing interaction with their customers.

This study tends to search out the business customers' eagerness to acquire a part as advocates in marketing. The scheme of customer advocacy gained extreme gratitude but still there is palpable interval of research scrutinizing the advocacy behavior of customers. In an endeavor to swathe this gap, the researcher will study the advocacy position of customers in competition with the personality traits of customers. Study objective is to inspect the relationship between the personality traits of customer and their eagerness to serve as advocates. This study commences with the establishment of hypothesized model using Big Five personality traits to cram the relation with the advocacy behavior of customers. The described model was tested on the customers of telecommunication company i.e. Ufone in the H-8 sector of Islamabad because many universities are situated in this sector as well as the HEC head office is also located in this sector. Survey research method was used as a tool for data collection. After this,

findings are discussed. Furthermore the paper is concluded by offering managerial implications and major limitations of this research are discussed.

### **Literature Review**

The meaning of the word ‘advocacy’ is not the technique of a company which it uses for speaking to its customers rather it’s a harmony among the company and the customers of the company that if the company is concerned about the pleasure of its customers than it will be reflected back in the form of customers conviction, more procurement and increment in the fidelity of the customers. It’s a kind of conformity among the company and its customers for the reciprocated remuneration. Company realizes the demands and necessities of its customers and in return the customers start to speak for buying the products of the company and in assembling the design of the product in an approved manner. One of the vital benefit is that customer starts telling others about the company and its products. Advocacy is a new technique for augmenting the relationship between customers and the company (Urban, 2005).

The initiative of the customer advocacy has gained a lot of acknowledgment but still remarkable research is required. For this purpose the personality traits of customers has been studied in connection with the advocacy behavior of the customers in this research.

In this study, it is intended to investigate the relationship between the personality traits of the customers and their inclination towards serving as promoters. This research is proposed to consider the advocacy of customer as an individual’s proclivity to curve up his/her know-how about some of the products or service (Chelminski, & Coutler, 2011).

Studies of the past suggest that the communal conduct is often influenced by helping others or with the will to have an increment on wellbeing of the communal society (Batson, 1991; Simon, 1993). The interties of the individuals towards the welfare of a society provide the foundation for an individual’s scruples which shows the compassionate sentiment with the needs of others (Aronfreed, 1968, 1970). In the actions regarding market, research shows that many people hold them accountable to assist others (Chelminski, & Coulter, 2011).

This research is aimed at exploring the aptitude of individuals to share any information and knowledge about product/service (Chelminski and Coulter, 2011) in association with the personality traits. The idea that insists on helping others and moving forward to the social wellbeing is the fundamental motion of social behavior, which can also be observed from previous literature (Batson, 1991; Simon, 1993). This enthusiasm is entrenched in one's conscience showing one's approach towards ethical tasks (Aronfreed, 1968, 1970). Some of the customers hold them responsible for assisting others (Chelminski, & Coulter, 2011). For example the centre of attention for many of the researchers before is on the leaders with rational liberality, who are always willing to share their familiarity with others (Childers, 1986).

The proposal of customer advocacy is intimately linked with different qualities of individuals, same as the concept of opinion leadership, competent assisting behavior, and market mavnism (Chelminski, & Coulter, 2011) and there is the idea to produce optimistic marketing place know-how by providing functional knowledge to customers (Chelminski, & Coulter, 2011).

Here customer advocacy deals differently as it impairs the customer to counteract any pessimism in market place, such as providing lower than normal products, and services that has obnoxious status because of the lower intensity of performance (Chelminski, & Coulter, 2011).

A question which usually comes across the personality research is that how many elementary and changeable features of personality are needed for the description of the character of an individual (Linden, Nijenhuis and Bakker, 2010). In order to embark upon this question, the researchers used different top down models (Linden, Nijenhuis and Bakker, 2010). One such structures or sculpt is Big Five (Digman, 1990; Goldberg, 1981; McCrae and Costa, 1999), which encompasses Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism.

These dimensions and features of personality can elucidate variety of personality traits over different grades and settings, psychological and substantial stability, job contentment, performance and customer advocacy (Barrick and Mount, 1991; Judge, Heller and Mount, 2002).

Big Five model of personality traits comprising of Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness has come forward as highly adequate and pragmatic model summarizing major character diversities (John, Noumann, & Soto, 2008).

It is alleged that very few studies have examined the impact of personality traits on the advocacy behavior of customers. In this study the main focus will be the examination of different dimensions of personality and the impact of each of them on the advocacy behavior of customers.

Agreeableness and Conscientiousness are linked to the exerted control (Campbell *et. al*, 2002). Agreeableness refers to an individual's sympathy towards other individual's sentiments and requirements (Serbet, Miller, Pryor, Reidy, and Zeichner, 2010). So keeping customer advocacy as dependent variable and that of the personality trait as independent variable, in this study the first proposed hypothesis is as follows:

*H 1: Agreeableness has a positive effect on customer advocacy behavior.*

Extraversion (related to optimistic affect and activation) and Neuroticism (associated to pessimistic affective strength) are considered to be instinctively resolute (Mac Donald, 1995; Rothbart, and Derryberry, 1981; Yik, and Russell, 2001).

Since the literature suggests that 'extraversion' is related to positive effect and activation, thus on the basis of this second hypothesis has been established that extraversion people show more readiness to serve as advocates to customers.

*H 2: Extraverted people are more ready to serve as customer advocates.*

Up to some degrees, conscientiousness approximates kinds of optimistic and pessimistic sentiments (McCrea and Costa, 1991, Watson, 2000). It is a measure of an individual's capability for being thankful for, allowing for penalty before taking some activity, unswerving on times of dullness and aggravation also including unsocial and violent behavior (Miller and Lynam, 2001). By reviewing literature it is identified that people with higher levels of conscientiousness operate more positively rather than negatively. So the third hypothesis is:

*H 3: Conscientiousness has appositive effect on customer advocacy behavior.*

Customer advocacy is well thought out to be extra role behavior. Customer advocacy is broadening the way for customers out of the perspective of marketing (Leo, Berett, and Dreman). 'Extra-role behavior is defined as distinctive behavior of frontline employees which is beyond their formal role'(Beltencourt, & Brown, 1997). For further the investigating the concept of customer advocacy, extra role behavior is mandatory.

Assisting out of the way is an element of this universal construct (King, George, & Hebl, 2005). While investigating the personality traits, researchers noted that at least four out of the five personality traits are in connection with sentimental filter of individuals, identified in terms of balance between positive and negative sentimental status (Diener, Suh, Lucas, & Smith, 1999).

Extraversion and neuroticism are the results of optimistic and pessimistic experiences (Clark, & Watson, 1999). Studies suggest that Neuroticism tends more towards the pessimistic rather than optimistic behavior. So it is argued that individuals with higher levels of neuroticism influence the advocacy behavior of customers negatively. So the fourth hypothesis comes out to be.

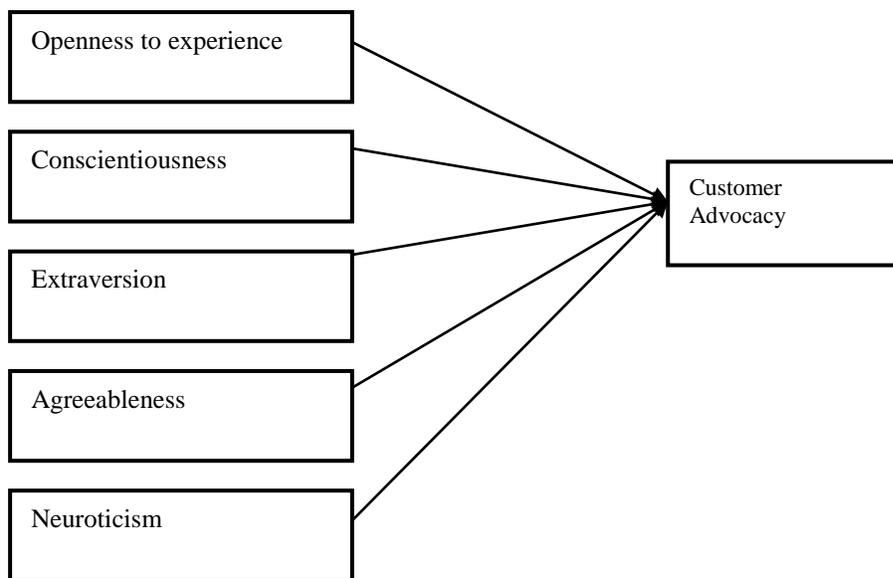
*H4: Neuroticism has a negative effect on the customer advocacy behavior.*

Openness and conscientiousness also to some degrees approximates types of positive and negative sentimental (Mc Crea, & Costa, 2000). Basic dimension that is closely associated with the mental process is readiness/ openness/ intellect (De Young, Graziplene, & Peterson, 2010). Readiness to discover is instinctive but has minor application on balance between pessimistic and optimistic sentimental (Mc Crea, & Costa, 1991). It is observed that the individuals with higher levels of openness have a positive manipulation on advocacy behavior of customers. The fifth hypothesis thus comes out to be.

*H5: Openness to experience has a positive effect on customer advocacy behavior.*

This study is aimed at investigating the customer advocacy in association with personality traits. For which the study is commenced with big five personality traits model in order to study its association with customer advocacy behavior. The model was then tested for a telecommunication company's customers using survey as a tool for research methodology. Key findings are then discussed and the hypotheses are tested using Ordinary Least Square Regression (OLS) and then the study is concluded with the implications important for managers and then limitations are identified.

### Proposed Research Model:



### Methodology

This study considers six variables that have not been discussed directly in a relationship by previous researchers specifically in Pakistan, which includes the five dimensions of personality i.e. Extraversion, Agreeableness, Conscientiousness, Openness to Experience and Neuroticism along with the Customer Advocacy Behavior.

### Research Design

**Type of Investigation:** This study was carried out to identify the impact of personality traits on the advocacy behavior of customers; hence it's a co-relational study.

**Study Setting:** As it's a co-relational study so it was conducted in a non-contrived setting invariably and done in organizations called as field study.

**Unit of Analysis:** Individual customers were mostly focused for the collection of data regarding this study; hence the units of analysis are customers. Data was gathered from each customer and each customer's response was treated as individual data source.

**Time Horizon:** Data was gathered just once, over a period of days in order to answer the research questions. Such study is called as cross-sectional studies.

### **Population and sample**

The population of this study is comprised of 304 customers of Pakistan from telecommunication sector. Unit of analysis of this study were customers from all levels of telecommunication industry.

### **Sampling**

Asper Krejcie and Morgan (1970) Formula for Sample Determination was used for determining the sample. Five hypotheses were developed and were tested with a sample of 142 customers from one Telecommunication Company of Pakistan. Customers from all the levels of the telecommunication sector were included in the study.

### **Sampling procedure**

Non probability convenient sampling techniques were used and data was collected by conducting a cross sectional survey.

### **Sampling techniques**

Sampling technique used for this research was convenience sampling in which questionnaire was used as a research instrument. 128 questionnaires were completely filled and returned and 14 were lost during the process or wrongly filled out of 142 questionnaires. In the sample of 128 customers 56 were males and 72 were females. Response rate was 90.14% as 142 questionnaires were distributed and 128 were received during the study. Total 51 items were added in the questionnaire first question was related to demographic variable including gender. Next questions 1-7 were related to customer advocacy behavior, questions 1, 6, 11, 16, 21, 26, 31, and 36 were related to extraversion, questions 2, 7, 12, 17, 22, 27, 32, 37, and 42 were about agreeableness, questions 3, 8, 13, 13, 23, 28, 33, 38, and 43 were related to conscientiousness, questions

4, 9, 14, 19, 24, 29, 34, and 39 were related to neuroticism, and questions 5, 10, 15, 20, 25, 30, 35, 40, 41, and 44 inquired about the customer's tendency to openness.

### **Characteristics of sample**

Demographic variables have effect on customer advocacy behavior, extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. For this reason as control variable in testing the hypothesis, gender was used.

### **Measures / Scales**

For the measurement of data Likert's five point scale was used ranging from 1 as strongly disagree, 2 as disagree, 3 as neutral, 4 as agree till 5 as strongly agree.

**Customer Advocacy Behavior:** 7-item scale has been taken from Liu, D., Harris, J., and Payne, A. "I take the initiative to act as a 'promoter' of this service provider?" The response rate ranged from 1 (strongly disagree) to 5 (strongly agree).

**Extraversion:** 8-item scale has been adapted from John and Srivastava, (1999). "I see myself as someone who is talkative?" The respondents were asked to rate each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

**Agreeableness:** 9-item scale has been adapted from John and Srivastava, (1999). "I see myself as someone who has a forgiving nature?" The respondents were asked to rate each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

**Conscientiousness:** 9-item scale has been adapted from John and Srivastava, (1999). "I see myself as someone who works hard until the task is finished?" The respondents were asked to rate each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

**Neuroticism:** 8-item scale has been adapted from John and Srivastava, (1999). "I see myself as someone who is emotionally stable, not easily upset?" The respondents were asked to rate each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

**Openness to experience:** 10-item scale has been adapted from John and Srivastava, (1999). "I see myself as someone who is original, comes up with new ideas?" The respondents were asked to rate each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

### **Data Analysis Procedure**

Sample of 128 responses were taken and introduced into SPSS software. It's computer operator statistical software. Following domains were analyzed in this software:

- Reliability
- Means
- Standard deviation
- Correlation
- Regression

## Results

Table 1 reports means, standard deviations, and Pearson correlations among studied variables. A Pearson correlation coefficient was computed to assess the relationship between the customer advocacy behavior and the big five personality traits. It was found that there was a positive correlation between the trait “extraversion” and customer advocacy behavior ( $r = 0.185$ ,  $n = 128$ ,  $p = 0.036$ ). Increase in the tendency towards extraverted personality was correlated with increase in the advocacy behavior of customers. A scatter plot summarizes the results (Table 1). It was also found that there was a positive correlation between the trait “openness to experience” and customer advocacy behavior ( $r = 0.280$ ,  $n = 128$ ,  $p = 0.001$ ). Increase in the tendency of “openness to experience” was correlated with increase in the advocacy behavior of customers. The results also show that there are no correlations between the variables “agreeableness and customer advocacy behavior”, “conscientiousness and customer advocacy behavior”, and “neuroticism and customer advocacy behavior”.

**Table 1: Descriptive and Intercorrelations**

Descriptive Statistics and Correlations									
Variables	Mean	S.D	Gender	AG	EXT	CO	NU	OP	CAB
Gender	.5625	.49803	--						
AG	3.5260	.67629	-.062	(0.744)					
EXT	3.1240	.61668	-.155	.105	(0.626)				
CO	3.2977	.58112	-.078	.392**	.217*	(0.632)			
NU	3.0156	.63680	.196*	-.353**	-.352**	-.408**	(0.654)		
OP	3.3793	.55363	.058	.235**	.366**	.234**	-.202*	(0.637)	
CAB	3.3125	.77705	-.124	-.014	.185*	.115	-.109	.280**	(0.806)

\*. Correlation is significant at the 0.05 level (2-tailed).

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

**Table 2: Regression Analysis**

Customer Advocacy Behavior				
Model	Beta	Sig.	R <sup>2</sup>	Δ R <sup>2</sup>
AG	-.126	.199		
EXT	.073	.456		
CO	.069	.487	.100	.100
NU	-.047	.643		
OP	.257	.008		

Dependent Variable: CAB

Table 2 reports the regression results of the variables. On the basis of the regression results H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, and H<sub>4</sub> are not accepted i.e. “Agreeableness has a positive effect on customer advocacy behavior”, “Extraverted people are more ready to serve as customer advocates”, “Conscientiousness has a positive effect on customer advocacy behavior”, “Neuroticism has a negative effect on customer advocacy behavior” respectively. Although the results of the regression analysis are in favor of H<sub>5</sub> i.e.

“Openness to experience has a positive effect on customer advocacy behavior”, thus H<sub>5</sub> is not rejected.

## **Discussion**

Not long ago it was widely believed that variance in psychological traits was solely environmentally determined or socially constructed. Times have changed, and as Rutter (2002) has argued “any dispassionate reading of the evidence leads to the inescapable conclusion that genetic factors play a substantial role in the origins of individual differences with respect to all psychological traits, both normal and abnormal (p. 2).” All individuals are not same; every individual is blessed with some innate abilities which make them different from one another. These abilities are the basis of individual differences and personality traits thus making one individual’s personality different from others.

One of the noteworthy personality traits is ability to take up new things known as openness. Openness to some extent estimates types of positive and negative emotions (McCrae & Costa, 1991; Watson, 2000). Basic dimension of personality related to psychological processes are readiness/openness/intellect (DeYoung, Grazioplene, & Peterson, 2010). Readiness to explore is an innate capability but has lesser application on balance between positive and negative emotions (McCrae & Costa, 1991). The advocacy behavior of customer is considered as extra role behavior, their agreeableness which is somewhat related to the positive word of mouth may be referred to as socialization. Researches supports current research hypothesis that people who tend to be more open to experience are more ready to share their experience with others rather than the ones who tends to be less open to experience. The statistical results show that coefficients of openness has positive sign which means the frequency of advocacy behavior of customer increases by 0.257 units whenever there is one unit increase in the openness to experience of the customer. Their significant relation can be confirmed through the significance value i.e. 0.008 ( $p < 0.01$ ) and also by t-value i.e. 2.708 ( $t\text{-value} > 2$ ).

A Researcher points out that individuals with higher level of openness have a positive influence on customer advocacy behavior. Openness to experience is an intellectual ability of maintaining customer relationships. Studies have reported a

positive relationship between Openness to experience and customer advocacy behavior as openness allows going out of the way (Ackerman & Heggstad, 1997; Gignac, Stough, & Loukomitis, 2004). So our results as well as theory supports our hypothesis that the more open to the experience an individual will be the more will be the chances to serve as customer advocates.

The only demographic variable “gender” was not working as a control variable. The proposed hypothesis as H1, H2, H3 H4 about personality traits; agreeableness, extraversion, conscientiousness and neuroticism yield insignificant results. Main reason behind the hypothesis rejection is that customers in Pakistani context are not interested in building association with products. In realistic customer scenarios, customers rarely show excitability, sociability, talkativeness, assertiveness and high amounts of emotional expressiveness rather emotional instability toward a particular brand. Most of the time customer’s conscience while using a particular product is need oriented instead of goal oriented in order to build trustworthy communication strategies.

The genetic variance of neuroticism and extraversion has been shown to mediate the occurrence of undesirable life events (Saudino, Pederson, Lichtenstein, McClearn, & Plomin, 1997) which may, in turn, contribute to prolonged negative behavior in individuals.

Customer advocacy behavior involves an interaction between a person's (customer's) underlying personality traits and situational variables. The situation that a customer finds himself or herself in plays a major role in how the person reacts. Under the given conditions of current research customer advocacy behavior proved to be invalid because customer fail to show/exhibit required expressions. Personality is a complex as a whole and each individual show these complex personality traits on varying degrees. Likewise customer advocacy behavior is a result of such complex personality associations.

## **Conclusion**

Impact of personality on customer advocacy behavior is an exploratory research. Research aims to explore and explain customer advocacy behavior in the context of big five personality traits. Statistically and methodologically, the use of the Big Five taxonomy is useful. There have been hundreds of existing studies utilizing the Big Five,

the current study may be among the first to utilize accepted personality traits in customer advocacy behaviors. Five personality traits were taken as variables out of which only two i.e. openness and extraversion are positively correlated with customer advocacy of behavior. Regression analysis reveals some degree of association between Openness to experience in personality and that of the advocacy behavior of customers. Personality traits are individual differences; therefore we cannot fix one particular behavioral extreme as criteria of customer advocacy behavior as well as personality. In flexible situation customer advocacy behavior is measured on varying degrees between two polar extremes of personality traits in order to achieve signification of results. It is now time to identify specific individuals (personality types) and specific interventions (change and personality programs) aimed at those (customers) considered “at risk” for not attending to their behaviors.

### **Limitations, Implications and Recommendations for Future Studies**

This study has a number of limitations. First limitation is that there were more women than men in our sample. Second, in this study only Big five traits were considered as the predictors of customer’s advocacy behavior, other factors including environmental factors, cultural factors etc. were not included. This study was a cross sectional study which makes the results of this study non-generalizable over the longitudinal study.

The most noteworthy limitation would be the sample size and use of a relatively young and homogeneous sample of convenience. Generalization of current findings should be cautiously made to other demographic. The current study is also limited by the sole use of self-reported personality. Also the study was conducted only in the telecommunication sector due to which it cannot be generalized over the other sectors.

Much of the previous work has been based on analyzing different factors that affect the customer advocacy behavior, this study advances on analyzing the impact of customer’s personality traits on customer’s advocacy behavior and considers the customers potential that how they can be further engaged to serve as advocates and thus improve the firm’s marketing performance.

Additional research should be encouraged into more diverse sectors as this study only covers the customers of telecommunication sector. An important direction for future research is also to examine these associations in age groups across the lifespan. Future work must also validate the scales used in the research on more diverse and large sample size.

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## **Moderational Effect of Age on Time Pressure and Human Judgment- Decision Making Relationship**

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### **ABSTRACT**

*Decision making is foreseeable in daily life, and ethical decision making is especially important to the harmony of the every society. There is no doubt in this that in stress or under pressure decisions are some time going to wrong direction rather than solving a problem another problem is created. In working environment where time pressure exists, it is difficult to take decision and make judgment about others. The study aims to identify Age play moderating role between human judgment, time pressure and decision making. Private and public sector were selected for this research and sample was considered 140 employees from different organizations out of them 128 were considered for analysis. For data analysis SPSS 17 used, which is supported by a technique of Multistage Sampling, Questionnaire heaving several questions regarding Human Judgment ,Time pressure, Decision making and age was used as data collection. Result exposed so as to, age use as moderator between human judgment and decision making relationship and not play use as moderator between time pressure and decision making. This research is a valuable adding up in follow a line of investigation that will assist authorities of private as well as public association to enlarge the level of decision making and human judgment.*

**Key words:** Human Judgment, Time Pressure, Decision making and Age.

### **INTRODUCTION**

Decision making is foreseeable in daily life, and ethical decision making is especially important to the harmony of the every society. To take a decision is never easy in life even on daily bases, especially when it effects on large scale such as ours and on society. Some researchers such as, Orasanu and Connolly (1993) explain 'The Responsibility Related Procedure' to take any sort of matters in our hands to deal with any matter. Narayan and Corcoran-Perry (1997) explains that the decision making is basic key to resolve any issue as per required. But it cannot be accurate all the time as making mistakes is a part of human nature. Which causes many reasons such as lack of knowledge or have no experience to solve such matter or issue before? That's why some time when we attempt to move forward

witch such problems we lose because of the fear holds our decisions much stronger than we thought off.

Today the moderate study explains us the concepts behind human ideology and thought's in different situations. Such as a normal human take a decision which will be totally different from a frightened person at that time. Even male and females decisions are quite opposite to each other's in same situations.

Human age is a common factor in taking decisions starting with the most ethical decisions being made by the older persons and changes the concept of the ethics of other person decision (Ruegger & King, 1992). Some of the presented studies looking at decision making in older adults are questionable: some state that decision making abilities decline with age, while others disagree with this statement (Deakin, Aitken, Robbins, & Sahakian, 2004). Nevertheless, 'The Self Absorbed Perusal', on part of a researcher has repeatedly extracted that there had been no or zero effect of our age related impact. It is observed that the impact of time pressure is always great and tremendous on the gross out put efficiency of work.

#### Statement of Problem

Researcher extracted, there are many factors, which effects decision making like human judgment and time pressure are out of these factors. Considering the other factors like age gender etc to finalize moderational influence of age on "Time Pressure And Human Judgment On Decision Making" capability as well as their respective association within human judgment and time stress.

#### ***Research Objective***

The Definite Purpose of such research recognizes the moderational effect of age and identifies association among "Time Pressure, Human Judgment and Decision Making".

Classification of Targets achieved will be as under:

- Scrutinize moderational-effect of age on Time Pressure and Human Judgement on Decision Making relationship.

### ***Research Significance***

The Researcher based psychological rehearsal foretells that is time pressure. It is a calculated fact that in our country, few researchers are at work in this area, and yet confused that how much time pressure effect will be absolutely and depressingly associated through human judgment and decision making, so the research I have chooses that would be helpful for further research and traveling around of innovative thoughts in this ground.

### ***Delimitation***

The study will be delimited to Public and private education Sector in Islamabad.

## **REVIEW OF LITERATURE**

The Researchers analysis and the extracted results of the hypothesis ,we may review our findings, regarding “Time Pressure, Human Judgment And Decision Making “, and their co-relational link with age, the author would ponder discussion on: The Variables calculated since 1961 to 2003, Edwards (1961) initially systemize the base, in which , reviewed 'decision based behavioral assumption through representing different psychological and economic theories of risk free alternative, risk-full alternatives in playoffs. Let’s have a brief discussion about human decisions and analyze the reasons behind it. Why such decisions taken by such person and what were the conditions. Before moving further we have to believe today wealth, age, experience, relations and body conditions all effects directly on any person’s decisions. Whereas, Becker and McClintock (1967) talk about the decision assumption, different attitudes in societal sciences. The Utilities ideology plays an intervening position toward connection decision Making (Theories) along through attitude of Collaborated Social Relational Sciences. Wright, P. (1974) discussed about the stressed decision maker, time pressures, While, Janis & Mann (1977) talked about decision making in which he analyzed the interrelational link between the conflict, choice,

and commitment. Thus, Beach and Mitchell (1978) discussed about the contingency Decision Strategies Selection Model. Einhorn and Hogarth (1981) attempted in resolving the judgment based impediment with functional arguments. These may involve the decisions made thus, in capacity of sense and intellect. Pitz & Sachs (1984) uttered the statement that the human based judgment is correlated to decision making having link with mind set ' human information processing'. Payne et al (1992) strained use of various decision approaches in the creation of predilection. Pennington and Hastie (1993) the study tells about the intellect based decision making and the cognitive approach of human mind working phenomenon. Stevenson (1993) talked regarding relationship of decision making with lasting cost. Diederich, A. (1997) accessible lively stochastic models for decision making with time restraint and in (2003) Decision making have a direct or deductive impact on crisis based mind power. Kocher, Strauß and Sutter (2006) offered the decision making of Individual or group, blended through basis with effect. It is personally selected. While we observe previous research, we come, conclude, mostly, the study, carried out, thus, was Qualitative to come across the relationship among, time pressure, human judgment and decision making.

### ***Time Pressure***

Stress/pressure can be defined as the situation where people being faced and observantly real and in cognitive approach as threatening (Atkinson, Atkinson, Smith, Bem, & Nolen-Hoeksema, 1996) or as being the substantial, with mental boundaries creature, once compelled, or feel endangered (Baltas & Baltas, 1996). Altuntas (2003) defines, pressure like disturbance conveys the result of the physical, along with mental stress, having emotional burden of working boundaries. On the other hand time is a critical source in human judgment and decision making". Exclusive of adequate time, many actions unspecified to emphasize excellent judgment and alternative cannot be implement. Many an observatory research analysis have treated time-pressure as a job attribute related in type to supplementary temperament as like the numerical substitute or number of characteristics (Payne et al., 1993) other hand Maule and Edland (1997)

discuss it so as to belongings of time-pressure might as well differ with the means of acclimatized use through folks. In addition, time-pressured changes individuals and their knowledge handing out precedence with confident category or categories of knowledge being prejudiced more profoundly (Wright, 1974)

### ***Human Judgment***

Vocabulary declares so as to opinion is “the psychological or logical procedure of form estimation or assessment by discriminating with match up to,” as well as the capability for adjudicator is “the authority or skill to make your intelligence up on the starting point of confirmation.”

Gigerenzer (1991, 1996) critically examined, human capacity is attracted to good judgment, which, in accumulation about: values, and promulgation. Gigerenzer (1996) and Cosmides & Tooby (1996) has extracted, which represents the common Rules for Survival. Einhorn & Hogarth (1981) tried to resolve judgmental unfairness with well-designed point of view that entail choice must be rational and intellectual. At the same time, the research psychologists read immense arrangements, regarding inaccuracy and unfairness.

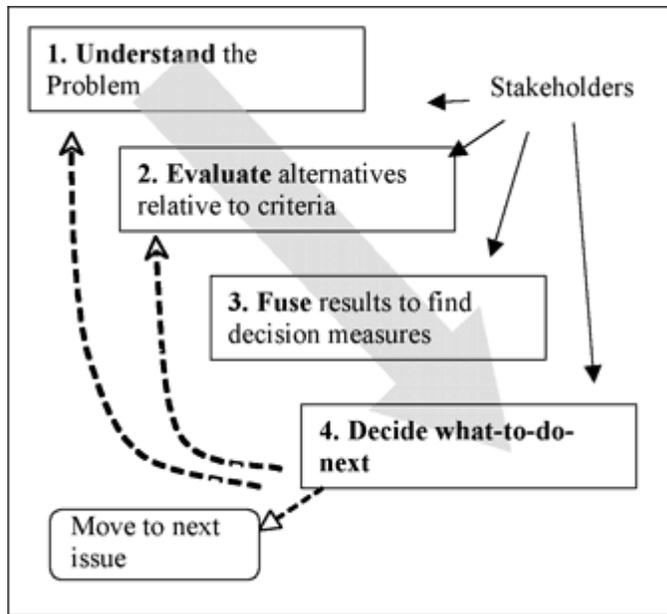
### ***Age***

On the topic on age, manifold studies of the naturalists come within reach of the adulthood personnel once retired, to such an extent, that the youth work on. It is an appealing aspect, in analyzing the three categorical study samples, jointly. As per capacity of the male and female, the analysis's are not dead sure, the distinctive capabilities applied on part of the three, vide, the youth, the adults and the retired make sense in their physical endeavor. Many Researchers believes that in attendance are distinctions, (Gardner, Scherer, & Tester, 1989; Dror, Katona, & Mungur, 1998) and many of them are disagreeing with this (Chen & Sun, 2003; Moshman, 1993). The naturalists scrutinize the working with the working skills through reverence to their age.

### ***Decision Making***

Decision making is very important in all situations of life, either these situations are in crises or in happiness, but a good decision is always play a major role in all situations. The human being prepared with incomplete knowledge managing capacity tries to sense of balance the aspiration to truthfully decide alternatives which eventually exploit his/her settlement and the similarly imperative want to decrease the cognitive damage of the given decision task (Ban Zor and Braznitz 1981). Whereas Kuzgun (1992) represented that the decision making aspects inclined toward overcome the recurrent difficulty, while we hold more than one decision, as existing.

Researchers have normally deliberately risky decision making in any situations allow the unlimited time to decision maker to implement that decision .Although all decisions are made under time constraint some have less time and some have more. This is same like that a driver, upon considering a yellow light, must decide whether to stop the vehicle or speed up through the intersection sooner than the red light come into view. Literature suggested that any human being is when involved in work based decision making, is engrossed physically through a chain process of skills as shown below:



The Decision, taken thus, is based on understanding about the problems faced, with its respective evaluation criteria.

## Hypothesis

The hypothesis based test is observed as:

- **H<sub>0</sub>**: Decision Making have significant effect with Time Pressure and Human Judgment
- **H<sub>1</sub>**: Age play moderational role between human judgment and decision making.
- **H<sub>2</sub>**: Age play moderational role between decision making and time pressure.
- **H<sub>3</sub>**: Age does not play moderational role between decision making, human judgment and time pressure.

## METHODOLOGY

### *Population*

Public and private education Sector of Islamabad was chosen as studied population.

### *Sample and Response Rate*

Selected four private and public organizations at Islamabad, Pakistan are:

Quaid-e-Azam University,

Mohammad Ali Jinnah University (MAJU),

Ripha international University and

Islamic International University.

The Sample based calculations were used while selecting 140 specific age limit resource persons, out of which, 128 respondents analyzed to eliminate biasness error.

### ***Instrument***

A Question tagged thus: Decision Making, Time Pressure and Human Judgment were adopted by Rizwan Saleem “Effect of Time Pressure and Human Judgment on Decision Making” in using it for data collection, meant for our Studies, through specific a questionnaire. The First Sample collects data information about demographics like gender discrimination, age, sex, qualification, and work on part of the few at the management level, out of these we only consider 'age' for our analysis.

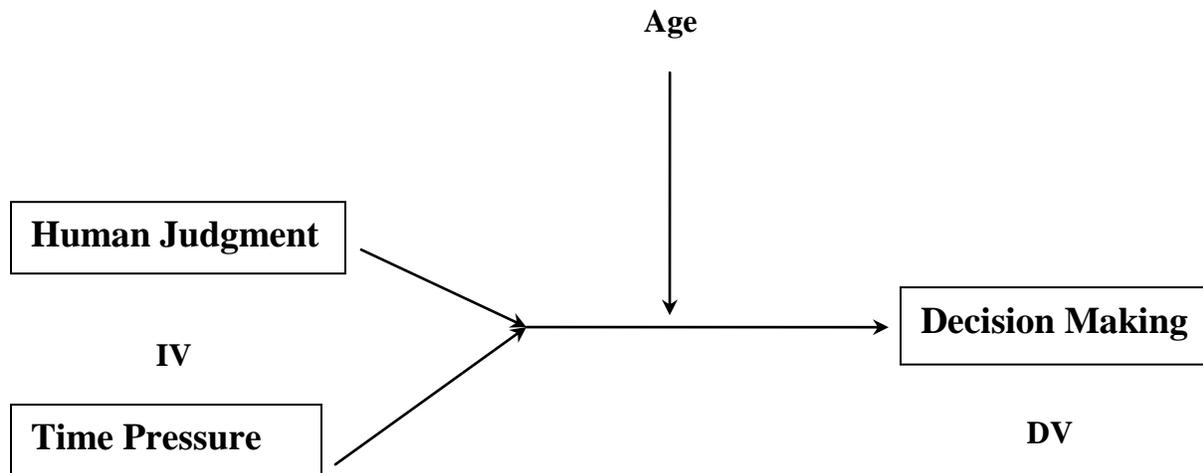
- **Part1.** Based on Decision Making having 10 queries for measuring DM.
- **Part2.** Based on Time Pressure having 10 queries for measuring TP.
- **Part3.** Based on Human Judgment having 7 queries for measuring HJ.  
(These three categories were analysed and observed, in our second consideration)

### **Instrument Description**

- Survey – to find the moderational effect of age on Time pressure human judgement - decision making relationship.
- Interrogate – All level Management, students
- Time Pressure & Human Judgement – the Independent Variables
- Decision Making – the Dependent Variable.

- Age – the Moderator
- Case – Private and Public Organizations.

### *Conceptual Model*



### *Econometric Model*

1.  $DM = \beta_0 + \beta_1 HJ + \beta_2 TP + e$
2.  $DM = \beta_0 + \beta_1 HJ + \beta_2 TP + \beta_3 AGE + \beta_4 HJ \times AGE + \beta_5 TP \times AGE + e$

Where

DM= Decision making

HJ= Human Judgment

TP= Time pressure

Age = Age

### *Analysis of Data*

Statistical tools were used:

- Means and Standard Deviations was premeditated, as the aggregate named and implied give us the exact feelings intended for the required mediocre respond as:

- Regression Analysis find out the result of independent variables on the dependant one.

## FINDINGS

### Results of first equation

$$DM = \beta_0 + \beta_1 HJ + \beta_2 TP + e$$

### Correlation

Correlations

		DECISION MAKING	TIME PRESSURE	HUMAN JUDGMENT
Pearson Correlation	DECISION MAKING	1.000	.601	.557
	TIME PRESSURE	.601	1.000	.628
	HUMAN JUDGMENT	.557	.628	1.000
Sig. (1-tailed)	DECISION MAKING	.	.000	.000
	TIME PRESSURE	.000	.	.000
	HUMAN JUDGMENT	.000	.000	.
N	DECISION MAKING	128	128	128
	TIME PRESSURE	128	128	128
	HUMAN JUDGMENT	128	128	128

As can be seen in table Time Pressure, Human Judgment and Decision Making are significantly correlated.

### Descriptive Statistics

128 individuals shortlisted for Decision Making, Time pressure and Human Judgment are 3.7883, 4.5498, and 4.3694 respectively.

Descriptive Statistics

	Mean	Std. Deviation	N
DECISION MAKING	3.7883	.55849	128
TIME PRESSURE	4.5498	.71863	128
HUMAN JUDGMENT	4.3694	.68653	128

Diversification in data shown by standard deviation, an indicator, along with a wide variety of the respondents:

ANOVA show, validity of model. Model extracts statistically significant (F= 44.205,  $p < .01$ ) with residual of 23.202.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.410	2	8.205	44.204	.000 <sup>a</sup>
	Residual	23.202	125	.186		
	Total	39.612	127			

a. Predictors: (Constant), HUMAN JUDGMENT, TIME PRESSURE

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.644 <sup>a</sup>	.414	.405	.43083	.414	44.204	2	125	.000	2.057

a. Predictors: (Constant), HUMAN JUDGMENT, TIME PRESSURE

b. Dependent Variable: DECISION MAKING

b. Dependent Variable: DECISION MAKING

The regression data for the beta and the R square are given below;

Correlation coefficient  $R = 0.644$  indicates the strength of association of the two independent variables (HJ & TP) collectively with the dependant variable (DM). The coefficient of determination  $R^2 = 0.414$  indicates that 41.4 percent variation in dependant variable (DM) has been explained by the variations in independent variables (HJ & TP).

F static =44.204 is significant at  $p < 0.01$  suggest that model is statistically significant (or the two independent variables significantly determine the dependant variable)

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.268	.272		4.669	.000
	TIME PRESSURE	.322	.068	.414	4.703	.000
	HUMAN JUDGMENT	.242	.072	.297	3.378	.001

a. Dependent Variable: DECISION MAKING

- Results shows both the coefficients of independent variables are individually statistically significant; coefficient carrying with independent variable TP and HJ are statistically significant at  $p < 0.01$  which shows that one unit change in independent variable TP brings a 0.414 units change in dependant variable DM and same like that one unit change in independent variable HJ brings a 0.297 units change in dependant variable DM and according to result we accept our supposition Decision Making have significant effect with Time Pressure and Human Judgment

### Results of second equation

$$DM = \beta_0 + \beta_1HJ + \beta_2TP + \beta_3AGE + \beta_4HJ \times AGE + \beta_5TP \times AGE + e$$

### Correlations

		DECISION MAKING	TIME PRESSURE	HUMAN JUDGMENT	AGE	HJAGE	TPAGE
Pearson Correlation	DECISION MAKING	1.000	.601	.557	.151	.320	.347
	TIME PRESSURE	.601	1.000	.628	.188	.389	.549
	HUMAN JUDGMENT	.557	.628	1.000	.148	.529	.352
	AGE	.151	.188	.148	1.000	.907	.915
	HJAGE	.320	.389	.529	.907	1.000	.918
	TPAGE	.347	.549	.352	.915	.918	1.000

Sig. (1-tailed)	DECISION MAKING	.	.000	.000	.044	.000	.000
	TIME PRESSURE	.000	.	.000	.017	.000	.000
	HUMAN JUDGMENT	.000	.000	.	.048	.000	.000
	AGE	.044	.017	.048	.	.000	.000
	HJAGE	.000	.000	.000	.000	.	.000
	TPAGE	.000	.000	.000	.000	.000	.
N	DECISION MAKING	128	128	128	128	128	128
	TIME PRESSURE	128	128	128	128	128	128
	HUMAN JUDGMENT	128	128	128	128	128	128
	AGE	128	128	128	128	128	128
	HJAGE	128	128	128	128	128	128
	TPAGE	128	128	128	128	128	128

As can be seen in table Time Pressure, Human Judgment Age and Decision Making are significantly correlated.

#### Descriptive Statistics

	Mean	Std. Deviation	N
DECISION MAKING	3.7883	.55849	128
TIME PRESSURE	4.5498	.71863	128
HUMAN JUDGMENT	4.3694	.68653	128
AGE	1.8125	.54339	128
HJAGE	7.9743	2.72657	128
TPAGE	8.31937	2.869770	128

Dependant Variable in Decision Making were 128 in number, 3.7883 was the aggregate, is meant, for two independent variables Time pressure and Human Judgment are 4.5498 and 4.3694 respectively, and mean for moderator (Age) and interaction terms between moderator and independent variables are 1.81125, 7.9743 and 8.319 respectively.

Standard Deviations are shown, which clearly indicates about 'diversity', a clear indicative that we possess a wide variety of opinions amongst the Respondents.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.755	5	3.551	19.820	.000 <sup>a</sup>
	Residual	21.858	122	.179		
	Total	39.612	127			

a. Predictors: (Constant), TPAGE, HUMAN JUDGMENT, TIME PRESSURE, AGE, HJAGE

b. Dependent Variable: DECISION MAKING

Validity of model shown by ANOVA. Model found statistically significant (F= 19.820, p < .01) with residual of 21.858.

**Model Synopsis<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		Sig. F Change
1	.669 <sup>a</sup>	.448	.426	.42327	.448	19.820	5	122	.000	1.985

a. Predictors: (Constant), TPAGE, HUMAN JUDGMENT, TIME PRESSURE, AGE, HJAGE

b. Dependent Variable: DECISION MAKING

The Correlation Coefficient R =0.669 indicates about The Strength of Association Between The Two Independent Variables (HJ & TP) as a whole, with The Dependant Variable (DM).The Coefficient of Determination R<sup>2</sup> =0.448 Indicates, About 45 Percent Variation in The Dependant Variable (DM) has been elaborated Through The Variations in The Independent Variables (HJ & TP).

F Static = 19.820 is significant at p < 0.01, Which Suggests, The Model is Statistically Significant (or The Two Independent Variables Significantly Determine The Dependant variable)

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.314	.817		.384	.036
TIME PRESSURE	.121	.243	.155	.498	.620
HUMAN JUDGMENT	.812	.248	.999	3.276	.001
AGE	1.038	.515	1.010	2.016	.046
HJAGE	.330	.134	1.613	2.469	.015
TPAGE	.091	.135	.467	.673	.502

a. Dependent Variable: DECISION MAKING

- Results shows that coefficient of independent variable (HJ) is individually statistically significant, the coefficient of independent variable (TP) is individually statistically insignificant and the coefficient of moderator variable (AGE) is individually statistically significant ; coefficient carrying with independent variable TP and HJ are statistically significant and insignificant at  $p < 0.1$  respectively which shows that one unit change in independent variable TP brings a 0.155 units change in dependant variable DM and same like that one unit change in independent variable HJ brings a 0.999 units change in dependant variable DM. Coefficient of moderator variable Age and their interaction terms with independent variables show the similar result like that coefficient of (HJAGE) is statistically significant and coefficient of TPAGE is statistically insignificant at  $p < 0.1$ , the result also discuss one unit change in moderator Age will bring 1.010 unit change in dependant variable. All above mentioned results

shows that age plays moderational role with human judgment but age haven't any concern with time pressure .We accept our hypothesis Age play moderational role between human judgment and decision making.

## **RESULTS AND DISCUSSION**

As earlier discussed in many research only age has not any strong effect on decision making but we never neglect this element that age didn't play any role in human judgment .As age increases human judgment would also be higher. Time pressure and human judgment may or may not cause or effect on Decision making without any other passive factor like age, sex, education etc. but It also depends on situation that in which situation you are going to take a decision. As per employees are concerned in this study most of them are satisfied with their working environment ant many of them are willing to work in time pressure and take better decision in stress because in education sector most of time they face many unforeseen situations which they handled according to their judgment which they attain with passage of time.

### **Recommendations**

So That, we may perceive about The improvement of 'job Satisfaction and The Morale Level improvement of The Employees, The Education Sector Should Must immediately better The Surrounding Environment for Learning Tendencies, And The Infrastructural Framework, so as to Try Reduce or Eliminate The Specific Stress Caused by Time Dilations, at work.

- Adroit and Skilful workforce should be concentric on Their Job and Should Take improvised Decision in Time Pressure Proposition.

- Human Judgment is not always based on 'Age'. It Might be possible An Aged Person's Judgment may go Wrong, as does the age factor, So do Consider All Possible Factors while making 'A Predialected Judgment about a person and taking decision.
- Company should give preference to those employees who are senior in age and deserve it.

### *Limitations of Study*

Although intentionally collection of data is in good faith but there are chances of some flaws in study. Researcher faces many hurdles which are part of research process. While collecting data many hurdles were faced by researchers, which are as follows.

1. **Lack of time and resources:** It was not feasible conduct study at large scale due to Lack of time and other resources.
2. **No of response rate:** Out of all respondents only 128 respondents have chosen, who meets the full requirements' of study which is very small number.
3. **Respondents Unwillingness:** Due to poor knowledge respondents' were unwilling to fill the questionnaire and felt its only time wasting exercise.
4. **Sector of research:** Study is delimited in specific sector that's why area of research is very small.

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